

COHERENT INC  
Form 10-K  
November 27, 2013

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PART IV

UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549

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FORM 10-K

(Mark One)

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the Fiscal Year Ended September 28, 2013

or

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

Commission File Number: 001-33962

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COHERENT, INC.

Delaware 94-1622541  
(State or other jurisdiction of (I.R.S. Employer  
incorporation or organization) Identification No.)

5100 Patrick Henry Drive, Santa Clara, California 95054  
(Address of principal executive offices) (Zip Code)

Registrant's telephone number, including area code: (408) 764-4000

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Name of each exchange on which registered
Common Stock, \$0.01 par value	The NASDAQ Stock Market LLC Nasdaq Global Select Market

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes  No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934 (the "Exchange Act"). Yes  No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports) and (2) has been subject to such filing requirements for the past 90 days. Yes  No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§229.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files. Yes  No

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Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See definitions of "large accelerated filer", "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer       Accelerated filer       Non-accelerated filer       (Do not check if a smaller reporting company)       Smaller reporting company

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes  No

As of November 22, 2013, 24,816,399 shares of common stock were outstanding. The aggregate market value of the voting shares (based on the closing price reported on the NASDAQ Global Select Market on March 30, 2013, of Coherent, Inc., held by nonaffiliates was approximately \$1,100,770,185. For purposes of this disclosure, shares of common stock held by persons who own 5% or more of the outstanding common stock and shares of common stock held by each officer and director have been excluded in that such persons may be deemed to be "affiliates" as that term is defined under the Rules and Regulations of the Exchange Act. This determination of affiliate status is not necessarily conclusive.

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Portions of the registrant's Proxy Statement for the registrant's fiscal 2014 Annual Meeting of Stockholders are incorporated by reference into Part III of the Form 10-K to the extent stated herein. The Proxy Statement or an amended report on Form 10-K will be filed within 120 days of the registrant's fiscal year ended September 28, 2013.

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SPECIAL NOTE REGARDING FORWARD LOOKING STATEMENTS

This annual report contains forward-looking statements. These forward-looking statements include, without limitation, statements relating to:

- expansion into, and financial returns from, new markets;
- optimization of financial returns;
- maintenance and development of current and new customer relationships;
- enhancement of market position through existing or new technologies;
- optimization of product mix;

future trends in microelectronics, scientific research and government programs, OEM components and instrumentation and materials processing;

- utilization of vertical integration;
- adoption of our products or lasers generally;
- applications and processes that will use lasers, including the suitability of our products;
- capitalization on market trends;
- alignment with current and new customer demands;
- positioning in the marketplace and gains of market share;
- design and development of products, services and solutions;
- control of supply chain and partners;
- realization of restructuring benefits;
- protection of intellectual property rights;
- compliance with environmental and safety regulations;
- net sales and operating results;
- variations in stock price;
- market acceptance of products;
- trends in the instrumentation market;
- sufficiency and management of cash, cash equivalents and investments;
- acquisition efforts and utilization of technology from our acquisitions;

- accounting for goodwill and intangible assets, inventory valuation, warranty reserves and taxes; and

In addition, we include forward-looking statements under the "Our Strategy" and "Future Trends" headings set forth below in "Business" and under the "Bookings and Book-to-Bill Ratio" heading set forth below in "Management's Discussion and Analysis of Financial Condition and Results of Operations."

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You can identify these and other forward-looking statements by the use of the words such as "may," "will," "could," "would," "should," "expects," "plans," "anticipates," "estimates," "intends," "potential," "projected," "continue," "our observation," or the negative of such terms, or other comparable terminology. Forward-looking statements also include the assumptions underlying or relating to any of the foregoing statements.

Our actual results could differ materially from those anticipated in these forward-looking statements as a result of various factors, including those set forth below in "Business," "Management's Discussion and Analysis of Financial Condition and Results of Operations" and under the heading "Risk Factors." All forward-looking statements included in this document are based on information available to us on the date hereof. We undertake no obligation to update these forward-looking statements as a result of events or circumstances or to reflect the occurrence of unanticipated events or non-occurrence of anticipated events, except to the extent required by law.

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PART I

ITEM 1. BUSINESS

GENERAL

Business Overview

Our fiscal year ends on the Saturday closest to September 30. Fiscal years 2013, 2012 and 2011 ended on September 28, September 29, and October 1, respectively, and are referred to in this annual report as fiscal 2013, fiscal 2012 and fiscal 2011 for convenience. Fiscal years 2013, 2012 and 2011 included 52 weeks.

We are one of the world's leading suppliers of photonics-based solutions in a broad range of commercial and scientific research applications. We design, manufacture, service and market lasers and related accessories for a diverse group of customers. Since inception in 1966, we have grown through internal expansion and through strategic acquisitions of complementary businesses, technologies, intellectual property, manufacturing processes and product offerings.

We are organized into two operating segments: Specialty Lasers and Systems ("SLS") and Commercial Lasers and Components ("CLC"). This segmentation reflects the go-to-market strategies for various products and markets. While both segments deliver cost-effective photonics solutions, SLS develops and manufactures configurable, advanced performance products largely serving the microelectronics, scientific research and government programs and OEM components and instrumentation markets. The size and complexity of many of the SLS products require service to be performed at the customer site by factory-trained field service engineers. CLC focuses on higher volume products that are offered in set configurations. The product architectures are designed for easy exchange at the point of use such that substantially all product service and repairs are based upon advanced replacement and depot (i.e., factory) repair. CLC's primary markets include materials processing, original equipment manufacturer ("OEM") components and instrumentation and microelectronics.

Income (loss) from operations is the measure of profit and loss that our chief operating decision maker ("CODM") uses to assess performance and make decisions. Income (loss) from operations represents the sales less the cost of sales and direct operating expenses incurred within the operating segments as well as allocated expenses such as shared sales and manufacturing costs. We do not allocate to our operating segments certain operating expenses, which we manage separately at the corporate level. These unallocated costs include stock-based compensation and corporate functions (certain advanced research and development, management, finance, legal and human resources) and are included in Corporate and other. Management does not consider unallocated Corporate and other costs in its measurement of segment performance.

We were originally incorporated in California on May 26, 1966 and reincorporated in Delaware on October 1, 1990. Our common stock is listed on the NASDAQ Global Select Market and we are a member of the Standard & Poor's SmallCap 600 Index and the Russell 2000 Index.

Additional information about Coherent, Inc. (referred to herein as the Company, we, our, or Coherent) is available on our web site at [www.coherent.com](http://www.coherent.com). We make available, free of charge on our web site, access to our annual report on Form 10-K, our quarterly reports on Form 10-Q, our current reports on Form 8-K and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), as soon as reasonably practicable after we file or furnish them electronically with the Securities and Exchange Commission ("SEC"). Information contained on our web site is not part of this annual report or our other filings with the SEC. Any product, product name, process, or technology described in these materials is the property of Coherent.

INDUSTRY BACKGROUND

The word "laser" is an acronym for "light amplification by stimulated emission of radiation." A laser emits an intense coherent beam of light with some unique and highly useful properties. Most importantly, a laser is orders of magnitude brighter than any lamp. As a result of its coherence, the beam can be focused to a very small and intense spot, useful for applications requiring very high power densities including cutting and other materials processing procedures. The laser's high spatial resolution is also useful for microscopic imaging and inspection applications. Laser light can be monochromatic—all the beam energy is confined to a narrow wavelength band. Some lasers can be used to create ultrafast output—a series of pulses with pulse durations as short as attoseconds (i.e., 10<sup>-18</sup> seconds).



There are many types of lasers and one way of classifying them is by the material or medium used to create the lasing action. This can be in the form of a gas, liquid, semiconductor, solid state crystal or fiber. Lasers can also be classified by their output wavelength: ultraviolet, visible, infrared or wavelength tunable. We manufacture all of these laser types. There are also many options in terms of pulsed output versus continuous wave, pulse duration, output power, beam dimensions, etc. In fact, each application has its specific requirements in terms of laser performance. The broad technical depth at Coherent enables us

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to offer a diverse set of product lines characterized by lasers targeted at growth opportunities and key applications. In all cases, we aim to be the supplier of choice by offering a high-value combination of superior technical performance and high reliability.

Photonics has taken its place alongside electronics as a critical enabling technology for the twenty-first century. Photonics based solutions are entrenched in a broad array of industries that include industrial automation, textile processing, microelectronics, flat panel displays and medical diagnostics, with adoption continuing in ever more diverse applications. Growth in these applications stems from two sources. First, there are many applications where the laser is displacing conventional technology because it can do the job faster, better or more economically. Second, there are new applications where the laser is the enabling tool that makes the work possible (e.g., the production of sub 50 micron microvias); these lasers are used in the manufacturing of high density printed circuit boards ("PCBs") found in the latest smart phones and tablet computers.

Key laser applications include: semiconductor inspection; manufacturing of advanced PCBs; flat panel display manufacturing; solar cell production; medical and bio-instrumentation; materials processing; industrial process and quality control; marking; imaging and printing; graphic arts and display; and, research and development. For example, ultraviolet ("UV") lasers are enabling the move towards miniaturization, which drives innovation and growth in many markets. In addition, the advent of industrial grade ultrafast lasers continues to open up new applications for laser processing.

**OUR STRATEGY**

We strive to develop innovative and proprietary products and solutions that meet the needs of our customers and that are based on our core expertise in lasers and optical technologies. In pursuit of our strategy, we intend to:

Leverage our technology portfolio and application engineering to lead the proliferation of photonics into broader markets—We will continue to identify opportunities in which our technology portfolio and application engineering can be used to offer innovative solutions and gain access to new markets. We plan to utilize our expertise to increase our market share in the mid to high power material processing applications.

Optimize our leadership position in existing markets—There are a number of markets where we have historically been at the forefront of technological development and product deployment and from which we have derived a substantial portion of our revenues. We plan to optimize our financial returns from these markets.

Maintain and develop additional strong collaborative customer and industry relationships—We believe that the Coherent brand name and reputation for product quality, technical performance and customer satisfaction will help us to further develop our loyal customer base. We plan to maintain our current customer relationships and develop new ones with customers who are industry leaders and work together with these customers to design and develop innovative product systems and solutions as they develop new technologies.

Develop and acquire new technologies and market share—We will continue to enhance our market position through our existing technologies and develop new technologies through our internal research and development efforts, as well as through the acquisition of additional complementary technologies, intellectual property, manufacturing processes and product offerings.

Streamline our manufacturing structure and improve our cost structure—We will focus on optimizing the mix of products that we manufacture internally and externally. We will utilize vertical integration where our internal manufacturing process is considered proprietary and seek to leverage external sources when the capabilities and cost structure are well developed and on a path towards commoditization.

Focus on long-term improvement of adjusted EBITDA, in dollars and as a percentage of net sales—We define adjusted EBITDA as operating income adjusted for depreciation, amortization, stock compensation expenses, major restructuring costs and certain other non-operating income and expense items. Key initiatives to reach our goals for EBITDA improvements include utilization of our Asian manufacturing locations, rationalizing our supply chain and continued leveraging of our infrastructure.

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APPLICATIONS

Our products address a broad range of applications that we group into the following markets: Microelectronics, Materials Processing, OEM Components and Instrumentation and Scientific Research and Government Programs.

Microelectronics

Nowhere is the trend towards miniaturization more prevalent than in the Microelectronics market where smart phones, tablets, ultrabooks, personal computers ("PC's") and televisions ("TV's") are driving advances in displays, integrated circuits and PCBs. In response to market demands and expectations, semiconductor and device manufacturers are continually seeking to improve their process and design technologies in order to manufacture smaller, more powerful and more reliable devices at lower cost. New laser applications and new laser technologies are a key element in delivering higher resolution and higher precision at lower manufacturing cost.

We support three major markets in the microelectronics industry: (1) flat panel display ("FPDs") manufacturing, (2) advanced packaging and interconnects and (3) semiconductor front-end.

Microelectronics—flat panel display manufacturing

The high-volume consumer market is driving the production of FPDs in applications such as mobile phones, tablets, ultrabooks, laptop computers, and TVs. There are several types of established and emerging displays based on quite different technologies, including liquid crystal ("LCD") and organic polymers ("OLED"). Each of these technologies utilize laser applications given that lasers provide higher process speed, better yield, improved battery life, lower cost and/or superior display brightness and resolution.

Several display types require a high-density pattern of silicon thin film transistors ("TFTs"). If this silicon is polycrystalline, the display performance is greatly enhanced. In the past, these polysilicon layers could only be produced on expensive special glass at high temperatures. However, excimer-based processes, such as excimer laser annealing ("ELA") have allowed high-volume production of low-temperature polysilicon ("LTPS") on conventional glass substrates. Our excimer lasers provide an invaluable solution for LTPS because they are the only industrial-grade excimer lasers with the high pulse energy optimized for this application. The current state-of-the-art product for this application is our excimer VYPER laser, which delivers over 1000W of power, enabling customers to scale to current Generation 5 & 5.5 substrates all the way up to Generation 8 sizes. These systems are integral to the manufacturing process on all leading LTPS-based smart phone displays, with the highest commercially available pixel densities of greater than 300 pixels per inch (ppi) and hold the potential for deployment in tablet display and OLED TV manufacturing.

Our AVIA, Rapid, Talisker and DIAMOND lasers are also used in other production processes for FPDs. These processes include drilling, cutting, patterning, marking and yield improvement.

Lasers have also become a valuable tool in high-brightness ("HB") LED manufacturing, improving LED performance and yield. LED has seen rapid growth over the last several years due to widespread adoption as the light source in all categories of LCD displays, from phones all the way to full size TVs. Our lasers are used in the back-end processing of HB-LEDs.

Microelectronics—advanced packaging and interconnects

After a wafer is patterned, there are then a host of other processes, referred to as back-end processing, which finally result in a packaged encapsulated silicon chip. Ultimately, these chips are then assembled into finished products. The advent of high-speed logic and high-memory content devices has caused chip manufacturers to look for alternative technologies to improve performance and lower process costs. In terms of materials, this search includes new types of materials, such as low-k and thinner silicon. Our AVIA, Rapid, Talisker and Matrix lasers provide economical methods of cutting and scribing these wafers while delivering higher yields than traditional mechanical methods. There are similar trends in chip packaging and PCB manufacturing requiring more compact packaging and denser interconnects. In many cases, lasers present enabling technologies. For instance, lasers are now the only economically practical method for drilling microvias in chip substrates and in both rigid and flexible PCBs. These microvias are tiny interconnects that are essential for enabling high-density circuitry commonly used in smart phones, tablets and advanced computing systems. Our DIAMOND carbon dioxide ("CO<sub>2</sub>") and AVIA diode pumped solid state ("DPSS") lasers are the lasers of choice in this application. The ability of these lasers to operate at very high repetition rates translates into faster drilling speeds and increased throughput in microvia processing applications. In addition,

multi-layer circuit boards require more flexible production methods than conventional printing technologies can offer, which has led to widespread adoption of laser direct imaging ("LDI"). Our Paladin laser is used for this application.  
Microelectronics—semiconductor front-end

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The term "front-end" refers to the production of semiconductor devices which occurs prior to packaging. As semiconductor device geometries decrease in size, devices become increasingly susceptible to smaller defects during each phase of the manufacturing process and these defects can negatively impact yield. One of the semiconductor industry's responses to the increasing vulnerability of semiconductor devices to smaller defects has been to use defect detection and inspection techniques that are closely linked to the manufacturing process. For example, automated laser-based inspection systems are now used to detect and locate defects as small as 0.01 micron, which may not be observable by conventional optical microscopes.

Detecting the presence of defects is only the first step in preventing their recurrence. After detection, defects must be examined in order to identify their size, shape and the process step in which the defect occurred. This examination is called defect classification. Identification of the sources of defects in the lengthy and complex semiconductor manufacturing process has become essential for maintaining high yield production. Semiconductor manufacturing has become an around-the-clock operation and it is important for products used for inspection, measurement and testing to be reliable and to have long lifetimes. Our Azure, Paladin and Excimer lasers are used to detect and characterize defects in semiconductor chips.

### Materials Processing

Lasers are widely accepted today in many important industrial manufacturing applications including cutting, welding, joining, drilling, perforating, and marking of metals and nonmetals. We supply high-power lasers for metal processing and low-to-medium power lasers for laser marking, nonmetals processing and precision micromachining.

Our high power industrial laser systems are used for cutting, welding, cladding and hardening of metals, as well as other materials processing applications.

Our Semiconductor business provides higher power arrays with powers in excess of 50 kilowatts through proprietary cooling and stacking technology. This unique technology provides the engine for both our Highlight direct diode systems as well as our kW class fiber lasers. Our differentiated fiber laser design offers our customers a higher level of integration and additional options for product serviceability. Our fiber lasers are used for metal cutting, cladding and welding applications.

Complementing our high power solid state lasers is our industry leading DIAMOND E1000 CO<sub>2</sub> laser. Introduced in 2009, this laser remains in high demand due to its high power, small size and completely sealed design - all ideal for material processing.

Combining the high power Direct Diode, Fiber and CO<sub>2</sub> offerings with our MetaBeam 1000 flatbed cutting tool provides a strong, compelling four-pronged approach to meeting the needs of our diverse materials processing customers. The new METABEAM 1000 offers the industry's most compact 1kW tool, with tool footprints at least 50% smaller than competitive designs. Operating costs, due to a combination of input power efficiencies and the sealed nature of the DIAMOND series of CO<sub>2</sub> lasers, are 50% less than similar, but larger tools.

We also participate in the low to medium power area, including such applications as the cutting, drilling and joining of a host of materials using our DIAMOND CO<sub>2</sub> lasers; Highlight fiber array product ("FAP") semiconductor lasers in OEM opportunities and direct end user applications with the lower power OMNIBEAM and METABEAM cutting tools; applications including cutting, perforating and scoring of paper, thin metals and packaging materials; and various cutting and patterning applications in the textile, wood and sign industries. In the specific area of textiles and clothing, our DIAMOND lasers service older applications, such as cutting complex shapes in leather for footwear, as well as newer applications such as creating detailed fade patterns on designer denims.

Laser marking and coding are generally considered part of the precision materials processing applications market for which we remain a leading supplier. One such area where applications are growing rapidly is the displacement of ink-jet coding due to both aesthetic and environmental pressures. The optimum choice of laser depends on the material being marked, whether it is a surface mark (engraved) or a sub-surface mark, and the specific economics of the application. Our DIAMOND C and GEM Series of CO<sub>2</sub> lasers provide many systems manufacturers with a reliable cost effective source for marking and engraving on non-metals. In addition, our Matrix product line of reliable, compact and low-cost DPSS lasers provides an ideal solution for marking of other materials in high volume manufacturing.

OEM components and instrumentation

Instrumentation is one of our more mature commercial applications. Representative applications within this market include bio-instrumentation, medical OEMs, graphic arts and display and machine vision. We also support the laser-based instrumentation market with a range of laser-related components, including diode lasers for optical pumping. Our OEM component business includes sales to other, less integrated laser manufacturers participating in OEM markets such as materials processing, scientific, and medical.

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### Bio-instrumentation

Bio-instrumentation applications for lasers include bio-agent detection for point source and standoff detection of pathogens or other bio-toxins; confocal microscopy for biological imaging that allows researchers and clinicians to visualize cellular and subcellular structures and processes with an incredible amount of detail; DNA sequencing that provides automation and data acquisition rates that would be impossible by any other method; drug discovery—genomic and proteomic analyses that enable drug discovery to proceed at very high throughput rates; and flow cytometry for analyzing single cells or populations of cells in a heterogeneous mixture, including blood samples. Our OBIS, Galaxy, Sapphire, Compass and Coherent CUBE lasers are used in several bio-instrumentation applications.

### Medical Therapy

We sell a variety of components and lasers to medical laser companies in end-user applications such as ophthalmology, aesthetic, surgical, therapeutic and dentistry. Our DIAMOND series CO<sub>2</sub> lasers are widely used in ophthalmic, aesthetic and surgical markets. We have a leading position in Lasik and photorefractive keratectomy surgery methods with our ExciStar XS excimer laser platform. With the acquisition of Lumera, we now have ultrafast lasers targeted for use in laser cataract surgery.

The unique ability of our optically pumped semiconductor lasers ("OPSL") technology to match a wavelength to an application has led to the development of a high-power yellow (577nm) laser for the treatment of eye related diseases, such as Age Related Macular Degeneration and retinal diseases associated with diabetes. The 577nm wavelength was designed to match the peak in absorption of oxygenated hemoglobin thereby allowing treatment to occur at a lower power level, and thus reducing stress and heat-load placed on the eye with traditional green-based (530nm) solid state lasers. Other applications where our OBIS, Genesis and Sapphire series of lasers are used include the retinal scanning market in diagnostic imaging systems as well as new ground breaking in-vivo imaging.

### Scientific research and government programs

We are widely recognized as a technology innovator and the scientific market has historically provided an ideal "test market" for our leading-edge innovations. These have included ultrafast lasers, DPSS lasers, continuous-wave ("CW") systems, excimer gas lasers and water-cooled ion gas lasers. Our portfolio of lasers that address the scientific research market is broad and includes our Chameleon, COMPexPro, Evolution, Legend, Libra, MBD, MBR, Vitara, Mira and Verdi lasers. Many of the innovations and products pioneered in the scientific marketplace have become commercial successes for both our OEM customers and us.

We have a large installed base of scientific lasers which are used in a wide range of applications spanning virtually every branch of science and engineering. These applications include biology and life science, engineering, physical chemistry and physics. Most of these applications require the use of ultrafast lasers that enable the generation of pulses short enough to be measured in femto- or attoseconds (10<sup>-15</sup> to 10<sup>-18</sup> seconds). Because of these very short pulse durations, ultrafast lasers enable the study of fundamental physical and chemical processes with temporal resolution unachievable with any other tool. These lasers also deliver very high peak power and large bandwidths, which can be used to generate many exotic effects. Some of these are now finding their way into mainstream applications, such as microscopy or materials processing. The use of ultrafast lasers such as the Chameleon in microscopy is now a common occurrence in bio-imaging labs.

## FUTURE TRENDS

### Microelectronics

Lasers are widely used in mass production microelectronics applications largely because they enable entirely new application capabilities that cannot be realized by any other known means. These laser-based fabrication and testing methods provide a level of precision, typically on a micrometer and nanometer level, that are unique, faster, are touch free, deliver superior end products, increase yields, and/or cut production costs. We anticipate this trend to continue, driven primarily by the increasing sophistication of consumer electronic goods and their convergence via the internet, resulting in increasing demand for better displays, more bandwidth and memory, and all packaged into devices which are lighter, thinner and consume less power. Although this market follows the macro-economic trends and carries inherent risks, we believe that we are well positioned to continue to capitalize on the current market trends and that we will see continued increased adoption of our solid-state, CO<sub>2</sub>, pulsed fiber, direct diode and excimer lasers, as all these lasers enable entirely new applications, performance improvements and reduced process costs.

LTIPS-based high resolution mobile displays (greater than 300ppi), and especially the emergence of OLED technology, is evolving as the prevalent FPD technology. We believe we are well positioned, especially with our Vyper Excimer lasers and LB optical systems, to take advantage of this trend, including the possibility of LTIPS-based OLED TVs and flexible OLED displays.



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CO<sub>2</sub>, Avia, Rapid, Talisker, Helios and direct diode lasers all seem aligned with the need for related FPD touch panel, film cutting, light guide technology, repair, frit welding and glass cutting applications.

The trend for thinner and lighter devices is impacting the glass substrates used in today's mobile devices requiring thinner glass with higher degrees of mechanical strength and scratch resistance. Mechanical means of cutting these glass panels are no longer adequate to meet future requirements and we expect lasers to play an increased role. Our CO<sub>2</sub> and Rapid lasers are well positioned to take advantage of this trend.

Semiconductor devices look set to continue Moore's Law, shrinking device geometries for at least another decade, as well as expanding vertically into new 3D structures. As a result we believe our many UV laser sources (such as Azure, Paladin, Avia, Talisker, ExiStar and Matrix) will continue to find increasing adoption, since their unique optical properties align well with the process demands of a nanometer scale world.

The same lasers plus CO<sub>2</sub> are also widely adopted for back end Advanced Packaging and Interconnect (API) applications. With dimension roadmaps showing a decade of dimension shrink on PCBs, interconnects, Silicon & LED scribe widths and glass thickness, we believe that our portfolio of lasers aligns well with these demands as well as new processes that seem likely to be enabled by our lasers, to meet the increasing demands and decreasing tolerances of these markets.

### Materials processing

The market for low to medium power CO<sub>2</sub>, solid state and semiconductor lasers used in industrial materials processing has experienced a nice rebound and is expected to see continued growth driven by wider adoption of lasers in new processes especially in emerging markets. Key design wins as well as more favorable markets continue to support our growth in this area. These lasers represent a cost-effective manufacturing solution for cutting, joining, marking and engraving of non-metal materials including marking/coding, flat bed cutting, engraving, as well as the production of capital equipment for apparel and leather goods manufacturing.

The market for kW class fiber lasers has seen strong growth in recent years, replacing legacy multi-kW CO<sub>2</sub> lasers in metal cutting and other applications. This trend will likely continue into the future. We believe we are well positioned to benefit from this large and growing market with our line of kW fiber lasers.

Our four-pronged approach to the higher power industrial laser market provides us with a unique combination of high power, precision and compact size, which we believe will be highly desirable in existing manufacturing environments as well as those of the future. We offer kilowatt Diamond CO<sub>2</sub> lasers, Highlight fiber and direct diode lasers as well as the MetaBEAM family of turnkey laser machine tools. Several factors are enabling us to gain market share in the materials processing market. We have developed an expanded portfolio of lasers with a broad spectrum of wavelengths, enabling optimum solutions for virtually every metal and non-metal material type. At the same time, the reliability of these products has been achieved at even higher levels, lowering the cost of ownership.

### OEM components and instrumentation

The instrumentation market is seeing a gradual migration from the use of mature laser technologies, such as water-cooled ion gas lasers, to new technologies, primarily based on solid state and semiconductor lasers. Using our unique portfolio of such lasers, as well as our patented OPSL technology, we are able to both assist and stimulate this transition as well as to be the technology of choice for developing applications such as security and clinical diagnostics. Our OPSL technology resulted in the first truly continuous wave solid-state UV laser which enables the use of UV in a clinical as well as a research environment. Furthermore we anticipate greater future opportunities in bio-instrumentation, including DNA sequencing, drug discovery, flow cytometry, and microscopy, based on our product enhancements and evolving market developments, particularly in increased migration from clinical to point-of-care diagnostics. Our newer laser technologies are the basis of a number of clinical procedures. In the area of photocoagulation, our Genesis OPSL yellow lasers are being used as the wavelength is particularly suitable for the treatment of blood vessels. In aesthetic laser procedures, we are an OEM supplier of CO<sub>2</sub> and semiconductor lasers to the major manufacturers of equipment used in the latest procedures in dermatology and hair removal. We supply excimer lasers used in refractive eye surgery and are actively involved in further developments in laser vision correction including use of ultrafast lasers in applications such as laser cataract surgery where higher precision and use of advanced implants enable better and more reliable patient outcomes. Laser cataract surgery is a relatively new

application which is expected to see strong growth over the next several years.

Scientific research and government programs

The scientific market benefited from stimulus funding during fiscal 2011, with applications in ultrashort pulses and in bio-research being the drivers of this anticipated expansion. We have recently seen the total amount of government-related funding for scientific research decline to pre-stimulus levels and it is unclear whether or to what extent the recent "U.S. fiscal

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cliff" experience will impact future government research funding. However, we believe that as we push the boundaries of performance and ease of use in our ultrafast lasers, we have the potential to capture a large share of the available market by enabling our customers to win funding for new research fields that drive discovery. While these markets remain highly competitive, we believe our leadership position and new product pipeline will drive attosecond science boundaries and biological imaging ease of use, enabling new research frontiers to be forged and we would expect a gain in market share as a result.

**MARKET APPLICATIONS**

We design, manufacture and market lasers, laser tools, precision optics and related accessories for a diverse group of customers. The following table lists our major markets and the Coherent technologies serving these markets.\*

Market	Application	Technology	
Microelectronics	Flat panel display	CO <sub>2</sub>	
		DPSS	
		Excimer	
	Advanced packaging and interconnects	Ultrafast	
		Semiconductor	
		CO <sub>2</sub>	
	Materials processing	Metal cutting, joining, surface treatment	DPSS
			Excimer
			Ultrafast
Laser marking and coding		CO <sub>2</sub>	
		DPSS	
		CO <sub>2</sub>	
OEM components and instrumentation	Non-metal cutting, drilling	DPSS	
		Excimer	
		Semiconductor	
	Bio-Instrumentation	Laser Machine Tools	
		DPSS	
		OPSL	
Scientific research and government programs	Graphic arts and display	Semiconductor	
		Ultrafast	
		OPSL	
	Medical therapy (OEM)	CO <sub>2</sub>	
		CO <sub>2</sub>	
		DPSS	
	All scientific applications	Ultrafast	
		Excimer	
		OPSL	
All scientific applications	Semiconductor		
	DPSS		
	Excimer		

OPSL  
Ultrafast

\*Coherent sells its laser measurement and control products into a number of these applications.

In addition to products we provide, we invest routinely in the core technologies needed to create substantial differentiation for our products in the marketplace. Our semiconductor, crystal and fiber facilities all maintain an external customer base providing value-added solutions. We direct significant engineering efforts to produce unique solutions targeted for internal consumption. These investments, once integrated into our broader product portfolio, provide our customers with

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uniquely differentiated solutions and the opportunity to substantially enhance the performance, reliability and capability of the products we offer.

### TECHNOLOGIES

#### Diode-pumped solid-state lasers

DPSS lasers use semiconductor lasers to pump a crystal to produce a laser beam. By changing the energy, optical components and the types of crystals used in the laser, different wavelengths and types of laser light can be produced. The efficiency, reliability, longevity and relatively low cost of DPSS lasers make them ideally suited for a wide range of OEM and end-user applications, particularly those requiring 24-hour operations. Our DPSS systems are compact and self-contained sealed units. Unlike conventional tools and other lasers, our DPSS lasers require minimal maintenance since they do not have internal controls or components that require adjusting and cleaning to maintain consistency. They are also less affected by environmental changes in temperature and humidity, which can alter alignment and inhibit performance in many systems.

We manufacture a variety of types of DPSS lasers for different applications including semiconductor inspection; advanced packaging and interconnects; laser pumping; spectroscopy; bio-agent detection; DNA sequencing; drug discovery; flow cytometry; forensics; computer-to-plate printing; entertainment lighting (display); medical; rapid prototyping and marking, welding, engraving, cutting and drilling.

#### Fiber lasers

Fiber lasers use semiconductor lasers to pump a doped optical fiber to produce a laser beam. The unique features of a fiber laser make them suitable for producing high power, continuous wave laser beams. We have introduced a 1 kilowatt fiber laser. Our fiber laser design has several unique features including a modular design for improved serviceability and diode bar based pumping. Due to packaging efficiency, diode bars reduce the overall cost of a fiber laser. Some of the most critical components inside a fiber laser include the gain fiber itself and the diodes providing the pump power. We are well positioned as a fiber laser supplier since we are vertically integrated with respect to these key technologies; we use diode bars and fiber manufactured in-house. We plan to continue to drive cost reduction in our diode laser pumps and demonstrate the scalability of the platform by moving up the power scale into the multi kilowatt regime. This platform will address the growing high power metal cutting and joining market.

#### Gas lasers (CO<sub>2</sub>, Excimer, Ion)

The breadth of our gas laser portfolio is industry leading, encompassing CO<sub>2</sub>, excimer and ion laser technologies. Gas lasers derive their name from the use of one or more gases as a lasing medium. They collectively span an extremely diverse and useful emission range, from the very deep ultraviolet to the far infrared. This diverse range of available wavelengths, coupled with high optical output power, and an abundance of other attractive characteristics, makes gas lasers extremely useful and popular for a variety of microelectronics, scientific, medical therapeutic and materials processing applications.

#### Optically Pumped Semiconductor Lasers ("OPSL")

Our OPSL platform is a surface emitting semiconductor laser that is energized or pumped by a semiconductor laser. The use of optical pumping circumvents inherent power scaling limitations of electrically pumped lasers, enabling very high powered devices. A wide range of wavelengths can be achieved by varying the semiconductor materials used in the device and changing the frequency of the laser beam using techniques common in solid state lasers. The platform leverages high reliability technologies developed for telecommunications and produces a compact, rugged, high power, single-mode laser.

Our OPSL products are well suited to a wide range of applications, including the bio-instrumentation, medical therapeutics and graphic arts and display markets. In fiscal 2009, our Genesis yellow laser continued to make progress in ophthalmology and we have expanded our offerings in the area of entertainment lighting using a variety of products across the visible spectrum. We also continue to expand our ultraviolet version of the OPSL platform called the Genesis, which was developed for the bio-instrumentation market.

#### Semiconductor lasers

High power edge emitting semiconductor diode lasers use the same principles as widely-used CD and DVD lasers, but produce significantly higher power levels. The advantages of this type of laser include smaller size, longer life, enhanced reliability and greater efficiency. We manufacture a wide range of discrete semiconductor laser products

with wavelengths ranging from 650nm to over 1000nm and output powers ranging from 1W to over 100W, with highly integrated products in the kW range. These products are available in a variety of industry standard form factors including the following: bare die,

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packaged and fiber coupled single emitters and bars, monolithic stacks, and fully integrated modules with microprocessor controlled units that contain power supplies and active coolers.

Our semiconductor lasers are used internally as the pump lasers in DPSS, fiber and OPSL products that are manufactured by us, as well as a wide variety of external medical, OEM, military and industrial applications, including aesthetic (hair removal, cosmetic dentistry), graphic arts, counter measures, rangefinders, target designators, and plastic welding.

### Ultrafast ("UF") Lasers

Ultrafast lasers are lasers generating light pulses with durations of a few femtoseconds ( $10^{-15}$  seconds) to a few tens of picoseconds ( $10^{-11}$  seconds). These types of lasers are used for medical, advanced microelectronics and materials processing applications as well as scientific research. UF laser oscillators generate a train of pulses at 50-100 MHz, with peak powers of tens of kilowatts, and UF laser amplifiers generate pulses at 1-2000 kHz, with peak powers up to several Terawatts.

The extremely short duration of UF laser pulses enables temporally resolving fast events like the dynamics of atoms or electrons. In addition, the high peak power enables so-called non-linear effects where several photons can be absorbed by a molecule at the same time. This type of process enables applications like multi-photon excitation microscopy or UF ablation of materials with high precision and minimal thermal damage.

### SALES AND MARKETING

We primarily market our products in the United States through a direct sales force. Our foreign sales are made principally to customers in South Korea, Japan, Germany and other European and Asia-Pacific countries. We sell internationally through direct sales personnel located in Canada, France, Germany, Italy, Japan, the Netherlands, China, South Korea, Taiwan and the United Kingdom, as well as through independent representatives in certain jurisdictions around the world. Foreign sales accounted for 77% of our total net sales in fiscal 2013, 76% of our total net sales in fiscal 2012 and 74% of our total net sales in fiscal 2011. In fiscal 2013, sales to Asian markets continued to grow at a faster rate than sales to other geographic regions. Sales made to independent representatives and distributors are generally priced in U.S. dollars. A large portion of foreign sales that we make directly to customers are priced in local currencies and are therefore subject to currency exchange fluctuations. Foreign sales are also subject to other normal risks of foreign operations such as protective tariffs, export and import controls and political instability. We had one customer during fiscal 2013 who contributed more than 10% of revenue, Advanced Process Systems Corporation. We had two customers during fiscal 2012 who contributed more than 10% of revenue, Japan Steel Works, Ltd. and Advanced Process Systems Corporation. There were no major customers over 10% of revenues for fiscal 2011.

To support our sales efforts we maintain and continue to invest in a number of applications centers around the world, where our applications experts work closely with customers on developing laser processes to meet their manufacturing needs. The applications span a wide range, but are mostly centered around the materials processing and microelectronics markets. Locations include several facilities in the US, Europe and Asia.

We maintain customer support and field service staff in major markets within the United States, Europe, Japan, China, South Korea, Taiwan and other Asia-Pacific countries. This organization works closely with customers, customer groups and independent representatives in servicing equipment, training customers to use our products and exploring additional applications of our technologies.

We typically provide parts and service warranties on our lasers, laser-based systems, optical and laser components and related accessories and services. Warranties on some of our products and services may be shorter or longer than one year. Warranty reserves, as reflected on our consolidated balance sheets, have generally been sufficient to cover product warranty repair and replacement costs. The weighted average warranty period covered is approximately 15 months.

### RESEARCH AND DEVELOPMENT

We are constantly developing and introducing new products as well as improving and refining existing products to better serve the markets we participate in. Our development efforts are focused on designing and developing products, services and solutions that anticipate customers' changing needs and emerging technological trends. Our efforts are also focused on identifying the areas where we believe we can make valuable contributions. Research and

development expenditures for fiscal 2013 were \$82.8 million, or 10.2% of net sales compared to \$78.3 million, or 10.2% of net sales for fiscal 2012 and \$81.2 million, or 10.1% of net sales for fiscal 2011. We work closely with customers, both individually and through our sponsored seminars, to develop products to meet customer application and performance needs. In addition, we are working with leading research and educational institutions to develop new photonics based solutions.



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### MANUFACTURING

#### Strategies

One of our core manufacturing strategies is to tightly control our supply of key parts, components, sub-assemblies and outsourcing partners. We primarily utilize vertical integration when we have proprietary internal capabilities that are not cost-effectively available from external sources. We believe this is essential to maintain high quality products and enable rapid development and deployment of new products and technologies. We provide customers with 24-hour technical expertise and quality that is International Organization for Standardization ("ISO") certified at our principal manufacturing sites.

Committed to quality and customer satisfaction, we design and produce many of our own components and sub-assemblies in order to retain quality and performance control. We have also outsourced certain components, sub-assemblies and finished goods where we can maintain our high quality standards while improving our cost structure.

As part of our strategy to increase our market share and customer support in Asia as well as our continuing efforts to manage costs, we acquired the business assets of privately-held Hypertronics in the second quarter of fiscal 2011. Hypertronics' assets included an engineering and integration center in Singapore and a low cost manufacturing facility in Penang, Malaysia. We have increased the footprint of both the Singapore and Malaysia factories and are using these operations to expand our laser manufacturing and repair activities in Asia. This will allow us to reduce service response time and inventories, providing benefits to us and to our customers. We have also established an International Procurement Office in Singapore and have started to increase our sourcing of materials from Asia to reduce material costs on a global basis. In fiscal 2012, we opened a tube refurbishment manufacturing site in South Korea to better service our customers in that region. In fiscal 2013, we expanded our manufacturing presence in Germany through the acquisitions of Innolight and Lumera.

We have designed and implemented proprietary manufacturing tools, equipment and techniques in an effort to provide products that differentiate us from our competitors. These proprietary manufacturing techniques are utilized in a number of our product lines including our gas laser production, crystal growth, beam alignment as well as the wafer growth for our semiconductor and optically pumped semiconductor laser product family.

Raw materials or sub-components required in the manufacturing process are generally available from several sources. However, we currently purchase several key components and materials, including exotic materials, crystals and optics, used in the manufacture of our products from sole source or limited source suppliers. We also purchase assemblies and turnkey solutions from contract manufacturers based on our proprietary designs. We rely on our own production and design capability to manufacture and specify certain strategic components, crystals, fibers, semiconductor lasers, lasers and laser based systems.

For a discussion of the importance to our business of, and the risks attendant to sourcing, see "Risk Factors" in item 1A — "We depend on sole source or limited source suppliers, both internal and external, for some of our key components and materials, including exotic materials, certain cutting-edge optics and crystals, in our products, which make us susceptible to supply shortages or price fluctuations that could adversely affect our business."

#### Operations

Our products are manufactured at our sites in Santa Clara and Sunnyvale, California; Wilsonville, Oregon; East Hanover, New Jersey; Bloomfield, Connecticut; Salem, New Hampshire; Lübeck, Germany; Göttingen, Germany; Kaiserslautern, Germany; Hannover, Germany; Glasgow, Scotland; Kallang Sector, Singapore; and Penang, Malaysia. In addition, we also use contract manufacturers for the production of certain assemblies and turnkey solutions. Our ion gas lasers, a portion of our DPSS lasers that are used in microelectronics, scientific research and materials processing applications, semiconductor lasers, fiber lasers and ultrafast scientific lasers are manufactured at our Santa Clara, California site. Our laser diode module products, laser instrumentation products, test and measurement equipment products are manufactured in Wilsonville, Oregon. We manufacture exotic crystals in East Hanover, New Jersey and both active and passive fibers are manufactured in our Salem, New Hampshire facility. Our CO<sub>2</sub> gas lasers are manufactured in Bloomfield, Connecticut. We manufacture a portion of our DPSS lasers used in microelectronics and OEM components and instrumentation applications in Lübeck, Germany. We manufacture a portion of our DPSS lasers used in microelectronics, OEM components and instrumentation and materials processing applications in

Kaiserslautern, Germany. We manufacture a portion of our DPSS lasers used in microelectronics and scientific applications in Hannover, Germany. Our excimer gas laser products are manufactured in Göttingen, Germany. We manufacture the fiber-based lasers and a portion of our DPSS lasers used in microelectronics and scientific research applications in Glasgow, Scotland. Our facility in Sunnyvale, California grows the aluminum-free materials that are incorporated into our semiconductor lasers. We have transferred several products and subassemblies for manufacture at our Singapore and Malaysia facilities and we are in the process of transferring additional product manufacturing to Singapore and Malaysia as part of our Asia strategy. We refurbish excimer tubes at our manufacturing site in South Korea.

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### INTELLECTUAL PROPERTY

We rely on a combination of patent, copyright, trademark and trade secret laws and restrictions on disclosure to protect our intellectual property rights. As of September 28, 2013, we held approximately 429 U.S. and foreign patents, which expire from 2014 through 2030 (depending on the payment of maintenance fees) and we have approximately 156 additional pending patent applications that have been filed. The issued patents cover various products in all of the major markets that we serve.

For a discussion of the importance to our business of, and the risks attendant to intellectual property rights, see "Risk Factors" in Item 1A — "We may not be able to protect our proprietary technology which could adversely affect our competitive advantage" and "We may, in the future, be subject to claims or litigation from third parties, for claims of infringement of their proprietary rights or to determine the scope and validity of our proprietary rights or the proprietary rights of competitors or other rights holders. These claims could result in costly litigation and the diversion of our technical and management personnel. Adverse resolution of litigation may harm our operating results or financial condition."

### COMPETITION

Competition in the various photonics markets in which we provide products is very intense. We compete against a number of companies including CVI Melles Griot, GSI Group, Inc., IPG Photonics Corporation, JDS Uniphase Corporation, Newport Corporation, Rofin-Sinar Technologies, Inc., and Trumpf GmbH, as well as other smaller companies. We compete globally based on our broad product offering, reliability, cost, and performance advantages for the widest range of commercial and scientific research applications. Other considerations by our customers include warranty, global service and support and distribution.

### BACKLOG

At fiscal 2013 year-end, our backlog of orders scheduled for shipment (within one year) was \$285.8 million compared to \$352.8 million at fiscal 2012 and \$356.5 million at fiscal 2011 year-end. By segment, backlog for SLS was \$204.7 million, \$272.1 million and \$265.9 million, respectively, at fiscal 2013, 2012 and 2011 year-ends. Backlog for CLC was \$81.1 million, \$80.7 million and \$90.6 million, respectively, at fiscal 2013, 2012 and 2011 year-ends. The decrease in SLS backlog from fiscal 2012 to fiscal 2013 year-end is primarily due to timing of large excimer laser annealing orders for the flat panel display market. Orders used to compute backlog are generally cancelable without substantial penalties. Historically, the rate of cancellation experienced by us has not been significant though we cannot guarantee that cancellations will not increase in the future.

### SEASONALITY

We have historically experienced decreased bookings and revenue in the first fiscal quarter compared to other quarters in our fiscal year due to the impact of time off and business closures at many of our customers due to year-end holidays. This historical pattern should not be considered a reliable indicator of the Company's future net sales or financial performance.

### EMPLOYEES

As of fiscal 2013 year-end, we had 2,514 employees. Approximately 391 of our employees are involved in research and development; 1,530 of our employees are involved in operations, manufacturing, service and quality assurance; and 593 of our employees are involved in sales, order administration, marketing, finance, information technology and other administrative functions. Our success will depend in large part upon our ability to attract and retain employees. We face competition in this regard from other companies, research and academic institutions, government entities and other organizations. We consider our relations with our employees to be good.

### ACQUISITIONS

In December 2012, we acquired privately held Lumera Laser GmbH (Kaiserslautern, Germany) for approximately \$51.5 million, excluding transaction costs. Lumera manufactures ultrafast solid state lasers for microelectronics, OEM medical and materials processing applications. Lumera has been included in our Specialty Lasers and Systems segment.

In October 2012, we acquired all of the outstanding shares of Innolight Innovative Laser and Systemtechnik GmbH for approximately \$18.3 million, excluding transaction costs. Innolight provides a core technology building block for

an emerging class of commercial, sub-nanosecond lasers for microelectronics manufacturing. Its semiconductor-based architecture delivers pulsed output that can be amplified by conventional or fiber amplifiers to ultimately deliver infrared, green or ultraviolet light capable of processing a range of materials. Innolight has been included in our Specialty Lasers and Systems segment.

In July 2012, we acquired all of the outstanding shares of MiDAZ Lasers Ltd for approximately \$3.8 million in cash. MiDAZ was a technology-based acquisition. We intend to utilize the acquired technology in low cost, compact pulsed solid state lasers. MiDAZ has been included in our Specialty Lasers and Systems segment.

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In January 2011, we acquired all of the assets and assumed certain liabilities of Hypertronics Pte Ltd for approximately \$14.5 million in cash. Hypertronics designs and manufactures laser and vision-based tools for flat panel, storage, semiconductor and solar applications at facilities in Singapore and Malaysia. Hypertronics has been included in our Specialty Lasers and Systems segment.

Please refer to "Note 4. Business Combinations" of Notes to Consolidated Financial Statements under Item 15 of this annual report for further discussion of the acquisition completed during fiscal 2013.

### RESTRUCTURINGS AND CONSOLIDATION

There were no new restructuring activities undertaken during fiscal 2013 or fiscal 2012. During the first quarter of fiscal 2010, we acquired the assets and certain liabilities of StockerYale's laser module product line in Montreal, Canada and began to transition those activities to contract manufacturers and other Coherent facilities in Salem, Massachusetts, Wilsonville, Oregon and Sunnyvale, California. The transfer was completed in the second quarter of fiscal 2011.

During the second quarter of fiscal 2009, we announced our plans to close our facilities in Tampere, Finland and St. Louis, Missouri. The closure of our St. Louis, Missouri and Yokohama, Japan sites were completed in the fourth quarter of fiscal 2009. The closure of our Finland site was scheduled for completion by the end of fiscal 2010, but we decided to delay the closure due to increased demand for products manufactured in Finland. In the second quarter of fiscal 2011, we ceased manufacturing operations in our Finland facility and we exited the facility in the third quarter of fiscal 2011.

### GOVERNMENT REGULATION

#### Environmental regulation

Our operations are subject to various federal, state, local and foreign environmental protection regulations relating to the use, storage, handling and disposal of regulated materials, chemicals, various radioactive materials and certain waste products. In the United States, we are subject to the federal regulation and control of the Environmental Protection Agency. Comparable authorities are involved in other countries. Such rules are subject to change by the governing agency and we monitor those changes closely. We expect all operations to meet the legal and regulatory environmental requirements and believe that compliance with those regulations will not have a material adverse effect on our capital expenditures, earnings and competitive and financial position.

Although we believe that our safety procedures for using, handling, storing and disposing of such materials comply with the standards required by federal and state laws and regulations, we cannot completely eliminate the risk of accidental contamination or injury from these materials. In the event of such an accident involving such materials, we could be liable for damages and such liability could exceed the amount of our liability insurance coverage and the resources of our business.

We may face potentially increasing complexity in our product designs and procurement operations due to the evolving nature of product compliance standards. Those standards may impact the material composition of our products entering specific markets. Such regulations went into effect in the European Union ("EU") in 2006, and China in 2007. We could face significant costs and liabilities in connection with product take-back legislation. Beginning in 2006, the EU Waste Electrical and Electronic Equipment Directive made producers of electrical goods financially responsible for specified collection, recycling, treatment and disposal of past and future covered products. In addition, the EU has added the Registration, Evaluation and Authorization of Chemicals Regulation, otherwise known as the REACH Regulation, which further regulates substances and products imported, manufactured or sold within the EU. Similar laws are now pending in various jurisdictions around the world, including the United States.

#### Environmental liabilities

Our operations are subject to various laws and regulations governing the environment, including the discharge of pollutants and the management and disposal of hazardous substances. As a result of our historic as well as on-going operations, we could incur substantial costs, including remediation costs. The costs under environmental laws and the timing of these costs are difficult to predict. Our accruals for such costs and liabilities may not be adequate because the estimates on which the accruals are based depend on a number of factors including the nature of the matter, the

complexity of the site, site geology, the nature and extent of contamination, the type of remedy, the outcome of discussions with regulatory agencies and other Potentially Responsible Parties (PRPs) at multi-party sites and the number and financial viability of other PRPs.

We further discuss the impact of environmental regulation under "Risk Factors" in Item 1A — "Compliance or the failure to comply with current and future environmental regulations could cause us significant expense."

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**SEGMENT INFORMATION**

We are organized into two operating segments: Specialty Lasers and Systems ("SLS") and Commercial Lasers and Components ("CLC"). This segmentation reflects the go-to-market strategies for various products and markets. SLS develops and manufactures configurable, advanced-performance products largely serving the microelectronics, scientific research and government programs and OEM components and instrumentation markets. The size and complexity of many of the SLS products require service to be performed at the customer site by factory-trained field service engineers. While both segments work to deliver cost-effective photonics solutions, CLC focuses on higher volume products that are offered in set configurations. The product architectures are designed for easy exchange at the point of use such that product service and repairs are based upon advanced replacement and depot (i.e., factory) repair. CLC's primary markets include materials processing, OEM components and instrumentation and microelectronics. We have identified SLS and CLC as operating segments for which discrete financial information was available. Both units have dedicated engineering, manufacturing, product business management and product line management functions. A small portion of our outside revenue is attributable to projects and recently developed products for which a segment has not yet been determined. The associated direct and indirect costs are presented in the category of Corporate and other, along with other corporate costs.

**FINANCIAL INFORMATION ABOUT FOREIGN AND DOMESTIC OPERATIONS AND EXPORT SALES**

Financial information relating to foreign and domestic operations for fiscal years 2013, 2012 and 2011, is set forth in Note 18, "Segment and Geographic Information" of our Notes to Consolidated Financial Statements under Item 15 of this annual report.

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ITEM 1A. RISK FACTORS

You should carefully consider the followings risks when considering an investment in our Common Stock. These risks could materially affect our business, results of operations or financial condition, cause the trading price of our Common Stock to decline materially or cause our actual results to differ materially from those expected or those expressed in any forward-looking statements made by us. These risks are not exclusive, and additional risks to which we are subject include, but are not limited to, the factors mentioned under “Forward-Looking Statements” and the risk of our businesses described elsewhere in this annual report. Additionally, these risks and uncertainties described herein are not the only ones facing us. Other events that we do not currently anticipate or that we currently deem immaterial also may affect our business, results of operations or financial condition.

BUSINESS ENVIRONMENT AND INDUSTRY TRENDS

Our operating results, including net sales, net income (loss) and adjusted EBITDA in dollars and as a percentage of net sales, as well as our stock price have varied in the past, and our future operating results will continue to be subject to quarterly and annual fluctuations based upon numerous factors, including those discussed in this Item 1A and throughout this report. Our stock price will continue to be subject to daily variations as well. Our future operating results and stock price may not follow any past trends or meet our guidance and expectations.

Our net sales and operating results, such as adjusted EBITDA percentage, net income (loss) and operating expenses, and our stock price have varied in the past and may vary significantly from quarter to quarter and from year to year in the future. We believe a number of factors, many of which are outside of our control, could cause these variations and make them difficult to predict, including:

- general economic uncertainties in the macroeconomic and local economies facing us, our customers and the markets we serve;
- fluctuations in demand for our products or downturns in the industries that we serve;
- the ability of our suppliers, both internal and external, to produce and deliver components and parts, including sole or limited source components, in a timely manner, in the quantity, quality and prices desired;
- the timing of receipt and conversion of bookings to net sales;
- the concentration of a significant amount of our backlog, and resultant net sales, with a few customers;
- cancellation of customer orders and rescheduling of shipments;
- fluctuations in our product mix;
- the ability of our customers' other suppliers to provide sufficient material to support our customers' products;
- currency fluctuations and stability, in particular the Euro, the Japanese Yen, the Korean Won, the Chinese Renminbi and the US dollar as compared to other currencies;
- commodity pricing;
- introductions of new products and product enhancements by our competitors, entry of new competitors into our markets, pricing pressures and other competitive factors;



our ability to develop, introduce, manufacture and ship new and enhanced products in a timely manner without defects;

our ability to manage our capacity and that of our suppliers;

our increased reliance on contract manufacturing;

the rate of market acceptance of our new products;

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- the ability of our customers to pay for our products;
- expenses associated with acquisition-related activities;
- seasonal sales trends;
- access to applicable credit markets by us, our customers and their end customers;
- delays or reductions in customer purchases of our products in anticipation of the introduction of new and enhanced products by us or our competitors;
- our ability to control expenses;
- the level of capital spending of our customers;
- potential excess and/or obsolescence of our inventory;
- costs and timing of adhering to current and developing governmental regulations and reviews relating to our products and business;
- costs related to acquisitions of technology or businesses;
- impairment of goodwill, intangible assets and other long-lived assets;
- our ability to meet our expectations and forecasts and those of public market analysts and investors;
- the availability of research funding by governments with regard to our customers in the scientific business, such as universities;
- continued government spending on defense-related projects where we are a subcontractor;
- maintenance of supply relating to products sold to the government on terms which we would prefer not to accept;
- changes in policy, interpretations, or challenges to the allowability of costs incurred under government cost accounting standards;
- damage to our reputation as a result of coverage in social media, Internet blogs or other media outlets;
- managing our and other parties' compliance with contracts in multiple languages and jurisdictions;
- managing our internal and third party sales representatives and distributors, including compliance with all applicable laws;
- impact of government economic policies on macroeconomic conditions;
- costs and expenses from litigation;
-

costs associated with designing around or payment of licensing fees associated with issued patents in our fields of business;

government support of the alternative energy industries, such as solar;

the future impact of legislation, rulemaking, and changes in accounting, tax, defense procurement, or export policies; and

distraction of management related to acquisition or divestment activities.

In addition, we often recognize a substantial portion of our sales in the last month of our fiscal quarters. Our expenses for any given quarter are typically based on expected sales and if sales are below expectations in any given quarter, the adverse

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impact of the shortfall on our operating results may be magnified by our inability to adjust spending quickly enough to compensate for the shortfall. We also base our manufacturing on our forecasted product mix for the quarter. If the actual product mix varies significantly from our forecast, we may not be able to fill some orders during that quarter, which would result in delays in the shipment of our products. Accordingly, variations in timing of sales, particularly for our higher priced, higher margin products, can cause significant fluctuations in quarterly operating results.

Due to these and other factors, such as varying product mix, we believe that quarter-to-quarter and year-to-year comparisons of our historical operating results may not be meaningful. You should not rely on our results for any quarter or year as an indication of our future performance. Our operating results in future quarters and years may be below public market analysts' or investors' expectations, which would likely cause the price of our stock to fall. In addition, over the past several years, the stock market has experienced extreme price and volume fluctuations that have affected the stock prices of many technology companies both in and outside our industry. There has not always been a direct correlation between this volatility and the performance of particular companies subject to these stock price fluctuations. Further, over the last twelve months, equity markets around the world have significantly fluctuated across most sectors. These factors, as well as general economic and political conditions or investors' concerns regarding the credibility of corporate financial statements, may have a material adverse effect on the market price of our stock in the future.

We are exposed to risks associated with worldwide economic conditions and related uncertainties which could negatively impact demand for our products and results of operations.

Volatility and disruption in the capital and credit markets, depressed consumer confidence, government economic policies, negative economic conditions, volatile corporate profits and reduced capital spending could negatively impact demand for our products. In particular, it is difficult to develop and implement strategy, sustainable business models and efficient operations, as well as effectively manage supply chain relationships in the face of such conditions including uncertainty regarding the ability of some of our suppliers to continue operations and provide us with uninterrupted supply flow. Our ability to maintain our research and development investments in our broad product offerings may be adversely impacted in the event that our sales decline and do not increase in the future. Spending and the timing thereof by consumers and businesses have a significant impact on our results and, where such spending is delayed or canceled, it could have a material negative impact on our operating results. The current global economic conditions remain uncertain and challenging. Weakness in our end markets could negatively impact our net sales, gross margin and operating expenses, and consequently have a material adverse effect on our business, financial condition and results of operations.

Continued uncertainty in U.S. and global fiscal policy has likely had a recent adverse impact on global financial markets and overall economic activity. Should this uncertain financial policy continue, it would likely negatively impact global economic activity, including possibly sending the U.S. into a new recession. It would also likely have negative repercussions on U.S. and global credit and financial markets, and further exacerbate sovereign debt concerns in the European Union. All of these factors would likely adversely impact the global demand for our products and the performance of our investments, and would likely have a material adverse effect on our business, results of operations and financial condition.

The financial turmoil which recently affected the banking system and financial markets continues to negatively impact financial institutions and has resulted in tighter credit markets, and lower levels of liquidity in some financial markets. There could be a number of follow-on effects from the tightened credit environment on our business, including the insolvency of key suppliers or their inability to obtain credit to finance development and/or manufacture products resulting in product delays; inability of customers to obtain credit to finance purchases of our products and/or customer insolvencies; and failure of financial institutions negatively impacting our treasury functions. In the event our customers are unable to obtain credit or otherwise pay for our shipped products it could significantly impact our

ability to collect on our outstanding accounts receivable. Other income and expense also could vary materially from expectations depending on gains or losses realized on the sale or exchange of financial instruments; impairment charges resulting from revaluations of debt and equity securities and other investments; interest rates; cash balances; and changes in fair value of derivative instruments. Volatility in the financial markets and any overall economic uncertainty increase the risk that the actual amounts realized in the future on our financial instruments could differ significantly from the fair values currently assigned to them. Uncertainty about current global economic conditions could also continue to increase the volatility of our stock price.

In addition, political and social turmoil related to international conflicts, terrorist acts and civil unrest may put further pressure on economic conditions in the United States and abroad. Unstable economic, political and social conditions make it difficult for our customers, our suppliers and us to accurately forecast and plan future business activities. If such conditions persist, our business, financial condition and results of operations could suffer. Additionally, unstable economic conditions can provide significant pressures and burdens on individuals, which could cause them to engage in inappropriate business conduct. See “Part II, Item 9A. CONTROLS AND PROCEDURES.”

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We depend on sole source or limited source suppliers, both internal and external, for some of our key components and materials, including exotic materials, certain cutting-edge optics and crystals, in our products, which make us susceptible to supply shortages or price fluctuations that could adversely affect our business.

We currently purchase several key components and materials used in the manufacture of our products from sole source or limited source suppliers, both internal and external. Our failure to timely receive these key components and materials, such as the large optics used in our flat panel display manufacturing applications, could cause delays in the shipment of our products. Some of these suppliers are relatively small private companies that may discontinue their operations at any time and which may be particularly susceptible to prevailing economic conditions. Some of our suppliers are located in regions which may be susceptible to natural disasters, such as the flooding in Thailand and the earthquake, tsunami and resulting nuclear disaster in Japan in recent years and last year's severe flooding and power loss in the Eastern part of the United States. We typically purchase our components and materials through purchase orders or agreed upon terms and conditions and we do not have guaranteed supply arrangements with many of these suppliers. Some of our products, particularly in the flat panel display industry, require designs and specifications which are at the cutting-edge of available technologies. Our and our customers' designs and specifications frequently change to meet rapidly evolving market demands. Accordingly certain of our products require components and supplies which may be technologically difficult and unpredictable to manufacture. These characteristics further pressure the timely delivery of such components. We may fail to obtain these supplies in a timely manner in the future. We may experience difficulty identifying alternative sources of supply for certain components used in our products and may have to incur expenses and management distraction in assisting our current and future suppliers to meet our and our customers' technical requirements. We would experience further delays while identifying, evaluating and testing the products of these potential alternative suppliers. Furthermore, financial or other difficulties faced by these suppliers or significant changes in demand for these components or materials could limit their availability. We continue to consolidate our supply base and move supplier locations. When we transition locations we may increase our inventory of such products as a "safety stock" during the transition, which may cause the amount of inventory reflected on our balance sheet to increase. Additionally, many of our customers rely on sole source suppliers. In the event of a disruption of our customers' supply chain, orders from our customers could decrease or be delayed.

Any interruption or delay in the supply of any of these components or materials, or the inability to obtain these components and materials from alternate sources at acceptable prices and within a reasonable amount of time, or our failure to properly manage these moves, would impair our ability to meet scheduled product deliveries to our customers and could cause customers to cancel orders. We have historically relied exclusively on our own production capability to manufacture certain strategic components, crystals, semiconductor lasers, lasers and laser-based systems. Because we manufacture, package and test these components, products and systems at our own facilities, and such components, products and systems are not readily available from other sources, any interruption in manufacturing would adversely affect our business. In addition, our failure to achieve adequate manufacturing yields of these items at our manufacturing facilities may materially and adversely affect our operating results and financial condition.

We participate in the microelectronics market, which requires significant research and development expenses to develop and maintain products and a failure to achieve market acceptance for our products could have a significant negative impact on our business and results of operations.

The microelectronics market is characterized by rapid technological change, frequent product introductions, the volatility of product supply and demand, changing customer requirements and evolving industry standards. The nature of this market requires significant research and development expenses to participate, with substantial resources invested in advance of material sales of our products to our customers in this market. Additionally, our product offerings may become obsolete given the frequent introduction of alternative technologies. In the event either our customers' or our products fail to gain market acceptance, or the microelectronics market fails to grow, it would likely

have a significant negative effect on our business and results of operations.

We participate in the flat panel display market, which has a relatively limited number of end customer manufacturers. Our backlog, timing of net sales and results of operations could be negatively impacted in the event our customers reschedule orders.

In the flat panel display market, there are a relatively limited number of manufacturers who are the end customers for our annealing products. Given macroeconomic conditions, varying consumer demand and technical process limitations at manufacturers, our customers may seek to reschedule or cancel orders. Challenges in meeting evolving technological requirements for these complex products by us and our suppliers could also result in delays in shipments, rescheduled or canceled orders by our customers. This could negatively impact our backlog, timing of net sales and results of operations.

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Additionally, as our backlog includes higher average selling price flat panel display systems, any delays or cancellation of shipments could have a material adverse effect on our financial results.

Some of our laser systems are complex in design and may contain defects that are not detected until deployed by our customers, which could increase our costs and reduce our net sales.

Lasers and laser systems are inherently complex in design and require ongoing regular maintenance. The manufacture of our lasers, laser products and systems involves a highly complex and precise process. As a result of the technological complexity of our products, in particular the flat panel annealing systems, changes in our or our suppliers' manufacturing processes or the inadvertent use of defective materials by us or our suppliers could result in a material adverse effect on our ability to achieve acceptable manufacturing yields and product reliability. To the extent that we do not achieve and maintain our projected yields or product reliability, our business, operating results, financial condition and customer relationships would be adversely affected. We provide warranties on a majority of our product sales, and reserves for estimated warranty costs are recorded during the period of sale. The determination of such reserves requires us to make estimates of failure rates and expected costs to repair or replace the products under warranty. We typically establish warranty reserves based on historical warranty costs for each product line. If actual return rates and/or repair and replacement costs differ significantly from our estimates, adjustments to cost of sales may be required in future periods which could have an adverse effect on our results of operations.

Our customers may discover defects in our products after the products have been fully deployed and operated under the end user's peak stress conditions. In addition, some of our products are combined with products from other vendors, which may contain defects. As a result, should problems occur, it may be difficult to identify the source of the problem. If we are unable to identify and fix defects or other problems, we could experience, among other things:

- loss of customers or orders;
- increased costs of product returns and warranty expenses;
- damage to our brand reputation;
- failure to attract new customers or achieve market acceptance;
- diversion of development and engineering resources; and
- legal actions by our customers and/or their end users.

The occurrence of any one or more of the foregoing factors could seriously harm our business, financial condition and results of operations.

Continued volatility in the semiconductor manufacturing industry could adversely affect our business, financial condition and results of operations.

A portion of our net sales in the microelectronics market depend on the demand for our products by semiconductor equipment companies. The semiconductor market has historically been characterized by sudden and severe cyclical variations in product supply and demand, which have often severely affected the demand for semiconductor manufacturing equipment, including laser-based tools and systems. The timing, severity and duration of these market cycles are difficult to predict, and we may not be able to respond effectively to these cycles. The continuing



uncertainty in this market severely limits our ability to predict our business prospects or financial results in this market.

During industry downturns, our net sales from this market may decline suddenly and significantly. Our ability to rapidly and effectively reduce our cost structure in response to such downturns is limited by the fixed nature of many of our expenses in the near term and by our need to continue our investment in next-generation product technology and to support and service our products. In addition, due to the relatively long manufacturing lead times for some of the systems and subsystems we sell to this market, we may incur expenditures or purchase raw materials or components for products we cannot sell. Accordingly, downturns in the semiconductor capital equipment market may materially harm our operating results. Conversely, when upturns in this market occur, we must be able to rapidly and effectively increase our manufacturing capacity to meet increases in customer demand that may be extremely rapid, and if we fail to do so we may lose business to our competitors and our relationships with our customers may be harmed.

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Our cash and cash equivalents and short-term investments are managed through various banks around the world and volatility in the capital and credit market conditions could cause financial institutions to fail or materially harm service levels provided by such banks, both of which could have an adverse affect on our ability to timely access funds.

World capital and credit markets have been and may continue to experience volatility and disruption. In some cases, the markets have exerted downward pressure on stock prices and credit capacity for certain issuers, as well as pressured the solvency of some financial institutions. These financial institutions, including banks, have had difficulty timely performing regular services and in some cases have failed or otherwise been largely taken over by governments. We maintain our cash, cash equivalents and short-term investments with a number of financial institutions around the world. Should some or all of these financial institutions fail or otherwise be unable to timely perform requested services, we would likely have a limited ability to timely access our cash deposited with such institutions, or, in extreme circumstances the failure of such institutions could cause us to be unable to access cash for the foreseeable future. If we are unable to quickly access our funds when we need them, we may need to increase the use of our existing credit lines or access more expensive credit, if available. If we are unable to access our cash or if we access existing or additional credit or are unable to access additional credit, it could have a negative impact on our operations, including our reported net income.

We are exposed to credit risk and fluctuations in the market values of our investment portfolio.

Although we have not recognized any material losses on our cash, cash equivalents and short-term investments, future declines in their market values could have a material adverse effect on our financial condition and operating results. Given the global nature of our business, we have investments both domestically and internationally. There has recently been growing pressure on the creditworthiness of sovereign nations, particularly in Europe where a significant portion of our cash, cash equivalents and short-term investments are invested, which results in corresponding pressure on the valuation of the securities issued by such nations. Additionally, our overall investment portfolio is often concentrated in certificates of deposit and money market funds. We maintain a mix of government-issued securities. Credit ratings and pricing of these investments can be negatively impacted by liquidity, credit deterioration or losses, financial results, or other factors. Additionally, liquidity issues or political actions by sovereign nations could result in decreased values for our investments in certain government securities. As a result, the value or liquidity of our cash, cash equivalents and short-term investments could decline or become materially impaired, which could have a material adverse effect on our financial condition and operating results. See “Item 7A. Quantitative and Qualitative Disclosures about Market Risk.”

Our future success depends on our ability to increase our sales volumes and decrease our costs to offset potential declines in the average selling prices (“ASPs”) of our products and, if we are unable to realize greater sales volumes and lower costs, our operating results may suffer.

Our ability to increase our sales volume and our future success depends on the continued growth of the markets for lasers, laser systems and related accessories, as well as our ability to identify, in advance, emerging markets for laser-based systems. We cannot assure you that we will be able to successfully identify, on a timely basis, new high-growth markets in the future. Moreover, we cannot assure you that new markets will develop for our products or our customers' products, or that our technology or pricing will enable such markets to develop. Future demand for our products is uncertain and will depend to a great degree on continued technological development and the introduction of new or enhanced products. If this does not continue, sales of our products may decline and our business will be harmed.

We have in the past experienced decreases in the ASPs of some of our products. As competing products become more widely available, the ASPs of our products may decrease. If we are unable to offset any decrease in our ASPs by

increasing our sales volumes, our net sales will decline. In addition, to maintain our gross margins, we must continue to reduce the cost of manufacturing our products while maintaining their high quality. From time to time, our products, like many complex technological products, may fail in greater frequency than anticipated. This can lead to further charges, which can result in higher costs, lower gross margins and lower operating results. Furthermore, as ASPs of our current products decline, we must develop and introduce new products and product enhancements with higher margins. If we cannot maintain our gross margins, our operating results could be seriously harmed, particularly if the ASPs of our products decrease significantly.

Our future success depends on our ability to develop and successfully introduce new and enhanced products that meet the needs of our customers.

Our current products address a broad range of commercial and scientific research applications in the photonics markets. We cannot assure you that the market for these applications will continue to generate significant or consistent demand for our products. Demand for our products could be significantly diminished by disrupting technologies or products that replace them

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or render them obsolete. Furthermore, the new and enhanced products in certain markets generally continue to be smaller in size and have lower ASPs, and therefore, we have to sell more units to maintain revenue levels. Accordingly, we must continue to invest in research and development in order to develop competitive products.

Our future success depends on our ability to anticipate our customers' needs and develop products that address those needs. Introduction of new products and product enhancements will require that we effectively transfer production processes from research and development to manufacturing and coordinate our efforts with those of our suppliers to achieve volume production rapidly. If we fail to transfer production processes effectively, develop product enhancements or introduce new products in sufficient quantities to meet the needs of our customers as scheduled, our net sales may be reduced and our business may be harmed.

We face risks associated with our foreign operations and sales that could harm our financial condition and results of operations.

For fiscal 2013, fiscal 2012 and fiscal 2011, 77%, 76% and 74%, respectively, of our net sales were derived from customers outside of the United States. We anticipate that foreign sales, particularly in Asia, will continue to account for a significant portion of our net sales in the foreseeable future.

A global economic slowdown or a natural disaster could have a negative effect on various foreign markets in which we operate, such as the earthquake, tsunami and resulting nuclear disaster during fiscal 2011 in Japan and last year's flooding in Thailand. Such a slowdown may cause us to reduce our presence in certain countries, which may negatively affect the overall level of business in such countries. Our foreign sales are primarily through our direct sales force. Additionally, some foreign sales are made through foreign distributors and resellers. Our foreign operations and sales are subject to a number of risks, including:

- longer accounts receivable collection periods;
- the impact of recessions and other economic conditions in economies outside the United States;
- unexpected changes in regulatory requirements;
- certification requirements;
- environmental regulations;
- reduced protection for intellectual property rights in some countries;
- potentially adverse tax consequences;
- political and economic instability;
- import/export regulations, tariffs and trade barriers;
- compliance with applicable United States and foreign anti-corruption laws;
- cultural and management differences;
- preference for locally produced products; and

shipping and other logistics complications.

Our business could also be impacted by international conflicts, terrorist and military activity, civil unrest and pandemic illness which could cause a slowdown in customer orders or cause customer order cancellations.

We are also subject to the risks of fluctuating foreign currency exchange rates, which could materially adversely affect the sales price of our products in foreign markets, as well as the costs and expenses of our foreign subsidiaries. While we use forward exchange contracts and other risk management techniques to hedge our foreign currency exposure, we remain exposed to the economic risks of foreign currency fluctuations.

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We may not be able to protect our proprietary technology which could adversely affect our competitive advantage.

Maintenance of intellectual property rights and the protection thereof is important to our business. We rely on a combination of patent, copyright, trademark and trade secret laws and restrictions on disclosure to protect our intellectual property rights. We cannot assure you that our patent applications will be approved, that any patents that may be issued will protect our intellectual property or that any issued patents will not be challenged by third parties. Other parties may independently develop similar or competing technology or design around any patents that may be issued to us. We cannot be certain that the steps we have taken will prevent the misappropriation of our intellectual property, particularly in foreign countries where the laws may not protect our proprietary rights as fully as in the United States. Further, we may be required to enforce our intellectual property or other proprietary rights through litigation, which, regardless of success, could result in substantial costs and diversion of management's attention. Additionally, there may be existing patents of which we are unaware that could be pertinent to our business and it is not possible for us to know whether there are patent applications pending that our products might infringe upon since these applications are often not publicly available until a patent is issued or published.

We may, in the future, be subject to claims or litigation from third parties, for claims of infringement of their proprietary rights or to determine the scope and validity of our proprietary rights or the proprietary rights of competitors or other rights holders. These claims could result in costly litigation and the diversion of our technical and management personnel. Adverse resolution of litigation may harm our operating results or financial condition.

In recent years, there has been significant litigation in the United States involving patents and other intellectual property rights. This has been seen in our industry, for example in the recently concluded patent-related litigation between IMRA America, Inc. ("Imra") and IPG Photonics Corporation and in Imra's recently brought litigation against two of our German subsidiaries. From time to time, like many other technology companies, we have received communications from other parties asserting the existence of patent rights, copyrights, trademark rights or other intellectual property rights which such third parties believe may cover certain of our products, processes, technologies or information. In the future, we may be a party to litigation to protect our intellectual property or as a result of an alleged infringement of others' intellectual property whether through direct claims or by way of indemnification claims of our customers, as, in some cases, we contractually agree to indemnify our customers against third-party infringement claims relating to our products. These claims and any resulting lawsuit, if successful, could subject us to significant liability for damages or invalidation of our proprietary rights. These lawsuits, regardless of their success, would likely be time-consuming and expensive to resolve and would divert management time and attention. Any potential intellectual property litigation could also force us to do one or more of the following:

- stop manufacturing, selling or using our products that use the infringed intellectual property;
- obtain from the owner of the infringed intellectual property right a license to sell or use the relevant technology, although such license may not be available on reasonable terms, or at all; or
- redesign the products that use the technology.

If we are forced to take any of these actions or are otherwise a party to lawsuits of this nature, we may incur significant losses for which we do not have insurance and our business may be seriously harmed. We do not have insurance to cover potential claims of this type.

If our goodwill or intangible assets become impaired, we may be required to record a significant charge to earnings.

Under accounting principles generally accepted in the United States, we review our intangible assets for impairment when events or changes in circumstances indicate the carrying value may not be recoverable. Goodwill is required to

be tested for impairment at least annually. Factors that may be considered in determining whether a change in circumstances indicating that the carrying value of our goodwill or other intangible assets may not be recoverable include declines in our stock price and market capitalization or future cash flows projections. We recorded a charge during the fourth quarter of fiscal 2012 related to the impairment of intangibles in our SLS operating segment relating to the decision to discontinue the legacy Hypertronics products. A decline in our stock price, or any other adverse change in market conditions, particularly if such change has the effect of changing one of the critical assumptions or estimates we used to calculate the estimated fair value of our reporting units, could result in a change to the estimation of fair value that could result in an impairment charge. Any such material charges, whether related to goodwill or purchased intangible assets, may have a material negative impact on our financial and operating results.

We depend on skilled personnel to operate our business effectively in a rapidly changing market, and if we are unable to retain existing or hire additional personnel when needed, our ability to develop and sell our products could be harmed.

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Our ability to continue to attract and retain highly skilled personnel will be a critical factor in determining whether we will be successful in the future. Recruiting and retaining highly skilled personnel in certain functions continues to be difficult. At certain locations where we operate, the cost of living is extremely high and it may be difficult to retain key employees and management at a reasonable cost. We may not be successful in attracting, assimilating or retaining qualified personnel to fulfill our current or future needs. Our failure to attract additional employees and retain our existing employees could adversely affect our growth and our business.

Our future success depends upon the continued services of our executive officers and other key engineering, sales, marketing, manufacturing and support personnel, any of whom may leave, which could harm our business and our results of operations.

The long sales cycles for our products may cause us to incur significant expenses without offsetting net sales.

Customers often view the purchase of our products as a significant and strategic decision. As a result, customers typically expend significant effort in evaluating, testing and qualifying our products before making a decision to purchase them, resulting in a lengthy initial sales cycle. While our customers are evaluating our products and before they place an order with us, we may incur substantial sales and marketing and research and development expenses to customize our products to the customers' needs. We may also expend significant management efforts, increase manufacturing capacity and order long lead-time components or materials prior to receiving an order. Even after this evaluation process, a potential customer may not purchase our products. As a result, these long sales cycles may cause us to incur significant expenses without ever receiving net sales to offset such expenses.

The markets in which we sell our products are intensely competitive and increased competition could cause reduced sales levels, reduced gross margins or the loss of market share.

Competition in the various photonics markets in which we provide products is very intense. We compete against a number of large public and private companies, including CVI Melles Griot, GSI Group, Inc., IPG Photonics Corporation, JDS Uniphase Corporation, Newport Corporation, Rofin-Sinar Technologies, Inc., and Trumpf GmbH, as well as other smaller companies. Some of our competitors are large companies that have significant financial, technical, marketing and other resources. These competitors may be able to devote greater resources than we can to the development, promotion, sale and support of their products. Some of our competitors are much better positioned than we are to acquire other companies in order to gain new technologies or products that may displace our product lines. Any of these acquisitions could give our competitors a strategic advantage. Any business combinations or mergers among our competitors, forming larger companies with greater resources, could result in increased competition, price reductions, reduced margins or loss of market share, any of which could materially and adversely affect our business, results of operations and financial condition.

Additional competitors may enter the markets in which we serve, both foreign and domestic, and we are likely to compete with new companies in the future. We may encounter potential customers that, due to existing relationships with our competitors, are committed to the products offered by these competitors. Further, our current or potential customers may determine to develop and produce products for their own use which are competitive to our products. As a result of the foregoing factors, we expect that competitive pressures may result in price reductions, reduced margins, loss of sales and loss of market share. In addition, in markets where there are a limited number of customers, competition is particularly intense.

If we fail to accurately forecast component and material requirements for our products, we could incur additional costs and incur significant delays in shipments, which could result in a loss of customers.



We use rolling forecasts based on anticipated product orders and material requirements planning systems to determine our product requirements. It is very important that we accurately predict both the demand for our products and the lead times required to obtain the necessary components and materials. We depend on our suppliers for most of our product components and materials. Lead times for components and materials that we order vary significantly and depend on factors including the specific supplier requirements, the size of the order, contract terms and current market demand for components. For substantial increases in our sales levels of certain products, some of our suppliers may need at least nine months lead-time. If we overestimate our component and material requirements, we may have excess inventory, which would increase our costs. If we underestimate our component and material requirements, we may have inadequate inventory, which could interrupt and delay delivery of our products to our customers. Any of these occurrences would negatively impact our net sales, business or operating results.

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Our increased reliance on contract manufacturing and other outsourcing may adversely impact our financial results and operations due to our decreased control over the performance and timing of certain aspects of our manufacturing.

Our manufacturing strategy includes partnering with contract manufacturers to outsource non-core subassemblies and less complex turnkey products, including some performed at international sites located in Asia and Eastern Europe. Additionally, we have outsourced the manufacture of certain of our optics components to certain third parties. Our ability to resume internal manufacturing operations for certain products and components in a timely manner may be eliminated. The cost, quality, performance and availability of contract manufacturing operations are and will be essential to the successful production and sale of many of our products. Our financial condition or results of operation could be adversely impacted if any contract manufacturer or other supplier is unable for any reason, including as a result of the impact of worldwide economic conditions, to meet our cost, quality, performance, and availability standards. We may not be able to provide contract manufacturers with product volumes that are high enough to achieve sufficient cost savings. If shipments fall below forecasted levels, we may incur increased costs or be required to take ownership of the inventory. Also, our ability to control the quality of products produced by contract manufacturers may be limited and quality issues may not be resolved in a timely manner, which could adversely impact our financial condition or results of operations.

If we fail to effectively manage our growth or, alternatively, our spending during downturns, our business could be disrupted, which could harm our operating results.

Growth in sales, combined with the challenges of managing geographically dispersed operations, can place a significant strain on our management systems and resources, and our anticipated growth in future operations could continue to place such a strain. The failure to effectively manage our growth could disrupt our business and harm our operating results. Our ability to successfully offer our products and implement our business plan in evolving markets requires an effective planning and management process. In economic downturns, we must effectively manage our spending and operations to ensure our competitive position during the downturn, as well as our future opportunities when the economy improves, remain intact. The failure to effectively manage our spending and operations could disrupt our business and harm our operating results.

Historically, acquisitions have been an important element of our strategy. However, we may not find suitable acquisition candidates in the future and we may not be able to successfully integrate and manage acquired businesses. Any acquisitions we make could disrupt our business and harm our financial condition.

We have in the past made strategic acquisitions of other corporations and entities, as well as asset purchases, and we continue to evaluate potential strategic acquisitions of complementary companies, products and technologies. In the event of any future acquisitions, we could:

- issue stock that would dilute our current stockholders' percentage ownership;
- pay cash that would decrease our working capital;
- incur debt;
- assume liabilities; or
- incur expenses related to impairment of goodwill and amortization.

Acquisitions also involve numerous risks, including:

problems combining the acquired operations, systems, technologies or products;

an inability to realize expected operating efficiencies or product integration benefits;

difficulties in coordinating and integrating geographically separated personnel, organizations, systems and facilities;

difficulties integrating business cultures;

unanticipated costs or liabilities, including the costs associated with improving the internal controls of the acquired company;

diversion of management's attention from our core businesses;

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adverse effects on existing business relationships with suppliers and customers;

potential loss of key employees, particularly those of the purchased organizations;

incurring unforeseen obligations or liabilities in connection with acquisitions; and

the failure to complete acquisitions even after signing definitive agreements which, among other things, would result in the expensing of potentially significant professional fees and other charges in the period in which the acquisition or negotiations are terminated.

We cannot assure you that we will be able to successfully identify appropriate acquisition candidates, to integrate any businesses, products, technologies or personnel that we might acquire in the future or achieve the anticipated benefits of such transactions, which may harm our business.

We are exposed to lawsuits in the normal course of business which could have a material adverse effect on our business, operating results, or financial condition.

We are exposed to lawsuits in the normal course of our business, including product liability claims, if personal injury, death or commercial losses occur from the use of our products. While we typically maintain business insurance, including directors' and officers' policies, litigation can be expensive, lengthy, and disruptive to normal business operations, including the potential impact of indemnification obligations for individuals named in any such lawsuits. We may not, however, be able to secure insurance coverage on terms acceptable to us in the future. Moreover, the results of complex legal proceedings are difficult to predict. An unfavorable resolution of a particular lawsuit, including a recall or redesign of products if ultimately determined to be defective, could have a material adverse effect on our business, operating results, or financial condition.

We use standard laboratory and manufacturing materials that could be considered hazardous and we could be liable for any damage or liability resulting from accidental environmental contamination or injury.

Although most of our products do not incorporate hazardous or toxic materials and chemicals, some of the gases used in our excimer lasers and some of the liquid dyes used in some of our scientific laser products are highly toxic. In addition, our operations involve the use of standard laboratory and manufacturing materials that could be considered hazardous. Also, if a facility fire were to occur at our Sunnyvale, California site and were to spread to a reactor used to grow semiconductor wafers, it could release highly toxic emissions. We believe that our safety procedures for handling and disposing of such materials comply with all federal, state and offshore regulations and standards. However, the risk of accidental environmental contamination or injury from such materials cannot be entirely eliminated. In the event of such an accident involving such materials, we could be liable for damages and such liability could exceed the amount of our liability insurance coverage and the resources of our business which could have an adverse effect on our financial results or our business as a whole.

Compliance or the failure to comply with current and future environmental regulations could cause us significant expense.

We are subject to a variety of federal, state, local and foreign environmental regulations relating to the use, storage, discharge and disposal of hazardous chemicals used during our manufacturing process or requiring design changes or recycling of products we manufacture. If we fail to comply with any present and future regulations, we could be subject to future liabilities, the suspension of production or a prohibition on the sale of products we manufacture. In addition, such regulations could restrict our ability to expand our facilities or could require us to acquire costly

equipment, or to incur other significant expenses to comply with environmental regulations, including expenses associated with the recall of any non-compliant product and the management of historical waste.

From time to time new regulations are enacted, and it is difficult to anticipate how such regulations will be implemented and enforced. We continue to evaluate the necessary steps for compliance with regulations as they are enacted. These regulations include, for example, the Registration, Evaluation, Authorization and Restriction of Chemical substances (“REACH”), the Restriction on the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Directive (“RoHS”) and the Waste Electrical and Electronic Equipment Directive (“WEEE”) enacted in the European Union which regulate the use of certain hazardous substances in, and require the collection, reuse and recycling of waste from, certain products we manufacture. This and similar legislation that has been or is in the process of being enacted in Japan, China, Korea and various states of the United States may require us to re-design our products to ensure compliance with the applicable standards, for example by requiring the use of different types of materials. These redesigns or alternative materials may detrimentally impact the performance of our products, add greater testing lead-times for product introductions or have other

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similar effects. We believe we comply with all such legislation where our products are sold and we will continue to monitor these laws and the regulations being adopted under them to determine our responsibilities. In addition, we are monitoring legislation relating to the reduction of carbon emissions from industrial operations to determine whether we may be required to incur any additional material costs or expenses associated with our operations. We are not currently aware of any such material costs or expenses. The SEC has promulgated rules requiring disclosure regarding the use of certain “conflict minerals” mined from the Democratic Republic of Congo and adjoining countries and procedures regarding a manufacturer's efforts to prevent the sourcing of such minerals. The implementation of such rules has required us to incur additional expense and internal resources and may continue to do so in the future, particularly in the event that only a limited pool of suppliers are available to certify that products are free from “conflict minerals.” Our failure to comply with any of the foregoing regulatory requirements or contractual obligations could result in our being directly or indirectly liable for costs, fines or penalties and third-party claims, and could jeopardize our ability to conduct business in the United States and foreign countries.

Our and our customers' operations would be seriously harmed if our logistics or facilities or those of our suppliers, our customers' suppliers or our contract manufacturers were to experience catastrophic loss.

Our and our customers' operations, logistics and facilities and those of our suppliers and contract manufacturers could be subject to a catastrophic loss from fire, flood, earthquake, volcanic eruption, work stoppages, power outages, acts of war, pandemic illnesses, energy shortages, theft of assets, other natural disasters or terrorist activity. A substantial portion of our research and development activities, manufacturing, our corporate headquarters and other critical business operations are located near major earthquake faults in Santa Clara, California, an area with a history of seismic events. Any such loss or detrimental impact to any of our operations, logistics or facilities could disrupt our operations, delay production, shipments and net sales and result in large expenses to repair or replace the facility. While we have obtained insurance to cover most potential losses, after reviewing the costs and limitations associated with earthquake insurance, we have decided not to procure such insurance. We believe that this decision is consistent with decisions reached by numerous other companies located nearby. We cannot assure you that our existing insurance coverage will be adequate against all other possible losses.

Difficulties with our enterprise resource planning (“ERP”) system and other parts of our global information technology system could harm our business and results of operation. If our network security measures are breached and unauthorized access is obtained to a customer's data or our data or our information technology systems, we may incur significant legal and financial exposure and liabilities.

Like many modern multinational corporations, we maintain a global information technology system, including software products licensed from third parties. Any system, network or Internet failures, misuse by system users, the hacking into or disruption caused by the unauthorized access by third parties or loss of license rights could disrupt our ability to timely and accurately manufacture and ship products or to report our financial information in compliance with the timelines mandated by the SEC. Any such failure, misuse, hacking, disruptions or loss would likely cause a diversion of management's attention from the underlying business and could harm our operations. In addition, a significant failure of our global information technology system could adversely affect our ability to complete an evaluation of our internal controls and attestation activities pursuant to Section 404 of the Sarbanes-Oxley Act of 2002.

As part of our day-to-day business, we store our data and certain data about our customers in our global information technology system. While our system is designed with access security, if a third party gains unauthorized access to our data, including any regarding our customers, such a security breach could expose us to a risk of loss of this information, loss of business, litigation and possible liability. These security measures may be breached as a result of third-party action, including intentional misconduct by computer hackers, employee error, malfeasance or otherwise. Additionally, third parties may attempt to fraudulently induce employees or customers into disclosing sensitive information such as user names, passwords or other information in order to gain access to our customers' data or our data, including our intellectual property and other confidential business information, or our information technology systems. Because the techniques used to obtain unauthorized access, or to sabotage systems, change frequently and

generally are not recognized until launched against a target, we may be unable to anticipate these techniques or to implement adequate preventative measures. Any security breach could result in a loss of confidence by our customers, damage our reputation, disrupt our business, lead to legal liability and negatively impact our future sales.

Changes in tax rates, tax liabilities or tax accounting rules could affect future results.

As a global company, we are subject to taxation in the United States and various other countries and jurisdictions. Significant judgment is required to determine worldwide tax liabilities. Our future tax rates could be affected by changes in the composition of earnings in countries or states with differing tax rates, changes in the valuation of our deferred tax assets and liabilities, or changes in the tax laws. In addition, we are subject to regular examination of our income tax returns by the Internal Revenue Service (“IRS”) and other tax authorities. From time to time the United States, foreign and state governments

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make substantive changes to tax rules and the application of rules to companies, including various announcements from the United States government potentially impacting our ability to defer taxes on international earnings. We regularly assess the likelihood of favorable or unfavorable outcomes resulting from these examinations to determine the adequacy of our provision for income taxes. Although we believe our tax estimates are reasonable, there can be no assurance that any final determination will not be materially different than the treatment reflected in our historical income tax provisions and accruals, which could materially and adversely affect our operating results and financial condition.

Changing laws, regulations and standards relating to corporate governance and public disclosure may create uncertainty regarding compliance matters.

Federal securities laws, rules and regulations, as well as the rules and regulations of self-regulatory organizations such as NASDAQ and the NYSE, require companies to maintain extensive corporate governance measures, impose comprehensive reporting and disclosure requirements, set strict independence and financial expertise standards for audit and other committee members and impose civil and criminal penalties for companies and their chief executive officers, chief financial officers and directors for securities law violations. These laws, rules and regulations have increased and will continue to increase the scope, complexity and cost of our corporate governance, reporting and disclosure practices, which could harm our results of operations and divert management's attention from business operations. Changing laws, regulations and standards relating to corporate governance and public disclosure may create uncertainty regarding compliance matters. New or changed laws, regulations and standards are subject to varying interpretations in many cases. As a result, their application in practice may evolve over time. We are committed to maintaining high standards of ethics, corporate governance and public disclosure. Complying with evolving interpretations of new or changed legal requirements may cause us to incur higher costs as we revise current practices, policies and procedures, and may divert management time and attention from revenue generating to compliance activities. If our efforts to comply with new or changed laws, regulations and standards differ from the activities intended by regulatory or governing bodies due to ambiguities related to practice, our reputation may also be harmed.

Governmental regulations, including duties, affecting the import or export of products could negatively affect our net sales.

The United States and many foreign governments impose tariffs and duties on the import and export of products, including some of those which we sell. In particular, given our worldwide operations, we pay duties on certain products when they are imported into the United States for repair work as well as on certain of our products which are manufactured by our foreign subsidiaries. These products can be subject to a duty on the product value. Additionally, the United States and various foreign governments have imposed tariffs, controls, export license requirements and restrictions on the import or export of some technologies, especially encryption technology. From time to time, government agencies have proposed additional regulation of encryption technology, such as requiring the escrow and governmental recovery of private encryption keys. Governmental regulation of encryption technology and regulation of imports or exports, or our failure to obtain required import or export approval for our products, could harm our international and domestic sales and adversely affect our net sales. From time to time our duty calculations and payments are audited by government agencies.

In addition, compliance with the directives of the Directorate of Defense Trade Controls ("DDTC") may result in substantial expenses and diversion of management. Any failure to adequately address the directives of DDTC could result in civil fines or suspension or loss of our export privileges, any of which could have a material adverse effect on our business or financial position, results of operations, or cash flows.

Our market is unpredictable and characterized by rapid technological changes and evolving standards demanding a significant investment in research and development, and, if we fail to address changing market conditions, our



business and operating results will be harmed.

The photonics industry is characterized by extensive research and development, rapid technological change, frequent new product introductions, changes in customer requirements and evolving industry standards. Because this industry is subject to rapid change, it is difficult to predict its potential size or future growth rate. Our success in generating net sales in this industry will depend on, among other things:

- maintaining and enhancing our relationships with our customers;
- the education of potential end-user customers about the benefits of lasers and laser systems; and
- our ability to accurately predict and develop our products to meet industry standards.

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For our fiscal years 2013, 2012 and 2011, our research and development costs were \$82.8 million (10.2% of net sales), \$78.3 million (10.2% of net sales) and \$81.2 million (10.1% of net sales), respectively. We cannot assure you that our expenditures for research and development will result in the introduction of new products or, if such products are introduced, that those products will achieve sufficient market acceptance or to generate sales to offset the costs of development. Our failure to address rapid technological changes in our markets could adversely affect our business and results of operations.

Failure to maintain effective internal controls may cause a loss of investor confidence in the reliability of our financial statements or to cause us to delay filing our periodic reports with the SEC and adversely affect our stock price.

The SEC, as directed by Section 404 of the Sarbanes-Oxley Act of 2002, adopted rules requiring public companies to include a report of management on internal control over financial reporting in their annual reports on Form 10-K that contain an assessment by management of the effectiveness of our internal control over financial reporting. In addition, our independent registered public accounting firm must attest to and report on the effectiveness of our internal control over financial reporting. Although we test our internal control over financial reporting in order to ensure compliance with the Section 404 requirements, our failure to maintain adequate internal controls over financial reporting could result in an adverse reaction in the financial marketplace due to a loss of investor confidence in the reliability of our financial statements or a delay in our ability to timely file our periodic reports with the SEC, which ultimately could negatively impact our stock price.

Provisions of our charter documents and Delaware law, and our Change-of-Control Severance Plan may have anti-takeover effects that could prevent or delay a change in control.

Provisions of our certificate of incorporation and bylaws may discourage, delay or prevent a merger or acquisition or make removal of incumbent directors or officers more difficult. These provisions may discourage takeover attempts and bids for our common stock at a premium over the market price. These provisions include:

- the ability of our Board of Directors to alter our bylaws without stockholder approval;

- limiting the ability of stockholders to call special meetings; and

- establishing advance notice requirements for nominations for election to our Board of Directors or for proposing matters that can be acted on by stockholders at stockholder meetings.

We are subject to Section 203 of the Delaware General Corporation Law, which prohibits a publicly-held Delaware corporation from engaging in a merger, asset or stock sale or other transaction with an interested stockholder for a period of three years following the date such person became an interested stockholder, unless prior approval of our board of directors is obtained or as otherwise provided. These provisions of Delaware law also may discourage, delay or prevent someone from acquiring or merging with us without obtaining the prior approval of our board of directors, which may cause the market price of our common stock to decline. In addition, we have adopted a change of control severance plan, which provides for the payment of a cash severance benefit to each eligible employee based on the employee's position. If a change of control occurs, our successor or acquirer will be required to assume and agree to perform all of our obligations under the change of control severance plan which may discourage potential acquirers or result in a lower stock price.

### ITEM 1B. UNRESOLVED STAFF COMMENTS

Not Applicable.

### ITEM 2. PROPERTIES

Our corporate headquarters is located in Santa Clara, California. At fiscal 2013 year-end, our primary locations were as follows (all square footage is approximate) (unless otherwise indicated, each property is utilized jointly by our two segments):

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	Description	Use	Term
Santa Clara, CA	8.5 acres of land, 200,000 square foot building	Corporate headquarters, manufacturing, R&D	Owned
Santa Clara, CA	90,120 square foot building	Office, manufacturing	Leased through July 2020
Sunnyvale, CA (1)	24,159 square foot building	Office, manufacturing, R&D	Leased through December 2018
Bloomfield, CT (1)	63,421 square foot building	Office, manufacturing, R&D	Leased through December 2017
Bloomfield, CT (1)	4,500 square foot building	Manufacturing, warehouse	Leased through July 2014, 12 month extension options
East Hanover, NJ (2)	30,000 square foot building	Office, manufacturing, R&D	Leased through October 2014
Wilsonville, OR (1)	41,250 square foot building	Office, manufacturing, R&D	Leased through December 2018
Salem, NH(1)	44,153 square foot building	Office, manufacturing, R&D	Leased through October 2019
Dieburg, Germany	32,123 square foot building	Office	Leased through December 2020
Göttingen, Germany(2)	7.6 acres of land, several buildings totaling 136,380 square feet	Office, manufacturing, R&D	Owned
Lübeck, Germany (2)	41,328 square foot building	Office, manufacturing, R&D	Leased through December 2014
Lübeck, Germany (2)	22,583 square foot building	Office, manufacturing, R&D	Leased through December 2014 with option to purchase building
Lübeck, Germany (2)	8,159 square foot building	Manufacturing	Leased through December 2018
Lübeck, Germany (2)	7,578 square foot building	Manufacturing, warehouse	Leased through December 2015
Kaiserslautern, Germany (2)	33,745 square foot building	Office, manufacturing, R&D	Leased through September 2015
Hannover, Germany (2)	11,759 square foot building	Manufacturing, R&D	Leased through December 2014
Tokyo, Japan	17,602 square foot building	Office	Leased through April 2015
Glasgow, Scotland (2)	2 acres of land, 31,600 square foot building	Office, manufacturing, R&D	Owned
YongIn-Si, South Korea (2)	33,074 square foot building	Office, manufacturing	Leased through November 2017
Kallang Sector, Singapore	31,894 square foot building	Office, manufacturing	Leased through March 2016
Penang, Malaysia	12,519 square foot building	Office, manufacturing	Leased through August 2014, with renewal option

(1) This facility is utilized primarily by our CLC operating segment.

(2) This facility is utilized primarily by our SLS operating segment.

We maintain other sales and service offices under varying leases expiring from 2014 through 2020 in the United States, Japan, South Korea, China, Taiwan, Germany, France, Italy, the United Kingdom and the Netherlands.

We consider our facilities to be both suitable and adequate to provide for current and near term requirements and that the productive capacity in our facilities is substantially being utilized or we have plans to utilize it. We plan to renew leases on buildings as they expire.

ITEM 3. LEGAL PROCEEDINGS

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We are subject to legal claims and litigation arising in the ordinary course of business, such as product liability, employment or intellectual property claims, including, but not limited to, the matters described below. On May 14, 2013, Imra America (“Imra”) filed a complaint for patent infringement against two of the Company’s subsidiaries in the Regional Court of Düsseldorf, Germany, captioned In re IMRA America Inc. versus Coherent Kaiserslautern GmbH et. al. 4b O 38/13. The complaint alleges that the use of certain of the Company’s lasers infringes upon EP Patent No. 754,103, entitled “Method For Controlling Configuration of Laser Induced Breakdown and Ablation,” issued November 5, 1997. The patent is owned by the University of Michigan and licensed to Imra. The complaint seeks unspecified compensatory damages, the cost of court proceedings and seeks to permanently enjoin the Company from infringing the patent in the future. With respect to this matter, management has determined that a potential loss is not probable and accordingly, no amount has been accrued. Management has determined a potential loss is reasonably possible as it is defined by ASC 450; however, based on its current knowledge, management does not believe that the amount of such possible loss or a range of potential loss is reasonably estimable. Although we do not expect that such legal claims and litigation will ultimately have a material adverse effect on our consolidated financial position, results of operations or cash flows, an adverse result in one or more matters could negatively affect our results in the period in which they occur.

Income Tax Audits

We are subject to taxation and file income tax returns in the U.S. federal jurisdiction and in many state and foreign jurisdictions. For U.S. federal income tax purposes, all years prior to 2010 are closed. In our major foreign jurisdictions and our major state jurisdictions, the years prior to 2006 and 2009, respectively, are closed to examination. Earlier years in our various jurisdictions may remain open for adjustment to the extent that we have tax attribute carryforwards from those years. In December 2011 and January 2012, three of our German subsidiaries received notices of tax audits for the fiscal years 2006 through 2010. We received a preliminary assessment for two of the German subsidiaries and the amount is immaterial; the audit for the other German subsidiary is currently in process. In addition, our German subsidiary of Coherent Kaiserslautern GmbH (formerly Lumera Laser GmbH) that was acquired in December 2012 is currently under audit for the fiscal years 2007 through 2009. As the years under the audit for Coherent Kaiserslautern GmbH are related to the pre-acquisition periods, the tax assessment should be recoverable from the escrow account for the acquisition.

Management believes that it has adequately provided for any adjustments that may result from tax examinations. We regularly engage in discussions and negotiations with tax authorities regarding tax matters in various jurisdictions. It is reasonably possible that certain federal, foreign and state tax matters may be concluded in the next 12 months. Although the timing of the resolution and/or closure of audits is highly uncertain, it is reasonably possible that the balance of net unrecognized tax benefits including interest and penalties could be reduced by approximately \$0.3 million to \$2.4 million in the next 12 months.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

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## PART II

## ITEM 5. MARKET FOR THE REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Our common stock is quoted on the NASDAQ Stock Market under the symbol "COHR." The following table sets forth the high and low sales prices for each quarterly period during the past two fiscal years as reported on the Nasdaq Global Select Market.

	Fiscal		2012	
	2013		High	Low
First quarter	\$49.74	\$42.08	\$54.50	\$40.50
Second quarter	\$59.99	\$50.63	\$59.70	\$52.29
Third quarter	\$58.80	\$50.65	\$59.28	\$39.76
Fourth quarter	\$62.68	\$55.19	\$50.46	\$42.59

The number of stockholders of record as of November 22, 2013 was 875. On December 10, 2012, we announced that the Board of Directors approved a \$1.00 per share special cash dividend on our outstanding common stock payable on December 27, 2012 to stockholders of record on December 19, 2012, resulting in a payment of \$24.0 million in the first quarter of fiscal 2013. While we paid a cash dividend in fiscal 2013 and may elect to pay dividends in the future, we have no present intention to declare cash dividends. Our line of credit agreement requires bank pre-approval for the payment of cash dividends.

There were no sales of unregistered securities in fiscal 2013.

There were no stock repurchases during the three months ended September 28, 2013. Our most recent repurchase authorization expired in October 2013.

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## COMPANY STOCK PRICE PERFORMANCE

The following graph shows a five-year comparison of cumulative total stockholder return, calculated on a dividend reinvestment basis and based on a \$100 investment, from September 27, 2008 through September 28, 2013 comparing the return on our common stock with the Russell 2000 Index, the Standard and Poors Technology Index and the Nasdaq Composite Index. No dividends have been declared or paid on our common stock during such period. The stock price performance shown on the following graph is not necessarily indicative of future price performance.

COMPARISON OF FIVE-YEAR CUMULATIVE TOTAL RETURN AMONG COHERENT, INC.,  
THE RUSSELL 2000 INDEX, THE S&P TECHNOLOGY INDEX AND  
THE NASDAQ COMPOSITE INDEX.

Company Name / Index	Base Period	INDEXED RETURNS				
		Years Ending				
	9/27/2008	10/3/2009	10/2/2010	10/1/2011	9/29/2012	9/28/2013
Coherent, Inc.	100	65.65	114.89	122.78	131.07	178.88
Russell 2000 Index	100	83.75	99.33	95.38	125.81	163.68
S&P Technology Index	100	100.49	114.74	119.28	157.94	169.80
NASDAQ Composite Index	100	103.76	116.52	120.44	157.60	195.67

The information contained above under the caption "Company Stock Price Performance" shall not be deemed to be "soliciting material" or to be "filed" with the SEC, nor will such information be incorporated by reference into any future SEC filing except to the extent that we specifically incorporate it by reference into such filing.



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## ITEM 6. SELECTED FINANCIAL DATA

The information set forth below is not necessarily indicative of results of future operations and should be read in conjunction with Item 7. "Management's Discussion and Analysis of Financial Condition and Results of Operations" and the Consolidated Financial Statements and Notes to Consolidated Financial Statements included elsewhere in this annual report.

We derived the selected consolidated financial data as of fiscal 2013 and 2012 year-end and for fiscal 2013, 2012 and 2011 from our audited consolidated financial statements, and accompanying notes, contained in this annual report.

The consolidated statements of operations data for fiscal 2010 and 2009 and the consolidated balance sheet data as of fiscal 2011, 2010 and 2009 year-end are derived from our consolidated financial statements which are not included in this report.

Consolidated financial data	Fiscal 2013(1)	Fiscal 2012(2)	Fiscal 2011(3)	Fiscal 2010(4)	Fiscal 2009(5)
	(in thousands, except per share data)				
Net sales	\$ 810,126	\$ 769,088	\$ 802,834	\$ 605,067	\$ 435,882
Gross profit	\$ 322,271	\$ 315,985	\$ 350,822	\$ 260,811	\$ 161,110
Net income(loss)	\$ 66,355	\$ 62,962	\$ 93,238	\$ 36,916	\$ (35,319 )
Net income (loss) per share(6):					
Basic	\$ 2.75	\$ 2.67	\$ 3.74	\$ 1.49	\$ (1.45 )
Diluted	\$ 2.70	\$ 2.62	\$ 3.66	\$ 1.47	\$ (1.45 )
Shares used in computation(6):					
Basic	24,138	23,561	24,924	24,718	24,281
Diluted	24,555	24,026	25,464	25,091	24,281
Total assets	\$ 966,478	\$ 880,772	\$ 843,266	\$ 803,104	\$ 753,604
Long-term obligations	\$—	\$ 2	\$ 19	\$ 33	\$ 6
Other long-term liabilities	\$ 62,132	\$ 55,326	\$ 62,841	\$ 79,688	\$ 91,685
Stockholders' equity	\$ 758,518	\$ 671,656	\$ 618,001	\$ 591,463	\$ 575,571

(1) Includes a tax benefit of \$1.4 million from the renewal of the R&D tax credit for fiscal 2012.

(2) Includes a charge of \$4.3 million after tax related to the write-off of previously acquired intangible assets and inventories, a \$2.8 million tax benefit due to decreases in valuation allowances against deferred tax assets and a \$1.6 million tax benefit related to the release of tax reserves and related interest as a result of the closure of open tax years.

(3) Includes a gain of \$6.1 million after tax related to the dissolution of our Finland operations, a \$9.7 million tax benefit from the release of tax reserves and related interest as a result of an IRS settlement and the closure of open tax years and a \$1.5 million tax charge due to an increase in valuation allowances against deferred tax assets.

(4) Includes restructuring expenses of \$5.8 million after tax primarily related to the closure of our Finland site and the consolidation of our Montreal, Canada site under the management of our Wilsonville, Oregon site and a net benefit after tax of \$1.4 million related to a receipt from the settlement of litigation resulting from our internal stock option investigation.

(5) Includes \$19.3 million in after-tax expense related to the impairment of goodwill, restructuring expenses of \$11.5 million after tax primarily related to the consolidation of our Munich site into our Gottingen and Lubeck, Germany sites and our Finland site, the exit of our Auburn, California facility, the exit of our St. Louis, Missouri facility and headcount reductions due to the evolving global economic conditions, \$0.8 million in after-tax costs related to our stock option investigation and litigation and a tax charge of \$3.8 million composed of the impact of a change in state tax law and a valuation allowance in one of our European subsidiaries.

(6) See Note 2, "Significant Accounting Policies" in our Notes to Consolidated Financial Statements under Item 15 of this annual report for an explanation of the determination of the number of shares used in computing net income (loss) per share.



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## ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with our Consolidated Financial Statements and related notes included in Item 8, "Financial Statements and Supplementary Data" in this annual report. This discussion contains forward-looking statements, which involve risks and uncertainties. Our actual results could differ materially from those anticipated in the forward-looking statements as a result of certain factors, including but not limited to those discussed in Item 1A, "Risk Factors" and elsewhere in this annual report. Please see the discussion of forward-looking statements at the beginning of this annual report under "Special Note Regarding Forward-Looking Statements."

## KEY PERFORMANCE INDICATORS

Below is a summary of some of the quantitative performance indicators (as defined below) that are evaluated by management to assess our financial performance. Some of the indicators are non-GAAP measures and should not be considered as an alternative to any other measure for determining operating performance that is calculated in accordance with generally accepted accounting principles.

	Fiscal 2013	2012	2011	
	(Dollars in thousands)			
Bookings	\$767,329	\$773,199	\$895,017	
Book-to-bill ratio	0.95	1.01	1.11	
Net Sales—Specialty Lasers and Systems	\$571,644	\$548,848	\$519,736	
Net Sales—Commercial Lasers and Components	\$238,482	\$220,240	\$283,098	
Gross Profit as a Percentage of Net Sales—Specialty Lasers and Systems	41.7	% 43.2	% 45.4	%
Gross Profit as a Percentage of Net Sales—Commercial Lasers and Components	36.2	% 36.7	% 41.1	%
Research and Development Expenses as a Percentage of Net Sales	10.2	% 10.2	% 10.1	%
Income Before Income Taxes	\$83,496	\$90,622	\$123,829	
Net Cash Provided by Operating Activities	\$115,522	\$64,771	\$86,676	
Days Sales Outstanding in Receivables	60.8	67.6	63.2	
Annualized Fourth Quarter Inventory Turns	3.0	2.8	3.1	
Capital Spending as a Percentage of Net Sales	2.7	% 4.7	% 4.6	%
Net Income as a Percentage of Net Sales	8.2	% 8.2	% 11.6	%
Adjusted EBITDA as a Percentage of Net Sales	17.8	% 18.4	% 19.5	%

Definitions and analysis of these performance indicators are as follows:

## Bookings and Book-to-Bill Ratio

Bookings represent orders received during the current period for products and services to be provided pursuant to service contracts. While we generally have not experienced a significant rate of cancellation, bookings are generally cancelable by our customers without substantial penalty and, therefore, we cannot assure all bookings will be converted to net sales.

The book-to-bill ratio is calculated as annual bookings divided by annual net sales. This is an indication of the strength of our business but can sometimes be impacted by a single large order. A ratio greater than 1.0 indicates that demand for our products is greater than what we supply in the year whereas a ratio of less than 1.0 indicates that demand for our products is less than what we supply in the year.

Fiscal 2013 bookings decreased slightly from bookings in fiscal 2012 and our book-to-bill ratio decreased from 1.01 in fiscal 2012 to 0.95 in fiscal 2013. Bookings decreased 0.8% from fiscal 2012, with decreases in the microelectronics (10%) and scientific (4%) markets partially offset by increases in the materials processing (18%) and OEM components and instrumentation (13%) markets. Compared to the third quarter of fiscal 2013, decreases in bookings in the fourth quarter of fiscal 2013 in the materials processing market were partially offset by increases in the OEM components and instrumentation, microelectronics and scientific markets.



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Fiscal 2012 bookings decreased from record bookings in fiscal 2011. Although we maintained a positive book-to-bill of 1.01, the book-to-bill ratio declined to 0.90 in the fourth quarter of fiscal 2012. Bookings decreased 13.6% from fiscal 2011, with decreases in all markets. Bookings decreases by market compared to fiscal 2011 were microelectronics (16%), OEM components and instrumentation (14%), scientific (13%) and materials processing (2%). Although fiscal 2012 bookings decreased in all markets, decreases in bookings in the fourth quarter of fiscal 2012 in the microelectronics market due to timing of large orders were partially offset by increases in the OEM components and instrumentation, scientific and materials processing markets.

### Microelectronics

Although fiscal 2013 bookings decreased 10% from bookings in fiscal 2012 and the book-to-bill ratio for the year was 0.85, bookings in the fourth quarter of fiscal 2013 increased 10% from the third quarter of fiscal 2013 primarily due to timing of large excimer laser annealing orders for the flat panel display market and strength in the semiconductor capital equipment market.

Flat panel display orders for fiscal 2013 decreased 24% from orders in fiscal 2012, but fourth quarter fiscal 2013 orders continued to be strong primarily due to timing of large excimer laser annealing orders. The flat panel display market remains very dynamic with high utilization rates for low-temperature polycrystalline silicon ("LTPS") backplanes. The trend for new product launches in the smartphone market for full HD screens that place more process restrictions on the manufacturing equipment benefits service revenues. Another important development is the release of the first smartphones to incorporate flexible displays. Although flexible displays will eventually cannibalize glass displays, their robustness and shapes should drive an increase in demand across various applications. In the television market, there are some interesting developments including the potential of the adoption of LTPS-equipped organic light-emitting diode ("OLED") screens, but these devices are expensive. Due to their clarity and more manageable price, Ultra HD televisions ("4k") are gaining traction, leading to a resurgence in two laser-based manufacturing steps for light guide panels. We expect to see incremental business during 2014 from these processes. Activity around glass cutting is also very high with most of the development work focused on edge strength of the processed glass, which is key to broad adoption. In the fourth quarter of fiscal 2013, we received the first tranche of the next round of orders for excimer laser annealing equipment for Gen 5.5 systems; the total order was for more than \$15 million and we expect to complete delivery within fiscal 2014. We are actively engaged on a second tranche that we expect to receive in fiscal 2014. In addition, our integrator partners have a robust forecast for customers across Asia.

Advanced packaging ("API") orders increased significantly for the full fiscal year signaling an overall recovery in the segment, but decreased from orders in the third quarter of fiscal 2013 due to the seasonal capital expenditure slowdown despite high utilization among board manufacturers. The fourth quarter decrease was primarily the result of a reduced response to new smartphones as well as the sale of Hitachi Via Mechanics, a leading supplier of printed circuit board manufacturing equipment, as customers may wait to see what changes, if any, occur as result of the sale before increasing order quantities. Products and technologies from Innolight and Lumera will play important roles in our product offerings for advanced packaging applications.

Orders from semiconductor capital equipment OEMs decreased 11% for the full fiscal 2013, but were strong in the fourth quarter of fiscal 2013 due to new inspection and metrology tool introductions from leading customers. We are working with customers on next generation devices that will support nodes at 20nm and below. Industry analysts are forecasting rising utilization rates, which boosts capacity expansion and service revenues, due to increasing demand for advanced components for smartphones, tablets, set-top boxes and automotive electronics. Growth in these devices offset the continued deterioration of the personal computer market. Demand should also be bolstered by shifts within the internet download manager ("IDM") universe. The combination of these factors has led industry reports to project strong growth in equipment spending in fiscal 2014.

### OEM Components and Instrumentation

Bookings in fiscal 2013 increased 13% from fiscal 2012 and the book-to-bill ratio for the year was 1.04. Additionally, orders in the fourth quarter of fiscal 2013 increased significantly from those in the third quarter of fiscal 2013 led by strength in the medical OEM and instrumentation markets.

Medical OEM orders increased significantly in the fourth quarter of fiscal 2013 with a number of the orders from existing customers in the aesthetic and ophthalmic markets. We found that consumer confidence has been generally

good during fiscal 2013, notwithstanding the recent U.S. budget delays and government shutdown. Our business in medical consumables, primarily single-use fibers for benign prostatic hyperplasia ("BPH") and kidney stone treatment, is doing well and we received an initial order for a new dental device that is effective for both hard and soft tissue treatment. We have also broadened our market opportunities through our recent acquisition as Lumera gives us immediate entry into the fast evolving cataract market, where we have been working on design wins and received orders for cataract treatment. We are also working on a next

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generation laser for flap cutting in LASIK, which has the potential to displace much more complex and costly competitive offerings.

Demand for instrumentation lasers was very strong during both the fourth quarter of fiscal 2013 and the full fiscal year, which is significant given the effects of sequestration on the research side of the instrumentation market. Two factors influenced these results. We continue to capture design wins for the OBIS™ platform, especially in flow cytometry, and we also enjoyed success in the subsystems market for bioinstrumentation. A subsystem or laser engine combines lasers with beam delivery technology to provide a plug-and-play solution. The ease of integration and performance flexibility has increased customer interest in subsystems. Part of the strength comes from new products including OBIS™ and Galaxy™ that have broadened our market participation while our legacy products such as Sapphire™ remain a cornerstone in the cytometry market.

### Materials Processing

Annual bookings increased 18% from fiscal 2012 and fiscal 2013's book-to-bill ratio was 1.05. However, bookings in the fourth quarter of fiscal 2013 decreased significantly from the third quarter of fiscal 2013 following a record-setting performance in the prior quarter and reduced bookings in China due to timing of orders for marking and non-metal cutting applications.

In general, demand for CO<sub>2</sub> lasers for marking, packaging and engraving has been strong. Our recent introduction of the Diamond™ E-250, a new embodiment of CO<sub>2</sub> technology, has created new opportunities. We have made steady progress in additive manufacturing with the Highlight™ direct diode system and we are optimistic about the longer term potential of additive manufacturing; we will be releasing a series of new solutions to address this market. Although fiber laser orders are still at an early stage for us, they contributed to our fiscal 2013 bookings increase. In the third quarter of fiscal 2013, we also shipped a three kilowatt prototype to a leading system integrator for metal cutting. The system delivers the required cutting speed and quality in a package considerably smaller than fiber lasers of comparable output power, thereby saving space on the production floor. In an OEM configuration, we believe our laser may fit inside the customer's tool.

### Scientific and Government Programs

Although fiscal 2013 orders decreased 4% from bookings in fiscal 2012, the book-to-bill ratio for the year was 1.05. Orders in the fourth quarter of fiscal 2013 increased significantly from the third quarter of fiscal 2013 as the U.S. market shrugged off some of the sequestration effects and displayed typical seasonal strength in our fourth quarter. Ultrafast imaging using our Chameleon™ platform was the largest application for the quarter and fiscal year. Orders for large systems used in chemistry and physics have reverted to pre-stimulus levels with many researchers once again bundling funding to purchase these high-performance systems. However, short- and long-term funding remains uncertain given the budget discussions in Congress.

Orders from Europe were in-line with our expectations and exhibited similar application trends to the U.S. There are a few developments to watch in the European market which could contribute to increased booking activity in fiscal 2014 and beyond. The Extreme Lightsource Project is a pan-European effort to develop high-intensity lasers similar to the National Ignition Facility at the Livermore National Lab. In addition, Horizon 2020 is a 7-year, €70 billion program to drive innovation and global competitiveness. Embedded within the Horizon program are two flagship projects to study the human brain and grapheme, a potential successor to silicon in microelectronics, which should impact the photonics industry.

In Asia excluding Japan, we continue to see strong demand which contributed to record scientific orders in that region for fiscal 2013. The Pacific Rim market was more balanced between the physical sciences and biological imaging. Bookings in Japan were slower than expected due to delays in the release of stimulus funding. Once the stimulus reaches end users, we expect to see funding skewed towards biological imaging since stem cell research is one of the key targets in the package.

### Net Sales

Net sales include sales of lasers, laser tools, related accessories and service contracts. Net sales for fiscal 2013 increased 5.3% from fiscal 2012. Net sales for fiscal 2012 decreased 4.2% from fiscal 2011. For a description of the

reasons for changes in net sales refer to the "Results of Operations" section below.

**Gross Profit as a Percentage of Net Sales**

Gross profit as a percentage of net sales ("gross profit percentage") is calculated as gross profit for the period divided by net sales for the period. Gross profit percentage for SLS decreased to 41.7% in fiscal 2013 from 43.2% in fiscal 2012 and from 45.4% in fiscal 2011. Gross profit percentage for CLC decreased to 36.2% in fiscal 2013 from 36.7% in fiscal 2012 and from

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41.1% in fiscal 2011. For a description of the reasons for changes in gross profit refer to the "Results of Operations" section below.

### Research and Development as a Percentage of Net Sales

Research and development as a percentage of net sales ("R&D percentage") is calculated as research and development expense for the period divided by net sales for the period. Management considers R&D percentage to be an important indicator in managing our business as investing in new technologies is a key to future growth. R&D percentage was flat at 10.2% from fiscal 2012 and increased from 10.1% in fiscal 2011. For a description of the reasons for changes in R&D spending refer to the "Results of Operations" section below.

### Net Cash Provided by Operating Activities

Net cash provided by operating activities shown on our Consolidated Statements of Cash Flows primarily represents the excess of cash collected from billings to our customers and other receipts over cash paid to our vendors for expenses and inventory purchases to run our business. We believe that cash flows from operations are an important performance indicator because cash generation over the long term is essential to maintaining a healthy business and providing funds to help fuel growth. For a description of the reasons for changes in Net Cash Provided by Operating Activities refer to the "Liquidity and Capital Resources" section below.

### Days Sales Outstanding in Receivables

We calculate days sales outstanding ("DSO") in receivables as net receivables at the end of the period divided by net sales during the period and then multiplied by the number of days in the period, using 360 days for years. DSO in receivables indicates how well we are managing our collection of receivables, with lower DSO in receivables resulting in higher working capital availability. The more money we have tied up in receivables, the less money we have available for research and development, acquisitions, expansion, marketing and other activities to grow our business. Our DSO in receivables for fiscal 2013 decreased 6.8 days from fiscal 2012 to 60.8 days. The decrease in DSO in receivables is primarily due to a lower concentration of sales in the last month of the fiscal year, particularly in Asia and Japan, a lower concentration of sales with longer payment terms in Japan and improved collections in Korea, Japan and Europe.

### Annualized Fourth Quarter Inventory Turns

We calculate annualized fourth quarter inventory turns as cost of sales during the fourth quarter annualized and divided by net inventories at the end of the fourth quarter. This indicates how well we are managing our inventory levels, with higher inventory turns resulting in more working capital availability and a higher return on our investments in inventory. The more money we have tied up in inventory, the less money we have available for research and development, acquisitions, expansion, marketing and other activities to grow our business. Our annualized inventory turns for fiscal 2013 increased to 3.0 turns from 2.8 turns in fiscal 2012. The improvement in inventory turns is primarily due to the impact of increased sales volumes in relation to inventory levels in certain businesses.

### Capital Spending as a Percentage of Net Sales

Capital spending as a percentage of net sales ("capital spending percentage") is calculated as capital expenditures for the period divided by net sales for the period. Capital spending percentage indicates the extent to which we are expanding or improving our operations, including investments in technology and equipment. Management monitors capital spending levels as this assists management in measuring our cash flows, net of capital expenditures. Our capital spending percentage decreased to 2.7% in fiscal 2013 from 4.7% in fiscal 2012 and 4.6% in fiscal 2011. The fiscal 2013 decrease was primarily due to investments made in fiscal 2012 for manufacturing and refurbishment capacity in Germany and Korea. The fiscal 2012 increase was primarily due to building improvements and purchases of production-related assets to support our expansion in Asia (South Korea and Singapore) and Germany. We expect capital spending for fiscal 2014 to be approximately 4.0% to 4.5% of net sales.

### Adjusted EBITDA as a Percentage of Net Sales

We define adjusted EBITDA as operating income adjusted for depreciation, amortization, stock compensation expenses, major restructuring costs and certain other non-operating income and expense items. Key initiatives to reach our goals for EBITDA improvements include utilization of our Asian manufacturing locations, rationalizing our supply chain and continued leveraging of our infrastructure.

We utilize a number of different financial measures, both GAAP and non-GAAP, such as adjusted EBITDA as a percentage of net sales, in analyzing and assessing our overall business performance, for making operating decisions and for forecasting and planning future periods. We consider the use of non-GAAP financial measures helpful in assessing our current financial performance and ongoing operations. While we use non-GAAP financial measures as a tool to enhance our

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understanding of certain aspects of our financial performance, we do not consider these measures to be a substitute for, or superior to, the information provided by GAAP financial measures. We provide adjusted EBITDA in order to enhance investors' understanding of our ongoing operations. This measure is used by some investors when assessing our performance.

Below is the reconciliation of our net income as a percentage of net sales to our adjusted EBITDA as a percentage of net sales:

	Fiscal			
	2013	2012	2011	
Net income as a percentage of net sales	8.2	% 8.2	% 11.6	%
Income tax expense	2.1	% 3.6	% 3.8	%
Interest and other income (expense), net	0.5	% 0.1	% (1.2)	)%
Depreciation and amortization	4.5	% 3.9	% 3.6	%
Purchase accounting step up	0.2	% —	% —	%
Restructuring and other one-time charges	—	% 0.5	% 0.1	%
Stock based compensation	2.3	% 2.1	% 1.6	%
Adjusted EBITDA as a percentage of net sales	17.8	% 18.4	% 19.5	%

**SIGNIFICANT EVENTS****Restructuring Activities**

During fiscal 2008, we initiated restructuring plans to decrease costs by consolidating facilities and reducing our workforce. As of September 29, 2012, we had made payments in connection with the restructuring plans in the amount of \$27.7 million; we made no payments during fiscal 2013. We completed payments for substantially all anticipated costs related to the restructuring plans in the third quarter of fiscal 2011. In the second quarter of fiscal 2011, we ceased manufacturing operations in our Finland facility and recognized a \$6.1 million gain, primarily in other income (expense), due to a non-recurring translation adjustment related to the dissolution of our Finland operations.

**Acquisitions**

On December 20, 2012, we acquired all of the outstanding shares of Lumera for approximately \$51.5 million, excluding transaction costs. Lumera manufactures ultrafast solid state lasers for microelectronics, OEM medical and materials processing applications. These assets and liabilities have been included in our Specialty Lasers and Systems segment.

On October 30, 2012, we acquired all of the outstanding shares of Innolight for approximately \$18.3 million, excluding transaction costs. Innolight provides a core technology building block for an emerging class of commercial, sub-nanosecond lasers for microelectronics manufacturing and its semiconductor-based architecture delivers pulsed output that can be amplified by conventional or fiber amplifiers to ultimately deliver infrared, green or ultraviolet light capable of processing a range of materials. These assets and liabilities have been included in our Specialty Lasers and Systems segment.

On July 23, 2012, we acquired all of the outstanding shares of MiDAZ Lasers Limited "Midaz" for \$3.8 million in cash, excluding transaction fees. Midaz was a technology based-acquisition and we intend to utilize the acquired technology in low cost, compact pulsed solid state lasers. These assets and liabilities have been included in our Specialty Lasers and Systems segment.

On January 5, 2011, we acquired all the assets and assumed certain liabilities of Hypertronics Pte Ltd for \$14.5 million, excluding transaction fees. Hypertronics designs and manufactures laser- and vision-based tools for flat panel display, storage, semiconductor and solar applications at facilities in Singapore and Malaysia. These assets and liabilities have been included in our Specialty Lasers and Systems segment. During the fourth quarter of fiscal 2012, we decided to no longer pursue orders of Hypertronics legacy products and we performed an impairment analysis of Hypertronics' intangible assets and determined that such assets were impaired. As a result, we recorded a \$4.0 million

non-cash intangibles amortization charge and a \$0.3 million inventory write-off in the fourth quarter of fiscal 2012.

**Stock Repurchases and Stock Dividend**

In March 2011, we repurchased and retired 454,682 shares of outstanding common stock at an average price of \$59.00 per share for a total of \$26.8 million, excluding expenses. During the third and fourth quarters of fiscal 2011, we repurchased and

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retired 1,024,409 shares of outstanding common stock at an average price of \$47.03 per share for a total of \$48.2 million, excluding expenses.

On August 25, 2011, we announced that the Board of Directors had authorized the repurchase of up to \$50.0 million of our common stock. During fiscal 2011, we repurchased and retired 586,200 shares of outstanding common stock at an average price of \$42.67 per share for a total of \$25.0 million excluding expenses. During fiscal 2012, we repurchased and retired 543,200 shares of outstanding common stock at an average price of \$45.99 per share for a total of \$25.0 million, excluding expenses.

On October 4, 2012, the Board of Directors authorized a buyback program whereby we are authorized to repurchase up to \$25.0 million of our common stock. The program was authorized for 12 months from the date of authorization. No shares were purchased under this program.

On December 10, 2012, we announced that the Board of Directors approved a \$1.00 per share special cash dividend on our outstanding common stock payable on December 27, 2012 to stockholders of record on December 19, 2012, resulting in a payment of \$24.0 million.

## RESULTS OF OPERATIONS—FISCAL 2013, 2012 AND 2011

Fiscal 2013, 2012 and 2011 consist of 52 weeks.

## Consolidated Summary

The following table sets forth, for the years indicated, the percentage of total net sales represented by the line items reflected in our consolidated statement of operations:

	Fiscal 2013	2012	2011	
	(As a percentage of net sales)			
Net sales	100.0	% 100.0	% 100.0	%
Cost of sales	60.2	% 58.9	% 56.3	%
Gross profit	39.8	% 41.1	% 43.7	%
Operating expenses:				
Research and development	10.2	% 10.2	% 10.1	%
Selling, general and administrative	18.5	% 18.0	% 18.6	%
Amortization of intangible assets	0.6	% 1.3	% 1.0	%
Total operating expenses	29.3	% 29.5	% 29.7	%
Income from operations	10.5	% 11.6	% 14.0	%
Other income (net)	(0.2)	)% 0.2	% 1.4	%
Income before income taxes	10.3	% 11.8	% 15.4	%
Provision for income taxes	2.1	% 3.6	% 3.8	%
Net income	8.2	% 8.2	% 11.6	%

Refer to Item 6 "Selected Financial Data" for a description of significant events that impacted the results of operations for fiscal years 2013, 2012 and 2011.

Net Sales

Market Application

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The following table sets forth, for the periods indicated, the amount of net sales and their relative percentages of total net sales by market application (dollars in thousands):

	Fiscal 2013		Fiscal 2012		Fiscal 2011			
	Amount	Percentage of total net sales	Amount	Percentage of total net sales	Amount	Percentage of total net sales		
Consolidated:								
Microelectronics	\$ 416,550	51.4	% \$ 373,696	48.6	% \$ 377,331	47.0	%	
OEM components and instrumentation	149,974	18.5	% 143,729	18.7	% 164,508	20.5	%	
Materials processing	121,660	15.0	% 108,666	14.1	% 104,497	13.0	%	
Scientific and government programs	121,942	15.1	% 142,997	18.6	% 156,498	19.5	%	
Total	\$ 810,126	100.0	% \$ 769,088	100.0	% \$ 802,834	100.0	%	

During fiscal 2013, net sales increased by \$41.0 million, or 5%, compared to fiscal 2012, net of a decrease of \$16.1 million due to the impact of foreign currency exchange rates, with sales increases in the microelectronics, materials processing and OEM components and instrumentation markets partially offset by decreases in the scientific and government program market. Microelectronics sales increased \$42.9 million, or 11%, primarily due to higher sales in flat panel display applications. Materials processing sales increased \$13.0 million, or 12%, during fiscal 2013 primarily due to higher shipments for marking, heat treating and cutting applications and the acquisition of Lumera at the end of the first quarter of fiscal 2013. The increase in the OEM components and instrumentation market of \$6.2 million, or 4%, during fiscal 2013 was primarily due to higher shipments for bio-instrumentation and medical (including the acquisition of Lumera at the end of the first quarter of fiscal 2013) applications partially offset by lower shipments for military and graphic arts and display applications. Military shipments were lower due to timing of military project spending and the impact from sequestration budget cuts and graphic arts and display shipments decreased due primarily to lower demand for light show lasers from entertainment customers. The decrease in scientific and government program market sales of \$21.1 million, or 15%, during fiscal 2013 was primarily due to lower demand for advanced research applications used by university and government research groups partly due to lower U.S. and global stimulus funding and from budget cuts from government agencies.

During fiscal 2012, net sales decreased by \$33.7 million, or 4%, compared to fiscal 2011, including a decrease of \$2.4 million due to the impact of foreign currency exchange rates, with sales decreases in the OEM components and instrumentation, scientific and government program and microelectronics markets partially offset by increases in the materials processing market. Microelectronics sales decreased \$3.6 million, or 1%, primarily due to lower shipments for advanced packaging and solar applications partially offset by higher sales in flat panel display applications. The decrease in the OEM components and instrumentation market of \$20.8 million, or 13%, during fiscal 2012 was primarily due to lower shipments for bio-instrumentation, military and machine vision applications partially offset by higher shipments for medical applications. Materials processing sales increased \$4.2 million, or 4%, during fiscal 2012 primarily due to higher shipments for marking and heat treating applications as well as higher shipments of laser system tools. The decrease in scientific and government program market sales of \$13.5 million, or 9%, during fiscal 2012 was due to lower demand for advanced research applications used by university and government research groups partly due to lower U.S. stimulus funding.

In fiscal 2013, one customer accounted for 14% of net sales; in fiscal 2012 two customers accounted for 11% each of net sales; and in fiscal 2011, no customers accounted for greater than 10% of net sales.

Segments

We are organized into two reportable operating segments: Specialty Lasers and Systems ("SLS") and Commercial Lasers and Components ("CLC"). SLS develops and manufactures configurable, advanced-performance products largely serving the microelectronics, scientific research and government programs and OEM components and instrumentation markets. CLC focuses on higher volume products that are offered in set configurations. CLC's primary markets include materials processing, OEM components and instrumentation and microelectronics.

The following table sets forth, for the periods indicated, the amount of net sales and their relative percentages of total net sales by segment (dollars in thousands):

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	Fiscal 2013		Fiscal 2012		Fiscal 2011	
	Amount	Percentage of total net sales	Amount	Percentage of total net sales	Amount	Percentage of total net sales
Consolidated:						
Specialty Lasers and Systems (SLS)	\$ 571,644	70.6 %	\$ 548,848	71.4 %	\$ 519,736	64.7 %
Commercial Lasers and Components (CLC)	238,482	29.4 %	220,240	28.6 %	283,098	35.3 %
Total	\$ 810,126	100.0 %	\$ 769,088	100.0 %	\$ 802,834	100.0 %

Net sales for fiscal 2013 increased \$41.0 million, or 5%, compared to fiscal 2012, with increases of \$22.8 million, or 4%, in our SLS segment and increases of \$18.2 million, or 8%, in our CLC segment. Net sales for fiscal 2012 decreased \$33.7 million, or 4%, compared to fiscal 2011, with decreases of \$62.9 million, or 22%, in our CLC segment and increases of \$29.1 million, or 6%, in our SLS segment.

The increase in our SLS segment sales in fiscal 2013 was primarily due to a \$23.3 million increase from the sale of products acquired through our acquisitions of Lumera and Innolight at the end of the first quarter of fiscal 2013. The increase was offset by a \$0.5 million decrease in sales of our other SLS products primarily due to lower shipments for scientific and government programs, solar, advanced packaging, medical and semiconductor applications partially offset by higher revenue for flat panel display annealing applications. The increase in our SLS segment sales from fiscal 2011 to fiscal 2012 was primarily due to higher revenue for flat panel display annealing applications partially offset by lower shipments for scientific and government programs, instrumentation and solar applications.

The increase in our CLC segment sales from fiscal 2012 to fiscal 2013 was primarily due to higher advanced packaging, instrumentation and materials processing application sales partially offset by lower sales for scientific and military applications. The decrease in our CLC segment sales from fiscal 2011 to fiscal 2012 was primarily due to lower advanced packaging and certain flat panel display application sales as well as lower instrumentation application sales.

**Gross Profit****Consolidated**

Our gross profit rate decreased by 1.3% to 39.8% in fiscal 2013 from 41.1% in fiscal 2012 primarily due to unfavorable product margins (0.8%) resulting from the unfavorable impact of foreign exchange rates, the impact of lower volumes in several business units in the first two quarters of fiscal 2013 and higher than expected manufacturing costs due to longer cycle times related to the production of our complex flat panel annealing systems, partially offset by favorable product mix in the microelectronics market due to a higher concentration of service business; higher intangibles amortization (0.6%) due to the acquisitions of Lumera at the end of the first quarter of fiscal 2013 and Innolight in the first quarter of fiscal 2013; and higher other costs (0.3%) primarily due to inventory step up amortization from the acquisition of Lumera and slightly higher inventory provisions. These decreases were net of lower warranty costs (0.4%) due to lower warranty expenses as a percentage of net sales in the microelectronics market.

Our gross profit rate decreased by 2.6% to 41.1% in fiscal 2012 from 43.7% in fiscal 2011 primarily due to unfavorable product margins (1.6%) due to lower volumes in several business units serving particularly the advanced packaging and components markets and higher manufacturing expense and start-up costs to expand manufacturing capacity in Germany and Excimer tube production in Korea. These decreases were net of the favorable impact of foreign exchange rates and favorable product mix in the microelectronics market as well as higher installation and warranty costs (0.9%) including installations and higher service events in flat panel display markets.

Our gross profit rate has been and will continue to be affected by a variety of factors including market mix, pricing on volume orders, our ability to manufacture advanced and more complex products, manufacturing efficiencies, excess and obsolete inventory write-downs, warranty costs, pricing by competitors or suppliers, new product introductions, production volume, customization and reconfiguration of systems, commodity prices and foreign currency fluctuations, particularly the recent weakening of the Japanese Yen and strengthening of the Euro.



Specialty Lasers and Systems

Our SLS gross profit rate decreased by 1.5% to 41.7% in fiscal 2013 from 43.2% in fiscal 2012 primarily due to unfavorable product costs (0.9%) due to the unfavorable impact of foreign exchange rates, lower volumes in several business units and higher than expected manufacturing costs due to longer cycle times related to the production of our complex flat

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panel annealing systems net of favorable mix in the microelectronics market; higher intangibles amortization (0.8%) due to the acquisitions of Lumera at the end of the first quarter of fiscal 2013 and Innolight in the first quarter of fiscal 2013; and higher other costs (0.1%) primarily due to inventory step up amortization from the acquisition of Lumera. These decreases were partially offset by lower warranty costs (0.3%) due to fewer warranty events and higher sales volumes.

Our SLS gross profit rate decreased by 2.2% to 43.2% in fiscal 2012 from 45.4% in fiscal 2011 primarily due to unfavorable product costs (1.4%) due to increased investments in Excimer manufacturing capabilities to support the growing flat panel display revenue net of the favorable impact of exchange rates and favorable product mix within the microelectronics market and higher installation and warranty costs (1.0%) due to higher service events and costs to support installations of a growing number of laser annealing systems in the flat panel display market partially offset by lower other costs (0.3%).

**Commercial Lasers and Components**

Our CLC gross profit rate decreased by 0.5% to 36.2% in fiscal 2013 from 36.7% in fiscal 2012 primarily due to unfavorable product costs (0.6%) resulting from unfavorable mix in the OEM components and instrumentation market net of the impact of higher volumes, higher other costs (0.5%) due to higher inventory provisions as a percentage of revenue and higher intangibles amortization (0.1%) partially offset by lower warranty and installation costs (0.7%) due to fewer warranty events.

Our CLC gross profit rate decreased by 4.4% to 36.7% in fiscal 2012 from 41.1% in fiscal 2011 primarily due to unfavorable product costs (2.9%) resulting from the impact of lower volumes in a few business units serving primarily the advanced packaging and components markets and unfavorable product mix within the instrumentation and semiconductor markets, higher other costs (1.0%) due to higher inventory provisions and the impact of lower sales volumes and higher warranty and installation costs (0.5%) due to a higher installed base and the impact of lower sales volumes.

**Operating Expenses**

The following table sets forth, for the periods indicated, the amount of operating expenses and their relative percentages of total net sales by the line items reflected in our consolidated statement of operations (dollars in thousands):

	Fiscal 2013		2012		2011			
	Amount	Percentage of total net sales	Amount	Percentage of total net sales	Amount	Percentage of total net sales		
	(Dollars in thousands)							
Research and development	\$ 82,785	10.2	% \$ 78,260	10.2	% \$ 81,232	10.1	%	
Selling, general and administrative	149,513	18.5	% 138,519	18.0	% 149,499	18.6	%	
Amortization of intangible assets	5,074	0.6	% 10,376	1.3	% 8,082	1.0	%	
Total operating expenses	\$ 237,372	29.3	% \$ 227,155	29.5	% \$ 238,813	29.7	%	

**Research and development**

Fiscal 2013 research and development ("R&D") expenses increased \$4.5 million, or 6%, from fiscal 2012, but remained flat as a percentage of sales. The increase was primarily due to the acquisitions of Lumera and Innolight in the first quarter of fiscal 2013 (\$3.9 million), higher payroll and other spending on projects (\$0.5 million) and higher stock-related compensation expense (\$0.3 million) partially offset by the favorable impact of foreign exchange rates (\$0.2 million). On a segment basis, SLS spending increased \$2.7 million primarily due to the acquisitions of Lumera and Innolight partially offset by lower project spending and the impact of foreign exchange rates. CLC spending increased \$1.5 million primarily due to higher payroll and other spending on projects. Corporate and other spending increased \$0.3 million.

Fiscal 2012 research and development ("R&D") expenses decreased \$3.0 million, or 4%, from fiscal 2011. The decrease was due primarily to lower payroll spending (\$4.9 million) due to lower performance-related compensation net of increased headcount partially offset by higher project and other spending (\$1.9 million). As a percentage of

sales, the slight increase was primarily due to decreased sales volumes. On a segment basis, CLC spending decreased \$2.2 million primarily due to lower payroll spending partially offset by higher project spending. SLS spending increased \$0.1 million primarily due to higher project and other spending partially offset by lower payroll spending and the impact of foreign exchange rates. Corporate and other spending decreased \$0.8 million.  
Selling, general and administrative

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Fiscal 2013 selling, general and administrative ("SG&A") expenses increased \$11.0 million, or 8%, from fiscal 2012. The increase was primarily due to the acquisitions of Lumera and Innolight in the first quarter of fiscal 2013 (\$4.0 million), \$3.3 million higher payroll spending due to higher headcount and increased salaries, higher performance-related compensation spending and higher sales commissions, \$2.7 million higher other variable spending on consulting and legal costs, sales representative commissions, tradeshows and other as well as \$1.9 million higher stock-related compensation expense partially offset by the favorable impact of foreign exchange rates (\$0.9 million). On a segment basis, SLS segment expenses increased \$5.6 million primarily due to the acquisitions of Lumera and Innolight, higher payroll spending and higher other variable spending partially offset by the favorable impact of foreign exchange rates. CLC spending increased \$2.0 million primarily due to higher other variable spending and higher payroll spending. Spending for Corporate and other increased \$3.4 million primarily due to higher stock-related compensation expense, higher other variable spending and higher payroll spending.

Fiscal 2012 selling, general and administrative ("SG&A") expenses decreased \$11.0 million, or 7%, from fiscal 2011. The decrease was primarily due to \$12.1 million lower payroll spending due to lower performance-related compensation spending net of higher headcount and increased salaries and \$1.8 million lower other variable spending partially offset by \$2.9 million higher stock-related compensation expense. On a segment basis, CLC spending decreased \$4.2 million primarily due to lower payroll spending and lower other variable spending. SLS segment expenses decreased \$4.4 million primarily due to lower payroll spending and lower other variable spending. Spending for Corporate and other decreased \$2.4 million primarily due to lower payroll spending and lower other variable spending partially offset by higher stock-related compensation expense.

Amortization of intangible assets

Amortization of intangible assets decreased \$5.3 million, or 51%, from fiscal 2012 to fiscal 2013 primarily due to the fourth quarter fiscal 2012 impairment of \$4.0 million of Hypertronics intangibles and the completion of amortization of certain intangibles (including Hypertronics) related to prior acquisitions partially offset by amortization from the acquisitions of Lumera and Innolight in the first quarter of fiscal 2013.

Amortization of intangible assets increased \$2.3 million, or 28%, from fiscal 2011 to fiscal 2012 primarily due to the fourth quarter fiscal 2012 impairment of \$4.0 million of Hypertronics intangibles partially offset by completion of amortization of certain intangibles related to prior acquisitions.

Other income (expense), net

Other income (expense), net, decreased \$3.2 million from fiscal 2012 to fiscal 2013. The decrease was primarily due to higher net foreign currency exchange losses (\$3.3 million) primarily due to the significant movement in the Japanese Yen at certain times in the first and third quarters of fiscal 2013.

Other income (expense), net, decreased \$10.0 million from fiscal 2011 to fiscal 2012. The decrease was primarily due to the \$6.5 million non-recurring translation adjustment related to the dissolution of our Finland operations in the second quarter of fiscal 2011, lower net foreign currency exchange gains (\$1.9 million) and lower gains on our deferred compensation plan assets net of expenses (\$1.5 million) including death benefits of \$0.2 million in fiscal 2012 and \$1.5 million in fiscal 2011.

Income taxes

The effective tax rate on income before income taxes for fiscal 2013 of 20.5% was lower than the statutory rate of 35.0%. This was primarily due to permanent differences related to the benefit of income subject to foreign tax rates that are lower than U.S. tax rates including Korea and Singapore tax exemptions, the benefit of foreign tax credits, the benefit of the federal research and development tax credits including renewal of the federal research and development tax credits for fiscal 2012 and the benefit of releasing foreign tax reserves accrued under ASC 740-10 and related interest. These amounts are partially offset by deemed dividend inclusions under the Subpart F tax rules, stock compensation not deductible for tax purposes and limitations on the deductibility of compensation under IRC Section 162(m).

During fiscal 2013, we increased our valuation allowance on deferred tax assets by \$4.3 million to \$13.4 million primarily due to the reduced ability to utilize California and other states research and development tax credits. During fiscal 2012, we increased our valuation allowance on deferred tax assets by \$0.3 million to \$9.1 million primarily due to the reduced ability to utilize California research and development tax credits and offset by the net increased ability

to utilize foreign tax attributes and net operating losses of our subsidiaries. During fiscal 2011, we increased our valuation allowance on deferred tax assets by \$1.5 million to \$8.8 million, primarily due to the reduced ability to utilize foreign tax attributes and net operating losses and the reduced ability to utilize California research and development tax credits as a result of releasing net unrecognized tax benefits under ASC 740-10 that supported the credits.

In making the determination to record the valuation allowance, management considered the likelihood of future taxable income and feasible and prudent tax planning strategies to realize deferred tax assets. In the future, if we determine that we

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expect to realize deferred tax assets, an adjustment to the valuation allowance will affect income in the period such determination is made.

The effective tax rate on income before income taxes for fiscal 2012 of 30.5% was lower than the statutory rate of 35.0%. This was primarily due to the benefit of income subject to foreign tax rates that are lower than U.S. tax rates and the benefit of releasing state tax reserves accrued under ASC 740-10 Income Taxes (formerly FASB Financial Interpretation No. 48, "Accounting for Uncertainty in Income Taxes") and related interest.

The effective tax rate on income before income taxes for fiscal 2011 of 24.7% was lower than the statutory rate of 35.0%. This was primarily due to the benefit of releasing unrecognized tax benefits under ASC 740-10 and related interest, the benefit of federal research and development credits, including additional credits reinstated from fiscal 2010 resulting from the enactment of the "Tax Relief, Unemployment Insurance Reauthorization and Jobs Creation Acts of 2010," the benefit of foreign tax credits, the benefit of currency translation adjustments related to closure of Coherent Finland's operations, the benefit from income subject to foreign tax rates that are lower than U.S. tax rates and the benefit from the unrealized gain on life insurance policy investments related to our deferred compensation plans. These amounts are partially offset by state income tax, limitations on the utilization of certain foreign tax attributes and net operating losses, limitations on the deductibility of compensation under IRC Section 162(m), deemed dividend inclusions under the Subpart F tax rules and a currency translation adjustment related to a dividend from a foreign subsidiary.

The American Taxpayer Relief Act of 2012 ("the Act") was enacted on January 2, 2013. Under the Act, the federal research and development tax credit was retroactively extended for amounts paid or incurred after December 31, 2011 through December 31, 2013. The prior period effects of the change in the tax law were recognized in our second quarter of fiscal 2013, which is the quarter that the law was enacted. Accordingly, prior year research and development tax credits of approximately \$1.4 million less appropriate reserves were recognized in the second quarter of fiscal 2013.

Coherent Korea received the final approval for a High-Tech tax exemption on March 26, 2013 from the Korean authorities. The High-Tech tax exemption is effective retroactively to the beginning of fiscal 2013 and is subject to capital contribution limitations. The impact of this tax exemption decreased Korean income taxes by approximately \$2.1 million in fiscal 2013. The benefit of the tax holiday on net income per share (diluted) was \$0.09.

Coherent Singapore had previously received a Pioneer Status tax exemption from the Singapore authorities effective from fiscal 2012 through fiscal 2017, and may be extended if certain additional requirements are satisfied. The tax holiday is conditional upon our meeting certain revenue, business spending and employment thresholds. Although Coherent Singapore had income in fiscal 2013, this amount was offset by a loss carryforward from fiscal 2012 and therefore we did not realize a benefit for the Singapore tax holiday in fiscal 2013 and 2012.

**FINANCIAL CONDITION****Liquidity and capital resources**

At September 28, 2013, we had assets classified as cash and cash equivalents, as well as time deposits and fixed income securities classified as short-term investments, in an aggregate amount of \$250.1 million, compared to \$224.9 million at September 29, 2012. At September 28, 2013, approximately \$157.5 million of the cash and securities was held in certain of our foreign subsidiaries, \$89.9 million of which was denominated in currencies other than the U.S. dollar. We currently have approximately \$150.6 million of cash, including investments in U.S. Treasury securities, held by foreign subsidiaries where we intend to permanently reinvest our accumulated earnings in these entities and our current plans do not demonstrate a need for these funds to support our domestic operations. If, however, a portion of these funds were needed for and distributed to our operations in the United States, we would be subject to additional U.S. income taxes and foreign withholding taxes. The amount of the taxes due would depend on the amount and manner of repatriation, as well as the location from where the funds are repatriated. We actively monitor the third-party depository institutions that hold these assets, primarily focusing on the safety of principal and secondarily maximizing yield on these assets. We diversify our cash and cash equivalents and investments among various financial institutions, money market funds and sovereign debt in order to reduce our exposure should any one of these

financial institutions or financial instruments fail or encounter difficulties. To date, we have not experienced any material loss or lack of access to our invested cash, cash equivalents or short-term investments. However, we can provide no assurances that access to our invested cash, cash equivalents or short-term investments will not be impacted by adverse conditions in the financial markets.

#### Sources and Uses of Cash

Historically, our primary source of cash has been provided by operations. Other sources of cash in the past three fiscal years include proceeds received from the sale of our stock through our employee stock option and purchase plans. Our

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historical uses of cash have primarily been for the repurchase of our common stock, capital expenditures, acquisitions of businesses and technologies and the payment of a cash dividend in the first quarter of fiscal 2013. Supplemental information pertaining to our historical sources and uses of cash is presented as follows and should be read in conjunction with our Consolidated Statements of Cash Flows and notes thereto (in thousands):

	Fiscal		
	2013	2012	2011
Net cash provided by operating activities	\$ 115,522	\$ 64,771	\$ 86,676
Sales of shares under employee stock plans	16,541	13,288	34,720
Repurchase of common stock	—	(24,999	) (100,637
Cash dividend paid on common stock	(24,040	) —	—
Capital expenditures	(21,988	) (36,051	) (37,117
Acquisition of businesses, net of cash acquired	(67,289	) (3,687	) (14,108

Net cash provided by operating activities increased by \$50.8 million in fiscal 2013 compared to fiscal 2012 and decreased by \$21.9 million in fiscal 2012 compared to fiscal 2011. The increase in cash provided by operating activities in fiscal 2013 was primarily due to higher cash flows from timing of accounts payable payments, improved inventory turns, timing of other current assets and liabilities as well as improved accounts receivable days sales outstanding partially offset by timing of tax payments. The decrease in cash provided by operating activities in fiscal 2012 was primarily due to lower net income, higher tax payments and lower cash flows from other current liabilities including variable compensation and accounts payable partially offset by higher cash flows from inventories and accounts receivable. We believe that our existing cash, cash equivalents and short term investments combined with cash to be provided by operating activities will be adequate to cover our working capital needs and planned capital expenditures for at least the next 12 months to the extent such items are known or are reasonably determinable based on current business and market conditions. However, we may elect to finance certain of our capital expenditure requirements through borrowings under our bank credit facilities or other sources of capital. We continue to follow our strategy to further strengthen our financial position by using available cash flow to fund operations.

We intend to continue pursuing acquisition opportunities at valuations we believe are reasonable based upon market conditions. However, we cannot accurately predict the timing, size and success of our acquisition efforts or our associated potential capital commitments. Furthermore, we cannot assure you that we will be able to acquire businesses on terms acceptable to us. We expect to fund future acquisitions primarily through existing cash balances and cash flows from operations. If required, we will look for additional borrowings or consider the issuance of securities. The extent to which we will be willing or able to use our common stock to make acquisitions will depend on its market value at the time and the willingness of potential sellers to accept it as full or partial payment.

On December 10, 2012, we announced that the Board of Directors approved a \$1.00 per share special cash dividend on our outstanding common stock payable on December 27, 2012 to stockholders of record on December 19, 2012, resulting in a payment of \$24.0 million in the first quarter of fiscal 2013. While we paid a cash dividend in fiscal 2013 and may elect to pay dividends in the future, we have no present intention to declare cash dividends.

On January 26, 2011, the Board authorized the repurchase of up to \$75.0 million of our common stock. The program was authorized for 12 months from the date of authorization. In March 2011, we repurchased and retired 454,682 shares of outstanding common stock under a modified "Dutch Auction" tender offer at an average price of \$59.00 per share for a total of \$26.8 million, excluding expenses. During the third and fourth quarters of fiscal 2011, we repurchased and retired an additional 1,024,409 shares of outstanding common stock at an average price of \$47.03 per share for a total of \$48.2 million, excluding expenses.

On August 25, 2011, we announced that the Board of Directors had authorized the repurchase of up to \$50.0 million of our common stock. The program was authorized for 12 months from the date of authorization. During fiscal 2011, we repurchased and retired 586,200 shares of outstanding common stock at an average price of \$42.67 per share for a total of \$25.0 million, excluding expenses.



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During fiscal 2012, we repurchased and retired 543,200 shares of outstanding common stock at an average price of \$45.99 per share for a total of \$25.0 million, excluding expenses, completing the repurchase.

On October 4, 2012, the Board of Directors authorized the repurchase of up to \$25.0 million of our common stock. The program was authorized for 12 months from the date of authorization. No shares were purchased under this program.

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During fiscal year 2008, we initiated restructuring plans to decrease costs by consolidating facilities and reducing our workforce. As of September 28, 2013, we had made payments in connection with the restructuring plans in the amount of \$27.7 million. We completed payments for substantially all anticipated costs related to the restructuring plans in the third quarter of fiscal 2011.

Additional sources of cash available to us were domestic and international currency lines of credit and bank credit facilities totaling \$64.7 million as of September 28, 2013, of which \$62.5 million was unused and available. These unsecured credit facilities were used in Europe and Japan during fiscal 2013. Our domestic line of credit consists of a \$50.0 million unsecured revolving credit account with Union Bank of California, which expires on May 31, 2014 and is subject to covenants related to financial ratios and tangible net worth. No amounts have been drawn upon our domestic line of credit and \$2.3 million of the international currency lines has been used as guarantees as of September 28, 2013.

Our ratio of current assets to current liabilities was 4.3:1 at September 28, 2013, compared to 4.0:1 at September 29, 2012. The increase in our ratio is primarily due increases in cash and short-term investments and inventories as well as decreases in income taxes payable. Our cash and cash equivalents, short-term investments, working capital and debt obligations are as follows (in thousands):

	Fiscal	
	2013	2012
Cash and cash equivalents	\$ 110,444	\$ 67,761
Short-term investments	139,666	157,168
Working capital	483,398	460,697
Total debt obligations	2	19

**Contractual Obligations and Off-Balance Sheet Arrangements**

We have no off-balance sheet arrangements as defined by Regulation S-K of the Securities Act of 1933. The following summarizes our contractual obligations at September 28, 2013 and the effect such obligations are expected to have on our liquidity and cash flow in future periods (in thousands):

	Total	Less than 1 year	1 to 3 years	3 to 5 years	More than 5 years
Long-term debt payments	\$2	\$2	\$—	\$—	\$—
Operating lease payments	40,749	9,335	13,253	9,731	8,430
Asset retirement obligations	2,474	—	1,269	—	1,205
Purchase commitments for inventory	40,214	40,214	—	—	—
Purchase obligations-other	5,177	5,177	—	—	—
Total	\$88,616	\$54,728	\$14,522	\$9,731	\$9,635

Because of the uncertainty as to the timing of such payments, we have excluded cash payments related to our contractual obligations for our deferred compensation plans aggregating \$26.1 million at September 28, 2013.

As of September 28, 2013, we recorded gross unrecognized tax benefits of \$23.2 million including gross interest and penalties of \$1.8 million. As of September 29, 2012, we recorded gross unrecognized tax benefits of \$27.6 million including gross interest and penalties of \$1.6 million. Both gross unrecognized tax benefits and gross interest and penalties are classified as non-current liabilities in the consolidated balance sheet. At this time, we are unable to make a reasonably reliable estimate of the timing of payments in individual years due to uncertainties in the timing of tax audit outcomes. As a result, these amounts are not included in the table above.

**Changes in financial condition**

Cash provided by operating activities in fiscal 2013 was \$115.5 million, which included net income of \$66.4 million, depreciation and amortization of \$36.1 million, stock-based compensation expense of \$18.9 million and \$0.3 million other partially offset by cash used by operating assets and liabilities of \$5.1 million and increases in net deferred tax assets of \$1.1 million. Cash provided by operating activities in fiscal 2012 was \$64.8 million, which included net income of \$63.0 million, depreciation and amortization of \$29.6 million, stock-based compensation expense of \$16.3 million and the \$4.1 million write-off of Hypertronics intangibles partially offset by cash used by operating assets and liabilities of \$42.0 million, increases in net deferred tax assets of \$4.8 million and \$1.4 million other.



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Cash used in investing activities in fiscal 2013 of \$70.7 million included \$20.5 million, net, used to acquire property and equipment and improve buildings and \$67.3 million used to acquire Lumera and Innolight partially offset by \$17.1 million net sales of available-for-sale securities. Cash used in investing activities in fiscal 2012 of \$142.9 million included \$103.5 million net purchases of available-for-sale securities, \$35.7 million, net, used to acquire property and equipment and improve buildings and \$3.7 million used to acquire Midaz.

Cash used in financing activities in fiscal 2013 was \$11.7 million, including \$24.0 million cash dividend on our common stock and \$4.2 million other partially offset by \$16.5 million generated from our employee stock purchase plans. Cash used in financing activities in fiscal 2012 was \$15.0 million, including \$25.0 million used to repurchase our common stock and \$3.3 million other partially offset by \$13.3 million generated from our employee stock purchase plans.

Changes in exchange rates in fiscal 2013 resulted in a decrease in cash balances of \$9.5 million. Changes in exchange rates in fiscal 2012 resulted in a decrease in cash balances of \$6.1 million.

### RECENT ACCOUNTING PRONOUNCEMENTS

See Note 2. "Significant Accounting Policies" in the Notes to Consolidated Financial Statements for a full description of recent accounting pronouncements, including the respective dates of adoption or expected adoption and effects on our consolidated financial position, results of operations and cash flows.

### APPLICATION OF CRITICAL ACCOUNTING POLICIES

Our discussion and analysis of financial condition and results of operations are based upon our consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States of America and pursuant to the rules and regulations of the SEC. The preparation of these financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. We have identified the following as the items that require the most significant judgment and often involve complex estimation: revenue recognition, accounting for long-lived assets (including goodwill and intangible assets), inventory valuation, warranty reserves, stock-based compensation and accounting for income taxes.

#### Revenue Recognition

We recognize revenue when all four revenue recognition criteria have been met: persuasive evidence of an arrangement exists, the product has been delivered or the service has been rendered, the price is fixed or determinable and collection is probable. Revenue from product sales is recorded when all of the foregoing conditions are met and risk of loss and title passes to the customer. Our products typically include a warranty and the estimated cost of product warranty claims (based on historical experience) is recorded at the time the sale is recognized. Sales to customers are generally not subject to any price protection or return rights.

The vast majority of our sales are made to original equipment manufacturers ("OEMs"), distributors, resellers and end-users in the non-scientific market. Sales made to these customers do not require installation of the products by us and are not subject to other post-delivery obligations, except in occasional instances where we have agreed to perform installation or provide training. In those instances, we defer revenue related to installation services or training until these services have been rendered. We allocate revenue from multiple element arrangements to the various elements based upon fair values or a selling price hierarchy, for arrangements entered into subsequent to October 2, 2010, as more fully described in Note 2, "Significant Accounting Policies - Revenue Recognition," in our consolidated financial statements.

Should changes in conditions cause management to determine these criteria are not met for certain future transactions, revenue recognized for any reporting period could be adversely affected. Failure to obtain anticipated orders due to delays or cancellations of orders could have a material adverse effect on our revenue. In addition, pressures from customers to reduce our prices or to modify our existing sales terms may have a material adverse effect on our revenue in future periods.

Our sales to distributors, resellers and end-user customers typically do not have customer acceptance provisions and only certain of our sales to OEM customers and integrators have customer acceptance provisions. Customer

acceptance is generally limited to performance under our published product specifications. For the few product sales that have customer acceptance provisions because of higher than published specifications, (1) the products are tested and accepted by the customer at our site or the customer accepts the results of our testing program prior to shipment to the customer, or (2) the revenue is deferred until customer acceptance occurs.

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Sales to end-users in the scientific market typically require installation and, thus, involve post-delivery obligations; however our post-delivery installation obligations are not essential to the functionality of our products. We defer revenue related to installation services until completion of these services.

For most products, training is not provided; therefore, no post-delivery training obligation exists. However, when training is provided to our customers, it is typically priced separately and recognized as revenue as these services are provided.

For multiple element arrangements which include extended maintenance contracts, we allocate and defer the amount of consideration equal to the separately stated price and recognize revenue on a straight-line basis over the contract period.

**Long-Lived Assets and Goodwill**

We evaluate long-lived assets and amortizable intangible assets whenever events or changes in business circumstances or our planned use of assets indicate that their carrying amounts may not be fully recoverable or that their useful lives are no longer appropriate. Reviews are performed to determine whether the carrying values of the assets are impaired based on comparison to the undiscounted expected future cash flows identifiable to such long-lived and amortizable intangible assets. If the comparison indicates that impairment exists, the impaired asset is written down to its fair value.

We have determined that our reporting units are the same as our operating segments as each constitutes a business for which discrete financial information is available and for which segment management regularly reviews the operating results. We make this determination in a manner consistent with how the operating segments are managed. Based on this analysis, we have identified two reporting units which are our reportable segments: SLS and CLC.

Goodwill is tested for impairment on an annual basis and between annual tests in certain circumstances, and written down when impaired (see Note 8 "Goodwill and Intangible Assets" in the Notes to Consolidated Financial Statements). We generally perform our annual impairment tests during the fourth quarter of each fiscal year using the opening balance sheet as of the first day of the fourth fiscal quarter, with any resulting impairment recorded in the fourth quarter of the fiscal year.

In September 2011, the FASB amended its guidance to simplify testing goodwill for impairment, allowing an entity to first assess qualitative factors to determine whether it is necessary to perform the two-step quantitative goodwill impairment test. If an entity determines as a result of the qualitative assessment that it is more likely than not (> 50% likelihood) that the fair value of a reporting unit is less than its carrying amount, then the quantitative test is required. Moreover, an entity can bypass the qualitative assessment for any reporting unit in any period and proceed directly to step one of the impairment test, and then resume performing the qualitative assessment in any subsequent period. Otherwise, no further testing is required. We adopted this accounting guidance for our impairment testing in fiscal 2012.

Under the goodwill standards in effect for fiscal 2011, a company could carry forward the detailed determination of a reporting unit from one year to the next if certain criteria have been met. Those criteria include: the assets and liabilities that make up the reporting unit have not changed significantly since the most recent fair value determination, the most recent fair value determination resulted in an amount that exceeded the carrying amount of the reporting unit by a substantial margin, and based on an analysis of events that have occurred and circumstances that have changed since the most recent fair value determination, the likelihood that a current fair value determination would be less than the current carrying amount of the reporting unit is remote.

Based on our analysis and a review of the criteria, using the opening balance sheet as of the first day of the fourth quarter of fiscal 2011, we determined that we had met the requirements of the goodwill standard for carrying forward our fair value determination from fiscal 2010, and did not perform detailed testing of the fair value of our reporting units for fiscal 2011. Between the completion of that testing and the end of the fourth quarter of fiscal 2011, we noted no indications of impairment or triggering events to cause us to review goodwill for potential impairment; based on our evaluation, the fair values of each of the two operating segments significantly exceeded their carrying value as of that date.

In our fiscal 2012 annual testing, we performed a qualitative assessment of the goodwill by reporting unit during the fourth quarter of fiscal 2012 using the opening balance sheet as of the first day of the fourth quarter and concluded that it was more likely than not that the fair value of each of the reporting units exceeded its carrying amount. In assessing the qualitative factors, we considered the impact of these key factors: macroeconomic conditions, fluctuations in foreign currency, market and industry conditions, our operating and competitive environment, regulatory and political developments, the overall financial performance of our reporting units including cost factors and budgeted-to-actual revenue results. We also considered market capitalization and stock price performance. Based on our assessment, goodwill in the reporting units was not impaired as of the first day of the fourth quarter of fiscal 2012. As such, it was not necessary to perform the two-step goodwill impairment test at that time.

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In fiscal 2013, we elected to bypass the qualitative assessment and proceed directly to performing the first step of the goodwill impairment test. This election was made because we had last performed this impairment test in fiscal 2010 and we have subsequently added a substantial amount of goodwill balances as a result of our acquisitions of Midaz in the fourth quarter of fiscal 2012 and the acquisitions of Innolight and Lumera in the first quarter of fiscal 2013. We performed our Step 1 test during the fourth quarter of fiscal 2013 using the opening balance sheet as of the first day of the fourth quarter and noted no impairment. We determined the fair value of our reporting units for the Step 1 test using a 50-50% weighting of the Income (discounted cash flow) approach and Market (market comparable) approach. The Income approach utilizes the discounted cash flow model to provide an estimation of fair value based on the cash flows that a business expects to generate. These cash flows are based on forecasts developed internally by management which are then discounted at an after tax rate of return required by equity and debt market participants of a business enterprise. This rate of return or cost of capital is weighted based on the capitalization of comparable companies. The Market approach determines fair value by comparing the reporting units to comparable companies in similar lines of business that are publicly traded. Total Enterprise Value (TEV) multiples such as TEV to revenues and TEV to earnings (if applicable) before interest and taxes of the publicly traded companies are calculated. These multiples are then applied to the reporting unit's operating results to obtain an estimate of fair value. Each of these two approaches captures aspects of value in each reporting unit. The Income approach captures our expected future performance, and the Market approach captures how investors view the reporting units through other competitors. We believe these valuation approaches are proven valuation techniques and methodologies for our industry and are widely accepted by investors. As neither was perceived by us to deliver any greater indication of value than the other, we weighted each of the approaches equally. Management completed and reviewed the results of the Step 1 analysis and concluded that a Step 2 analysis was not required as the estimated fair values of both of our reporting units were substantially in excess of their carrying values. Between the completion of that testing and the end of the fourth quarter of fiscal 2013, we noted no indications of impairment or triggering events to cause us to review goodwill for potential impairment.

At September 28, 2013, we had \$113.4 million of goodwill, \$43.0 million of purchased intangible assets and \$114.3 million of property and equipment on our consolidated balance sheet.

**Inventory Valuation**

We record our inventory at the lower of cost (computed on a first-in, first-out basis) or market. We write-down our inventory to its estimated market value based on assumptions about future demand and market conditions. Inventory write-downs are generally recorded within guidelines set by management when the inventory for a device exceeds 12 months of its demand and when individual parts have been in inventory for greater than 12 months. If actual market conditions are less favorable than those projected by management, additional inventory write-downs may be required which could materially affect our future results of operations. Due to rapidly changing forecasts and orders, additional write-downs for excess or obsolete inventory, while not currently expected, could be required in the future. In the event that alternative future uses of fully written down inventories are identified, we may experience better than normal profit margins when such inventory is sold. Differences between actual results and previous estimates of excess and obsolete inventory could materially affect our future results of operations. We write-down our demo inventory by amortizing the cost of demo inventory over a twenty month period starting from the fourth month after such inventory is placed in service.

**Warranty Reserves**

We provide warranties on the majority of our product sales and allowances for estimated warranty costs are recorded during the period of sale. The determination of such allowances requires us to make estimates of product return rates and expected costs to repair or replace the products under warranty. We currently establish warranty reserves based on historical warranty costs for each product line. The weighted average warranty period covered is approximately 15 months. If actual return rates and/or repair and replacement costs differ significantly from our estimates, adjustments to cost of sales may be required in future periods.

**Stock-Based Compensation**



We account for stock-based compensation using fair value. We estimate the fair value of stock options granted using the Black-Scholes Merton model and estimate the fair value of market-based performance restricted stock units granted using a Monte Carlo simulation model. We use historical data to estimate pre-vesting option forfeitures and record stock-based compensation expense only for those awards that are expected to vest. We amortize the fair value of stock options on a straight-line basis over the requisite service periods of the awards, which are generally the vesting periods. We value service-based restricted stock units using the intrinsic value method and amortize the value on a straight-line basis over the restriction period. We value market-based performance restricted stock units using a Monte Carlo simulation model and amortize the value over the performance period, with no adjustment in future periods, based upon the actual shareholder return over the performance period.

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U.S. Generally Accepted Accounting Principles ("GAAP") requires the use of option pricing models that were not developed for use in valuing employee stock options. The Black-Scholes option-pricing model was developed for use in estimating the fair value of short-lived exchange traded options that have no vesting restrictions and are fully transferable. In addition, option-pricing models require the input of highly subjective assumptions, including the options expected life, the expected price volatility of the underlying stock and an estimate of expected forfeitures. Our computation of expected volatility considers historical volatility and market-based implied volatility. Our estimate of expected forfeitures is based on historical employee data and could differ from actual forfeitures.

See Note 14 "Employee Stock Option and Benefit Plans" in the notes to the Consolidated Financial Statements for a description of our stock-based employee compensation plans and the assumptions we use to calculate the fair value of stock-based employee compensation.

**Income Taxes**

As part of the process of preparing our consolidated financial statements, we are required to estimate our income tax provision (benefit) in each of the jurisdictions in which we operate. This process involves us estimating our current income tax provision (benefit) together with assessing temporary differences resulting from differing treatment of items for tax and accounting purposes. These differences result in deferred tax assets and liabilities, which are included within our consolidated balance sheets.

We record a valuation allowance to reduce our deferred tax assets to an amount that more likely than not will be realized. While we have considered future taxable income and ongoing prudent and feasible tax planning strategies in assessing the need for the valuation allowance, in the event we were to determine that we would be able to realize our deferred tax assets in the future in excess of our net recorded amount, an adjustment to the allowance for the deferred tax asset would increase income in the period such determination was made. Likewise, should we determine that we would not be able to realize all or part of our net deferred tax asset in the future, an adjustment to the valuation allowance for the deferred tax asset would be charged to income in the period such determination was made.

Federal income taxes have not been provided for on a portion of the unremitted earnings of foreign subsidiaries because such earnings are intended to be permanently reinvested. The total amount of unremitted earnings and accumulated translation adjustments of foreign subsidiaries for which we have not yet recorded federal and state income taxes was approximately \$335.4 million and \$52.7 million, respectively, at fiscal 2013 year-end. The amount of federal and state income taxes that would be payable upon repatriation of such earnings are not practicably determinable.

**ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK****Market risk disclosures**

We are exposed to market risk related to changes in interest rates and foreign currency exchange rates. We do not use derivative financial instruments for speculative or trading purposes.

**Interest rate sensitivity**

A portion of our investment portfolio is composed of fixed income securities. These securities are subject to interest rate risk and will fall in value if market interest rates increase. If interest rates were to increase immediately (whether due to changes in overall market rates or credit worthiness of the issuers of our individual securities) and uniformly by 10% from levels at fiscal 2013 year-end, the fair value of the portfolio, based on quoted market prices in active markets involving similar assets, would decline by an immaterial amount due to their short-term maturities. We have the ability to generally hold our fixed income investments until maturity and therefore we would not expect our operating results or cash flows to be affected to any significant degree by the effect of a sudden change in market interest rates on our securities portfolio. If necessary, we may sell short-term investments prior to maturity to meet our liquidity needs.

At fiscal 2013 year-end, the fair value of our available-for-sale debt securities was \$139.7 million, all of which was classified as short-term investments. Gross unrealized gains and losses on available-for-sale debt securities were \$601,000 and \$(16,000), respectively, at fiscal 2013 year-end. At fiscal 2012 year-end, the fair value of our available-for-sale debt securities was \$155.1 million, all of which was classified as short-term investments. Gross unrealized gains and losses on available-for-sale debt securities were \$952,000 and (\$3,000), respectively, at fiscal 2012 year-end.

Foreign currency exchange risk

We maintain operations in various countries outside of the United States and have foreign subsidiaries that manufacture and sell our products in various global markets. The majority of our sales are transacted in U.S. dollars. However, we do generate revenues in other currencies, primarily the Japanese Yen, the Euro and the Korean Won. As a result, our earnings, cash

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flows and cash balances are exposed to fluctuations in foreign currency exchange rates. We attempt to limit these exposures through financial market instruments. We utilize derivative instruments, primarily forward contracts with maturities of three months or less, to manage our exposure associated with anticipated cash flows and net asset and liability positions denominated in foreign currencies. Gains and losses on the forward contracts are mitigated by gains and losses on the underlying instruments. We do not use derivative financial instruments for trading purposes. We do not anticipate any material adverse effect on our consolidated financial position, results of operations or cash flows resulting from the use of these instruments. There can be no assurance that these strategies will be effective or that transaction losses can be minimized or forecasted accurately. For example, the Japanese Yen has recently decreased significantly in value and the Euro has recently strengthened in value. While we model currency valuations and fluctuations, these may not ultimately be accurate. If a financial counterparty to any of our hedging arrangements experiences financial difficulties or is otherwise unable to honor the terms of the foreign currency hedge, we may experience material financial losses. In the current economic environment, the risk of failure of a financial party remains high.

At September 28, 2013, approximately \$157.5 million of our cash, cash equivalents and short-term investments were held outside the U.S. in certain of our foreign operations, \$89.9 million of which was denominated in currencies other than the U.S. dollar.

A hypothetical 10% change in foreign currency rates on our forward contracts would not have a material impact on our results of operations, cash flows or financial position.

The following table provides information about our foreign exchange forward contracts at September 28, 2013. The table presents the weighted average contractual foreign currency exchange rates, the value of the contracts in U.S. dollars at the contract exchange rate as of the contract maturity date and fair value. The U.S. notional fair value represents the contracted amount valued at September 28, 2013 rates.

Forward contracts to sell (buy) foreign currencies (in thousands, except contract rates):

	Average Contract Rate	U.S. Notional Contract Value	U.S. Notional Fair Value
For US Dollars:			
Euro	1.3244	\$(46,248 )	\$(47,299 )
Korean Won	1,088.1900	\$ 17,345	\$ 17,545
Chinese Renminbi	6.1690	\$ 11,524	\$ 11,793
British Pound Sterling	1.5689	\$ 1,870	\$ 1,919
Japanese Yen	100.2589	\$(5,212 )	\$(5,308 )
Singapore Dollar	1.2679	\$(1,465 )	\$(1,480 )
Malaysian Ringgit	3.2755	\$ 642	\$ 649
For Euros:			
Japanese Yen	98.4463	\$ 11,860	\$ 11,753

**ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA**

See Item 15-(a) for an index to the Consolidated Financial Statements and Supplementary Financial Information, which are attached hereto and incorporated by reference herein. The financial statements and notes thereto can be found beginning on page 63 of this annual report.

**ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE**

Not applicable.



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ITEM 9A. CONTROLS AND PROCEDURES

Management's Evaluation of Disclosure Controls and Procedures

We have evaluated the effectiveness of the design and operation of our disclosure controls and procedures, as such term is defined in Rule 13a-15(e) under the Securities Exchange Act of 1934, as of the end of the period covered by this annual report ("Evaluation Date"). The controls evaluation was done under the supervision and with the participation of management, including our Chief Executive Officer and Chief Financial Officer. Based on this evaluation, our Chief Executive Officer and Chief Financial Officer concluded as of the Evaluation Date that our disclosure controls and procedures were effective in providing reasonable assurance that information required to be disclosed by us in reports that we file or submit under the Securities Exchange Act of 1934, as amended, is (i) recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission's rules and forms and (ii) accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosures.

Management's Report on Internal Control Over Financial Reporting

Management, including our Chief Executive Officer and Chief Financial Officer, is responsible for establishing and maintaining adequate internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the Company.

Management assessed the effectiveness of our internal control over financial reporting as of September 28, 2013, utilizing the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO") in Internal Control-Integrated Framework (1992). Based on the assessment by management, we determined that our internal control over financial reporting was effective as of September 28, 2013. The effectiveness of our internal control over financial reporting as of September 28, 2013 has been audited by Deloitte & Touche LLP, our independent registered public accounting firm, as stated in their report which appears below.

Inherent Limitations Over Internal Controls

Internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles ("GAAP"). Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness for future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate. Our internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of the financial statements for external purposes in accordance with GAAP. Our internal control over financial reporting includes those policies and procedures that:

- (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of our assets;
- (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that our receipts and expenditures are being made only in accordance with authorizations of our management and directors; and
- (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of our assets that could have a material effect on the financial statements.

Management, including our CEO and CFO, does not expect that our internal controls will prevent or detect all errors and all fraud. A control system, no matter how well designed and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Further, the design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Because of the inherent limitations in all control systems, no evaluation of internal controls can provide absolute assurance that all control issues and instances of fraud, if any, have been detected. Also, any evaluation of the effectiveness of controls in future periods are subject to the risk that those internal controls may become inadequate because of changes in business conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Changes in Internal Control Over Financial Reporting

There were no changes in our internal control over financial reporting that occurred during the quarter ended September 28, 2013 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders of Coherent, Inc.:

We have audited the internal control over financial reporting of Coherent, Inc. and its subsidiaries (collectively, the "Company") as of September 28, 2013, based on the criteria established in Internal Control—Integrated Framework (1992) issued by the Committee of Sponsoring Organizations of the Treadway Commission. The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's Report on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company's internal control over financial reporting is a process designed by, or under the supervision of, the company's principal executive and principal financial officers, or persons performing similar functions, and effected by the company's board of directors, management, and other personnel to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of the inherent limitations of internal control over financial reporting, including the possibility of collusion or improper management override of controls, material misstatements due to error or fraud may not be prevented or detected on a timely basis. Also, projections of any evaluation of the effectiveness of the internal control over financial reporting to future periods are subject to the risk that the controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of September 28, 2013, based on the criteria established in Internal Control—Integrated Framework (1992) issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated financial statements as of and for the year ended September 28, 2013, of the Company and our report dated November 27, 2013, expressed an unqualified opinion on those consolidated financial statements.

/s/ DELOITTE & TOUCHE LLP

San Jose, California

November 27, 2013



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ITEM 9B. OTHER INFORMATION

Not applicable.

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## PART III

## ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

Information regarding: (i) our directors will be set forth under the caption "Proposal One —Election of Directors—Nominees"; (ii) compliance with Section 16(a) of the Securities Act of 1933 will be set forth under the caption "Section 16(a) Beneficial Ownership Reporting Compliance"; (iii) the process for stockholders to nominate directors will be set forth under the caption "Proposal One—Election of Directors—Process for Recommending Candidates for Election to the Board of Directors"; (iv) our audit committee and audit committee financial expert will be set forth under the caption "Proposal One—Election of Directors—Board Meetings and Committees—Audit Committee"; in our proxy statement for use in connection with an upcoming Annual Meeting of Stockholders to be held in 2014 (the "2014 Proxy Statement") and is incorporated herein by reference or included in a Form 10-K/A as an amendment to this Form 10-K. The 2014 Proxy Statement or Form 10-K/A will be filed with the SEC within 120 days after the end of our fiscal year.

**Business Conduct Policy**

We have adopted a worldwide Business Conduct Policy that applies to the members of our Board of Directors, executive officers and other employees. This policy is posted on our Website at [www.coherent.com](http://www.coherent.com) and may be found as follows:

1. From our main Web page, first click on "Company" and then on "corporate governance."
2. Next, click on "Business Conduct Policy."

We intend to satisfy the disclosure requirement under Item 5.05 of Form 8-K regarding an amendment to, or waiver from, a provision of this Business Conduct Policy by posting such information on our Website, at the address and location specified above.

Stockholders may request free printed copies of our worldwide Business Conduct Policy from:  
Coherent, Inc.

Attention: Investor Relations  
5100 Patrick Henry Drive  
Santa Clara, California 95054  
Executive Officers

The name, age, position and a brief account of the business experience of our executive officers as of November 27, 2013 are set forth below:

Name	Age	Office Held
John R. Ambroseo	52	President and Chief Executive Officer
Helene Simonet	61	Executive Vice President and Chief Financial Officer
Mark Sobey	53	Executive Vice President and General Manager, Specialty Laser Systems
Paul Sechrist	54	Executive Vice President, Worldwide Sales and Service
Luis Spinelli	65	Executive Vice President and Chief Technology Officer
Bret M. DiMarco	45	Executive Vice President, General Counsel and Corporate Secretary

**John R. Ambroseo.** Mr. Ambroseo has served as our President and Chief Executive Officer as well as a member of the Board of Directors since October 2002. Mr. Ambroseo served as our Chief Operating Officer from June 2001 through September 2002. Mr. Ambroseo served as our Executive Vice President and as President and General Manager of the Coherent Photonics Group from September 2000 to June 2001. From September 1997 to September 2000, Mr. Ambroseo served as our Executive Vice President and as President and General Manager of the Coherent Laser Group. From March 1997 to September 1997, Mr. Ambroseo served as our Scientific Business Unit Manager. From August 1988, when Mr. Ambroseo joined us, until March 1997, he served as a Sales Engineer, Product Marketing Manager, National Sales Manager and Director of European Operations. Mr. Ambroseo received a Bachelor degree from SUNY-College at Purchase and a PhD in Chemistry from the University of Pennsylvania.

**Helene Simonet.** Ms. Simonet has served as our Executive Vice President and Chief Financial Officer since April 2002. Ms. Simonet served as Vice President of Finance of our former Medical Group and Vice President of Finance, Photonics Division from December 1999 to April 2002. Prior to joining Coherent, she spent over twenty years in

senior finance positions

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at Raychem Corporation's Division and Corporate organizations, including Vice President of Finance of Raynet Corporation. Ms. Simonet has both Master's and Bachelor degrees from the University of Leuven, Belgium. Mark Sobey. Mr. Sobey was appointed Executive Vice President of Coherent and General Manager of Specialty Laser Systems (SLS) in April 2010. He has served as Senior Vice President and General Manager for the SLS Business Group, which primarily serves the Microelectronics and Research markets, since joining Coherent in July 2007. Prior to Coherent, Mr. Sobey has spent over 20 years in the Laser and Fiber Optics Telecommunications industries, including roles as Senior Vice President Product Management at Cymer from January 2006 through June 2007 and previously as Senior Vice President Global Sales at JDS Uniphase through October 2005. He received his PhD in Engineering and BSc in Physics, both from the University of Strathclyde in Scotland.

Paul Sechrist. Mr. Paul Sechrist was appointed Executive Vice President, Worldwide Sales and Service in March 2011. He has over 30 years of experience with Coherent, including roles as Senior Vice President and General Manager of Commercial Lasers and Components from October 2008 to March 2011, Vice President and General Manager of Specialty Laser Systems, Santa Clara from March 2008 to October 2008 and Vice President for Components from April 2005 to October 2008. Mr. Sechrist received an AA degree from San Jose City College, with Physics studies at California State University, Hayward.

Luis Spinelli. Mr. Spinelli has served as our Executive Vice President and Chief Technology Officer since February 2004. Mr. Spinelli joined the Company in May 1985 and has since held various engineering and managerial positions, including Vice President, Advanced Research from April 2000 to September 2002 and Vice President, Corporate Research from September 2002 to February 2004. Mr. Spinelli has led the Advanced Research Unit from its inception in 1998, whose charter is to identify and evaluate new and emerging technologies of interest for us across a range of disciplines in the laser field. Mr. Spinelli holds a degree in Electrical Engineering from the University of Buenos Aires, Argentina with post-graduate work at the Massachusetts Institute of Technology.

Bret M. DiMarco. Mr. DiMarco has served as our Executive Vice President and General Counsel since June 2006 and our Corporate Secretary since February 2007. From February 2003 until May 2006, Mr. DiMarco was a member and from October 1995 until January 2003 was an associate at Wilson Sonsini Goodrich & Rosati, P.C., a law firm. Mr. DiMarco received a Bachelor's degree from the University of California at Irvine and a Juris Doctorate degree from the Law Center at the University of Southern California. He is also an adjunct professor of law at the University of California Hastings College of the Law, teaching corporate law and mergers & acquisitions.

**ITEM 11. EXECUTIVE COMPENSATION**

Information regarding: (i) executive officer and director compensation will be set forth under the captions "Election of Directors—Director Compensation" and "Executive Officers and Executive Compensation" and (ii) compensation committee interlocks will be set forth under the caption "Executive Officers and Executive Compensation—Compensation Committee Interlocks and Insider Participation and Committee Independence" in the 2014 Proxy Statement or included in a Form 10-K/A as an amendment to our Form 10-K for the fiscal year ended September 28, 2013. The 2014 Proxy Statement or Form 10-K/A will be filed with the SEC within 120 days after the end of our fiscal year.

**ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS**

Information regarding: (i) equity compensation plan information will be set forth under the caption "Equity Compensation Plan Information"; and (ii) security ownership of certain beneficial owners and management will be set forth under the caption "Security Ownership of Certain Beneficial Owners and Management"; in our 2014 Proxy Statement and is incorporated herein by reference or included in a Form 10-K/A as an amendment to our Form 10-K for the fiscal year ended September 28, 2013.

**ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE**

The information required under this item will be set forth under the caption "Certain Relationships and Related Party Transactions" in our 2014 Proxy Statement and is incorporated herein by reference or included in a Form 10-K/A as an amendment to our Form 10-K for the fiscal year ended September 28, 2013.

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

Principal Accounting Fees and Services

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The following table sets forth fees for services provided by Deloitte & Touche LLP, the member firms of Deloitte Touche Tohmatsu, and their respective affiliates (collectively, "Deloitte") during fiscal years 2013 and 2012:

	2013	2012
Audit fees(1)	\$ 1,818,000	\$ 1,725,000
Audit-related fees(2)	79,126	172,632
Tax fees(3)	135,337	—
All other fees(4)	2,200	2,200
Total	\$ 2,034,663	\$ 1,899,832

(1) Represents fees for professional services provided in connection with the integrated audit of our annual financial statements and internal control over financial reporting and review of our quarterly financial statements, advice on accounting matters that arose during the audit and audit services provided in connection with other statutory or regulatory filings.

(2) For fiscal 2013, represents \$79,126 in fees for due diligence associated with our acquisition activities in fiscal 2013. For fiscal 2012, represents \$146,874 in fees for due diligence associated with our acquisition activities in fiscal 2012 and \$25,578 for services related to the review of our XBRL filings.

(3) Represents tax compliance and related services.

(4) Represents the annual subscription for access to the Deloitte Accounting Research Tool, which is a searchable on-line accounting database.

#### Pre-Approval of Audit and Non-Audit Services

The Audit Committee has determined that the provision of non-audit services by Deloitte is compatible with maintaining Deloitte's independence. In accordance with its charter, the Audit Committee approves in advance all audit and non-audit services to be provided by Deloitte. In other cases, the Chairman of the Audit Committee has the delegated authority from the Committee to pre-approve certain additional services, and such pre-approvals are communicated to the full Committee at its next meeting. During fiscal year 2013, all services were pre-approved by the Audit Committee in accordance with this policy.

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## PART IV

## ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

## (a) 1. Index to Consolidated Financial Statements

The following Consolidated Financial Statements of Coherent, Inc. and its subsidiaries are filed as part of this annual report on Form 10-K:

<u>Report of Independent Registered Public Accounting Firm</u>	<u>65</u>
<u>Consolidated Balance Sheets—September 28, 2013 and September 29, 2012</u>	<u>66</u>
<u>Consolidated Statements of Operations—Years ended September 28, 2013, September 29, 2012 and October 1, 2011</u>	<u>67</u>
<u>Consolidated Statements of Comprehensive Income—Years ended September 28, 2013, September 29, 2012 and October 1, 2011</u>	<u>68</u>
<u>Consolidated Statements of Stockholders' Equity—Years ended September 28, 2013, September 29, 2012 and October 1, 2011</u>	<u>69</u>
<u>Consolidated Statements of Cash Flows—Years ended September 28, 2013, September 29, 2012 and October 1, 2011</u>	<u>70</u>
<u>Notes to Consolidated Financial Statements</u>	<u>72</u>
<u>Quarterly Financial Information (Unaudited)</u>	<u>104</u>

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2. Consolidated Financial Statement Schedules

Financial statement schedules have been omitted because they are either not required, not applicable or the information required to be set forth therein is included in the Consolidated Financial Statements hereto.

3. Exhibits

Exhibit  
Numbers

- 3.1\* Restated and Amended Certificate of Incorporation. (Previously filed as Exhibit 3.1 to Form 10-K for the fiscal year ended September 29, 1990)
- 3.2\* Certificate of Amendment of Restated and Amended Certificate of Incorporation of Coherent, Inc. (Previously filed as Exhibit 3.2 to Form 10-K for the fiscal year ended September 28, 2002)
- 3.3\* Bylaws. (Previously filed as Exhibit 3.1 to Form 8-K, filed on December 12, 2012)
- 10.1\*‡ Amended and Restated Employee Stock Purchase Plan. (Previously filed as Exhibit 10.1 to Form S-8 filed on June 12, 2012)
- 10.2\*‡ Coherent Employee Retirement and Investment Plan. (Previously filed as Exhibit 10.23 to Form 8, Amendment No. 1 to Annual Report on Form 10-K for the fiscal year ended September 25, 1982)
- 10.3\* 1998 Director Option Plan. (Previously filed as Appendix B to Schedule 14A filed February 28, 2006)
- 10.4\*‡ 2001 Stock Plan. (Previously filed as Exhibit 10.1 to Form 10-Q for the quarter ended March 29, 2008)
- 10.5\*‡ Change of Control Severance Plan, as amended and restated effective December 7, 2012. (Previously filed as Exhibit 10.1 to Form 8-K, filed on December 12, 2012)
- 10.6\*‡ Variable Compensation Plan, as amended. (Previously filed as Exhibit 10.7 to Form 10-K for the fiscal year ended October 1, 2011)
- 10.7\*‡ Fiscal 2011 Variable Compensation Plan Payout Scale. (Previously filed as Exhibit 10.8 to Form 10-K for the fiscal year ended October 1, 2011)
- 10.8\*‡ Fiscal 2012 Variable Compensation Plan Payout Scale. (Previously filed as Exhibit 10.9 to Form 10-K for the fiscal year ended October 1, 2011)
- 10.9\*\*\*\*‡ Fiscal 2013 Variable Compensation Plan Payout Scale for Named Executive Officers. (Previously filed as Exhibit 10.3 to Form 10-Q for the fiscal quarter ended December 29, 2012)
- 10.10\*‡ Supplementary Retirement Plan. (Previously filed as Exhibit 10.5 to Form 10-Q for the quarter ended April 1, 2006)
- 10.11\*‡ 2005 Deferred Compensation Plan. (Previously filed as Exhibit 10.1 to Form 10-Q for the fiscal quarter ended December 31, 2011)
- 10.12\*‡ Form of 2001 Stock Plan Terms and Conditions of Restricted Stock Units. (Previously filed as Exhibit 10.1 to Form 8-K filed on November 27, 2009)
- 10.13\*‡ Form of 2001 Stock Plan Amended Global Stock Option Agreement. (Previously filed as Exhibit 10.2 to Form 8-K filed on November 27, 2009)
- 10.14\* Amended and Restated Loan Agreement by and between Coherent, Inc. and Union Bank of California, N.A. dated as of May 30, 2012. (Previously filed as Exhibit 10.1 to Form 8-K filed on June 5, 2012)
- 10.15\* Amended and Restated Promissory Note (Base Rate) (Previously filed as Exhibit 10.2 to Form 8-K filed on June 5, 2012)
- 10.16\* Second Lease Amendment by and between Coherent, Inc. and 5200 Patrick Henry Associates LLC dated as of July 23, 2010. (Previously filed as Exhibit 10.1 to Form 10-Q for the quarter ended July 3, 2010)
- 10.17\* Form of Indemnification Agreement (Previously filed as Exhibit 10.18 to Form 10-K for the year ended October 2, 2010)
- 10.18\*‡ 2011 Equity Incentive Plan. (incorporated by reference to Exhibit 10.1 to the Company's Registration Statement on Form S-8 (File No. 333-174019) filed on May 6, 2011)
- 10.19\*‡ Form of RSU Agreement for members of the Board of Directors under the Company's 2011 Equity Incentive Plan. (Previously filed as Exhibit 10.1 to Form 10-Q for the fiscal quarter ended July 2, 2011)



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- 10.20\*‡ Form of Option Agreement for members of the Board of Directors under the Company's 2011 Equity Incentive Plan. (Previously filed as Exhibit 10.1 to Form 10-Q for the fiscal quarter ended July 2, 2011)
- 10.21\*‡ Form of Performance RSU Agreement under the 2011 Equity Incentive Plan. (Previously filed as Exhibit 10.22 to Form 10-K for the fiscal year ended October 1, 2011)
- 10.22\*‡ Form of Time-Based RSU Agreement under the 2011 Equity Incentive Plan. (Previously filed as Exhibit 10.23 to Form 10-K for the fiscal year ended October 1, 2011)

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10.23*‡	Form of Performance RSU Agreement under the 2011 Equity Incentive Plan (Amended) (Previously filed as Exhibit 10.23 to Form 10-K for the fiscal year ended September 29, 2012)
10.24*‡	Form of Performance RSU Agreement under the 2011 Equity Incentive Plan, as amended November 8, 2013. (Previously filed as Exhibit 10.1 to Form 8-K filed November 14, 2013)
21.1	Subsidiaries
23.1	Consent of Independent Registered Public Accounting Firm
24.1	Power of Attorney (see signature page)
31.1	Certification of Chief Executive Officer pursuant to Exchange Act Rule 13a-14(a)/15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Certification of Chief Financial Officer pursuant to Exchange Act Rule 13a-14(a)/15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1	Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2	Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.

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\* These exhibits were previously filed with the Commission as indicated and are incorporated herein by reference.

\*\* Portions of this exhibit are redacted and confidential treatment has been requested.

‡ Identifies management contract or compensatory plans or arrangements required to be filed as an exhibit.

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SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

COHERENT, INC.

Date: November 27, 2013

/s/ JOHN R. AMBROSEO

By: John R. Ambroseo

President and Chief Executive Officer

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below hereby constitutes and appoints John R. Ambroseo and Helene Simonet, and each of them individually, as his attorney-in-fact, each with full power of substitution, for him in any and all capacities to sign any and all amendments to this Report on Form 10-K, and to file the same with, with exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, hereby ratifying and confirming all that said attorney-in-fact, or his or her substitute, may do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated:

/s/ JOHN R. AMBROSEO

John R. Ambroseo  
(Director and Principal Executive Officer)

November 27, 2013  
Date

/s/ HELENE SIMONET

Helene Simonet  
(Principal Financial and Accounting Officer)

November 27, 2013  
Date

/s/ JAY T. FLATLEY

Jay T. Flatley  
(Director)

November 27, 2013  
Date

/s/ SUSAN M. JAMES

Susan M. James  
(Director)

November 27, 2013  
Date

/s/ L. WILLIAM KRAUSE

L. William Krause  
(Director)

November 27, 2013  
Date

/s/ GARRY W. ROGERSON

Garry W. Rogerson  
(Director)

November 27, 2013  
Date

/s/ LAWRENCE TOMLINSON

Lawrence Tomlinson  
(Director)

November 27, 2013  
Date

/s/ SANDEEP VIJ

Sandeep Vij  
(Director)

November 27, 2013  
Date

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STATEMENT OF MANAGEMENT RESPONSIBILITY

Management is responsible for the preparation, integrity, and objectivity of the Consolidated Financial Statements and other financial information included in the Company's 2013 Annual Report on Form 10-K. The Consolidated Financial Statements have been prepared in conformity with U.S. generally accepted accounting principles and reflect the effects of certain estimates and judgments made by management. It is critical for investors and other readers of the Consolidated Financial Statements to have confidence that the financial information that we provide is timely, complete, relevant and accurate

Management, with oversight by the Company's Board of Directors, has established and maintains a corporate culture that requires that the Company's affairs be conducted to the highest standards of business ethics and conduct.

Management also maintains a system of internal control that is designed to provide reasonable assurance that assets are safeguarded and that transactions are properly recorded and executed in accordance with management's authorization. This system is regularly monitored through direct management review, as well as extensive audits conducted by internal auditors throughout the organization.

Our Consolidated Financial Statements as of and for the year ended September 28, 2013 have been audited by Deloitte & Touche LLP, an independent registered public accounting firm. Their audit was conducted in accordance with the standards of the Public Company Accounting Oversight Board (United States) and included an integrated audit under such standards.

The Audit Committee of the Board of Directors meets regularly with management, the internal auditors and the independent registered public accounting firm to review accounting, reporting, auditing and internal control matters.

The Audit Committee has direct and private access to both internal and external auditors.

See Item 9A for Management's Report on Internal Control Over Financing Reporting.

We are committed to enhancing shareholder value and fully understand and embrace our fiduciary oversight responsibilities. We are dedicated to ensuring that our high standards of financial accounting and reporting as well as our underlying system of internal controls are maintained. Our culture demands integrity and we have the highest confidence in our processes, internal controls, and people, who are objective in their responsibilities and operate under the highest level of ethical standards.

/s/ JOHN R. AMBROSEO

John R. Ambroseo

President and Chief Executive Officer

/s/ HELENE SIMONET

Helene Simonet

Executive Vice President and Chief Financial Officer

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders of Coherent, Inc.:

We have audited the accompanying consolidated balance sheets of Coherent, Inc. and its subsidiaries (collectively, the "Company") as of September 28, 2013 and September 29, 2012, and the related consolidated statements of operations, comprehensive income, stockholders' equity, and cash flows for each of the three years in the period ended September 28, 2013. These consolidated financial statements are the responsibility of the Company's management.

Our responsibility is to express an opinion on these consolidated financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, such consolidated financial statements present fairly, in all material respects, the financial position of the Company as of September 28, 2013 and September 29, 2012, and the results of its operations and its cash flows for each of the three years in the period ended September 28, 2013, in conformity with accounting principles generally accepted in the United States of America.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the Company's internal control over financial reporting as of September 28, 2013, based on the criteria established in Internal Control-Integrated Framework (1992) issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated November 27, 2013 expressed an unqualified opinion on the Company's internal control over financial reporting.

/s/ DELOITTE & TOUCHE LLP

San Jose, California  
November 27, 2013

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COHERENT, INC. AND SUBSIDIARIES  
 CONSOLIDATED BALANCE SHEETS  
 (In thousands, except par value)

	September 28, 2013	September 29, 2012
<b>ASSETS</b>		
Current assets:		
Cash and cash equivalents	\$ 110,444	\$ 67,761
Short-term investments	139,666	157,168
Accounts receivable—net of allowances of \$1,386 in 2013 and \$1,443 in 2012	136,759	144,345
Inventories	168,067	160,113
Prepaid expenses and other assets	52,577	61,730
Deferred tax assets	21,713	23,368
Total current assets	629,226	614,485
Property and equipment, net	114,333	115,096
Goodwill	113,408	77,689
Intangible assets, net	42,971	9,473
Other assets	66,540	64,029
Total assets	\$ 966,478	\$ 880,772
<b>LIABILITIES AND STOCKHOLDERS' EQUITY</b>		
Current liabilities:		
Current portion of long-term obligations	\$ 2	\$ 17
Accounts payable	36,565	29,088
Income taxes payable	24,695	33,944
Other current liabilities	84,566	90,739
Total current liabilities	145,828	153,788
Long-term obligations	—	2
Other long-term liabilities	62,132	55,326
Commitments and contingencies (Note 12)		
Stockholders' equity:		
Common stock, par value \$.01:		
Authorized—500,000 shares;		
Outstanding—24,464 shares in 2013 and 23,746 shares in 2012	244	237
Additional paid-in capital	162,253	131,708
Accumulated other comprehensive income	54,450	40,455
Retained earnings	541,571	499,256
Total stockholders' equity	758,518	671,656
Total liabilities and stockholders' equity	\$ 966,478	\$ 880,772
See accompanying Notes to Consolidated Financial Statements.		

Table of ContentsCOHERENT, INC. AND SUBSIDIARIES  
CONSOLIDATED STATEMENTS OF OPERATIONS

(In thousands, except per share data)

	Year Ended		
	September 28, 2013	September 29, 2012	October 1, 2011
Net sales	\$ 810,126	\$ 769,088	\$ 802,834
Cost of sales	487,855	453,103	452,012
Gross profit	322,271	315,985	350,822
Operating expenses:			
Research and development	82,785	78,260	81,232
Selling, general and administrative	149,513	138,519	149,499
Amortization of intangible assets	5,074	10,376	8,082
Total operating expenses	237,372	227,155	238,813
Income from operations	84,899	88,830	112,009
Other income (expense):			
Interest and dividend income	230	311	909
Interest expense	(164	) (86	) (147
Other—net	(1,469	) 1,567	11,058
Total other income (expense), net	(1,403	) 1,792	11,820
Income before income taxes	83,496	90,622	123,829
Provision for income taxes	17,141	27,660	30,591
Net income	\$ 66,355	\$ 62,962	\$ 93,238
Net income per share:			
Basic	\$ 2.75	\$ 2.67	\$ 3.74
Diluted	\$ 2.70	\$ 2.62	\$ 3.66
Shares used in computation:			
Basic	24,138	23,561	24,924
Diluted	24,555	24,026	25,464

See accompanying Notes to Consolidated Financial Statements.

Table of ContentsCOHERENT, INC. AND SUBSIDIARIES  
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

(In thousands)

	Year Ended		
	September 28, 2013	September 29, 2012	October 1, 2011
Net income	\$ 66,355	\$ 62,962	\$ 93,238
Other comprehensive income (loss):			
Translation adjustments	13,998	(10,796 )	(10,842 )
Changes in unrealized gains (losses) on available-for-sale securities, net of taxes	(3 )	30 )	(21 )
Other comprehensive income (loss), net of tax (1)	13,995	(10,766 )	(10,863 )
Total comprehensive income	\$ 80,350	\$ 52,196	\$ 82,375

Tax expense (benefit) of \$(746), \$(166) and \$(2,283) was provided on translation adjustments during fiscal 2013, (1)2012 and 2011, respectively. Tax expense (benefit) on changes in unrealized gains (losses) on available-for-sale securities was insignificant.



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COHERENT, INC. AND SUBSIDIARIES  
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY  
Three Years in the Period Ended September 28, 2013  
(In thousands)

	Common Stock Shares	Common Stock Par Value	Add. Paid-in Capital	Accum. Other Comp. Income	Retained Earnings	Total
Balances, October 2, 2010	24,554	\$245	\$186,078	\$62,084	\$343,056	\$591,463
Common stock issued under stock plans, net of shares withheld for employee taxes	1,233	11	31,403	—	—	31,414
Tax impact from employee stock options	—	—	290	—	—	290
Repurchases of common stock	(2,065 )	(20 )	(100,617 )	—	—	(100,637 )
Stock-based compensation	—	—	13,096	—	—	13,096
Net income	—	—	—	—	93,238	93,238
Other comprehensive loss, net of tax	—	—	—	(10,863 )	—	(10,863 )
Balances, October 1, 2011	23,722	236	130,250	51,221	436,294	\$618,001
Common stock issued under stock plans, net of shares withheld for employee taxes	567	6	8,745	—	—	8,751
Tax impact from employee stock options	—	—	1,264	—	—	1,264
Repurchases of common stock	(543 )	(5 )	(24,994 )	—	—	(24,999 )
Stock-based compensation	—	—	16,443	—	—	16,443
Net income	—	—	—	—	62,962	62,962
Other comprehensive income, net of tax	—	—	—	(10,766 )	—	(10,766 )
Balances, September 29, 2012	23,746	237	131,708	40,455	499,256	\$671,656
Common stock issued under stock plans, net of shares withheld for employee taxes	718	7	12,364	—	—	12,371
Tax impact from employee stock options	—	—	(836 )	—	—	(836 )
Stock-based compensation	—	—	19,017	—	—	19,017
Cash dividends paid (\$1.00 per common share)	—	—	—	—	(24,040 )	(24,040 )
Net income	—	—	—	—	66,355	66,355
Other comprehensive income, net of tax	—	—	—	13,995	—	13,995
Balances, September 28, 2013	24,464	\$244	\$162,253	\$54,450	\$541,571	\$758,518

See accompanying Notes to Consolidated Financial Statements

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COHERENT, INC. AND SUBSIDIARIES  
 CONSOLIDATED STATEMENTS OF CASH FLOWS  
 (In thousands)

	Year Ended		
	September 28, 2013	September 29, 2012	October 1, 2011
Cash flows from operating activities:			
Net income	\$ 66,355	\$ 62,962	\$ 93,238
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	26,356	23,243	20,539
Amortization of intangible assets	9,767	6,406	8,082
Write-off of Hypertronics intangibles	—	4,142	—
Stock-based compensation	18,891	16,315	12,963
Excess tax benefit from stock-based compensation arrangements	—	(1,264)	(5,111)
Non-cash translation adjustment related to Finland dissolution	—	—	(6,511)
Deferred income taxes	(1,107)	(4,763)	22,089
Other non-cash (income) expense	353	(192)	68
Changes in assets and liabilities, net of effect of acquisitions:			
Accounts receivable	4,226	(5,146)	(26,185)
Inventories	4,260	(9,767)	(38,570)
Prepaid expenses and other assets	10,128	(5,294)	(8,098)
Other assets	34	147	(1,194)
Accounts payable	6,116	(10,443)	(161)
Income taxes payable/receivable	(20,574)	(6,922)	4,272
Other current liabilities	(11,185)	(5,360)	8,712
Other long-term liabilities	1,902	707	2,543
Net cash provided by operating activities	115,522	64,771	86,676
Cash flows from investing activities:			
Purchases of property and equipment	(21,988)	(36,051)	(37,117)
Proceeds from dispositions of property and equipment	1,482	280	355
Purchases of available-for-sale securities	(228,231)	(244,186)	(230,992)
Proceeds from sales and maturities of available-for-sale securities	245,361	140,700	195,570
Acquisition of businesses, net of cash acquired	(67,289)	(3,687)	(14,108)
Change in restricted cash	—	—	625
Net cash used in investing activities	(70,665)	(142,944)	(85,667)

(continued)

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COHERENT, INC. AND SUBSIDIARIES  
 CONSOLIDATED STATEMENTS OF CASH FLOWS (Continued)  
 (In thousands)

	Year Ended		
	September 28, 2013	September 29, 2012	October 1, 2011
Cash flows from financing activities:			
Short-term borrowings	\$ 20,717	\$ 9,262	\$ 2,344
Repayments of short-term borrowings	(20,717	) (9,262	) (2,344
Repayments of capital lease obligations	(17	) (15	) (18
Repurchase of common stock	—	(24,999	) (100,637
Issuance of common stock under employee stock option and purchase plans	16,541	13,288	34,720
Cash dividend paid (\$1.00 per common share)	(24,040	) —	—
Excess tax benefits from stock-based compensation arrangements	—	1,264	5,111
Net settlement of restricted common stock	(4,170	) (4,537	) (3,306
Net cash used in financing activities	(11,686	) (14,999	) (64,130
Effect of exchange rate changes on cash and cash equivalents	9,512	(6,128	) (15,198
Net increase (decrease) in cash and cash equivalents	42,683	(99,300	) (78,319
Cash and cash equivalents, beginning of year	67,761	167,061	245,380
Cash and cash equivalents, end of year	\$ 110,444	\$ 67,761	\$ 167,061
Supplemental disclosure of cash flow information:			
Cash paid during the year for:			
Interest	\$ 164	\$ 86	\$ 108
Income taxes	\$ 54,047	\$ 49,755	\$ 17,291
Cash received during the year for:			
Income taxes	\$ 13,538	\$ 11,855	\$ 5,250
Noncash investing and financing activities:			
Unpaid property and equipment purchases	\$ 1,550	\$ 1,031	\$ 1,334

(concluded)

See accompanying Notes to Consolidated Financial Statements

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COHERENT, INC. AND SUBSIDIARIES  
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. DESCRIPTION OF BUSINESS

Founded in 1966, Coherent, Inc. provides photonics-based solutions in a broad range of commercial and scientific research applications. We design, manufacture, service and market lasers, laser tools and related accessories for a diverse group of customers. Headquartered in Santa Clara, California, the Company has worldwide operations including research and development, manufacturing, sales, service and support capabilities.

2. SIGNIFICANT ACCOUNTING POLICIES

Fiscal Year

Our fiscal year ends on the Saturday closest to September 30. Fiscal years 2013, 2012 and 2011 ended on September 28, 2013, September 29, 2012 and October 1, 2011, respectively, and are referred to in these financial statements as fiscal 2013, fiscal 2012, and fiscal 2011 for convenience. All fiscal years include 52 weeks. Accordingly, the financial statements of these subsidiaries as of that date and for the years then ended have been used for our consolidated financial statements. Management believes that the impact of the use of different year-ends is immaterial to our consolidated financial statements taken as a whole.

Use of Estimates

The preparation of consolidated financial statements in conformity with Generally Accepted Accounting Principles ("GAAP") requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Basis of Presentation

The consolidated financial statements include the accounts of Coherent, Inc. and its majority-owned subsidiaries (collectively, "the Company", "we", "our", or "Coherent"). Intercompany balances and transactions have been eliminated. Investments in business entities in which we do not have control, but have the ability to exercise significant influence over operating and financial policies (generally 20%-50% ownership) are accounted for by the equity method. We currently do not have any investments accounted for by the equity method. Minority interests in non-wholly owned subsidiaries are insignificant.

Fair Value of Financial Instruments

The carrying amounts of certain of our financial instruments including cash and cash equivalents, accounts receivable, accounts payable and accrued liabilities approximate fair value due to their short maturities. Short-term investments are comprised of available-for-sale securities, which are carried at fair value. Other non-current assets include trading securities and life insurance contracts related to our deferred compensation plans; trading securities are carried at fair value and life insurance contracts are carried at cash surrender values, which due to their ability to be converted to cash at that amount, approximate their fair values. The recorded carrying amount of our long-term obligations approximates fair value at fiscal 2013 and 2012 year-ends. Foreign exchange contracts are stated at fair value based on prevailing financial market information.

Cash Equivalents

All highly liquid investments with maturities of three months or less at the time of purchase are classified as cash equivalents.

Concentration of Credit Risk

Financial instruments that may potentially subject us to concentrations of credit risk consist principally of cash equivalents, short-term investments and accounts receivable. At fiscal 2013 year-end, the majority of our short-term investments are in US Treasury and federal agency obligations and corporate notes and obligations. Cash equivalents and short-term investments are maintained with several financial institutions and may exceed the amount of insurance provided on such balances. At September 28, 2013, we held cash and cash equivalents and short-term investments outside the U.S. in certain of our foreign operations totaling approximately \$157.5 million, \$89.9 million of which

was denominated in currencies other than the U.S. dollar. The majority of our accounts receivable are derived from sales to customers for commercial applications. We perform ongoing credit evaluations of our customers' financial condition and limit the amount of credit extended when deemed necessary but generally require no collateral. We maintain reserves for potential credit losses. Our products are broadly

distributed and there were two customers who accounted for 15.2% and 11.7% of accounts receivable at fiscal 2013 year-end. There were two customers who accounted for 14.9% and 14.8% of accounts receivable at fiscal 2012 year-end.

#### Accounts Receivable Allowances

Accounts receivable allowances reflect our best estimate of probable losses inherent in our accounts receivable balances. We regularly review allowances by considering factors such as historical experience, credit quality, the age of the accounts receivable balances and current economic conditions that may affect a customer's ability to pay.

Activity in accounts receivable allowance is as follows (in thousands):

	Fiscal year-end		
	2013	2012	2011
Beginning balance	\$ 1,443	\$ 1,439	\$ 1,655
Additions charged to expenses	1,622	1,362	1,329
Accruals resulting from acquisitions	—	—	184
Deductions from reserves	(1,679	) (1,358	) (1,729
Ending balance	\$ 1,386	\$ 1,443	\$ 1,439

#### Inventories

Inventories are stated at the lower of cost (first-in, first-out) or market. Inventories are as follows (in thousands):

	Fiscal year-end	
	2013	2012
Purchased parts and assemblies	\$ 50,275	\$ 46,526
Work-in-process	60,089	60,171
Finished goods	57,703	53,416
	\$ 168,067	\$ 160,113

#### Property and Equipment

Property and equipment are stated at cost and are depreciated or amortized using the straight-line method. Cost, accumulated depreciation and amortization, and estimated useful lives are as follows (dollars in thousands):

	Fiscal year-end		Useful Life
	2013	2012	
Land	\$ 6,295	\$ 6,251	
Buildings and improvements	73,139	67,916	5-40 years
Equipment, furniture and fixtures	220,133	205,479	3-10 years
Leasehold improvements	29,763	28,162	Lesser of useful life or terms of leases
	329,330	307,808	
Accumulated depreciation and amortization	(214,997	) (192,712	)
Property and equipment, net	\$ 114,333	\$ 115,096	

#### Asset Retirement Obligations

The fair value of a liability for an asset retirement obligation is recognized in the period in which it is incurred if a reasonable estimate of fair value can be made. The fair value of the liability is added to the carrying amount of the associated asset and this additional carrying amount is depreciated over the life of the asset. All of our existing asset retirement obligations are associated with commitments to return the property to its original condition upon lease termination at various sites and costs

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## COHERENT, INC. AND SUBSIDIARIES

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

## 2. SIGNIFICANT ACCOUNTING POLICIES (Continued)

to clean up and dispose of certain fixed assets at our Sunnyvale, California site. We estimated that as of fiscal 2013 year-end, gross expected future cash flows of \$2.5 million would be required to fulfill these obligations. The following table reconciles changes in our asset retirement liability for fiscal 2013 and 2012 (in thousands):

Asset retirement liability as of October 1, 2011	\$ 1,878
Payment of asset retirement obligations	—
Adjustment to asset retirement obligations recognized	69
Accretion recognized	113
Changes due to foreign currency exchange	(31 )
Asset retirement liability as of September 29, 2012	2,029
Payment of asset retirement obligations	—
Adjustment to asset retirement obligations recognized	253
Accretion recognized	70
Changes due to foreign currency exchange	(105 )
Asset retirement liability as of September 28, 2013	\$ 2,247

At September 28, 2013 and September 29, 2012, the asset retirement liability is included in other long-term liabilities on our consolidated balance sheets.

Long-lived Assets

We evaluate the carrying value of long-lived assets, including intangible assets, whenever events or changes in business circumstances or our planned use of long-lived assets indicate that their carrying amounts may not be fully recoverable or that their useful lives are no longer appropriate. Reviews are performed to determine whether the carrying values of long-lived assets are impaired based on a comparison to the undiscounted expected future net cash flows. If the comparison indicates that impairment exists, long-lived assets that are classified as held and used are written down to their respective fair values. When long-lived assets are classified as held for sale, they are written down to their respective fair values less costs to sell. Significant management judgment is required in the forecast of future operating results that is used in the preparation of expected undiscounted cash flows. For fiscal years 2013, 2012 and 2011, there were no significant asset impairments recorded.

Goodwill

Goodwill is tested for impairment on an annual basis and between annual tests in certain circumstances, and written down when impaired (see Note 8. "Goodwill and Intangible Assets"). In testing for impairment, we have the option to first assess qualitative factors to determine whether it is more likely than not (that is, a likelihood of more than 50%) that the fair value of a reporting unit is less than its carrying amount. Moreover, an entity can bypass the qualitative assessment for any reporting unit in any period and proceed directly to step one of the impairment test, and then resume performing the qualitative assessment in any subsequent period. In fiscal 2012, we performed a qualitative assessment. In fiscal 2013, we elected to bypass the qualitative assessment and proceed directly to performing the first step of the goodwill impairment test. This election was made because we had last performed this impairment test in fiscal 2010 and we have subsequently added a substantial amount of goodwill balances as a result of our acquisitions of Midaz in the fourth quarter of fiscal 2012 and the acquisitions of Innolight and Lumera in the first quarter of fiscal 2013. We performed our Step 1 test during the fourth quarter of fiscal 2013 using the opening balance sheet as of the first day of the fourth quarter and noted no impairment. Between the completion of that testing and the end of the fourth quarter of fiscal 2013, we noted no indications of impairment or triggering events to cause us to review goodwill for potential impairment. Absent any impairment indicators, we perform our annual impairment tests during the fourth quarter of each fiscal year using opening balance sheet as of the first day of the fourth fiscal quarter, with any resulting impairment recorded in the fourth quarter of the fiscal year.

Intangible Assets

Intangible assets, including acquired existing technology, customer lists, trade name and non-compete agreements are amortized on a straight-line basis over estimated useful lives of 1 year to 15 years.





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## COHERENT, INC. AND SUBSIDIARIES

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

## 2. SIGNIFICANT ACCOUNTING POLICIES (Continued)

## Warranty Reserves

We provide warranties on the majority of our product sales and reserves for estimated warranty costs are recorded during the period of sale. The determination of such reserves requires us to make estimates of product return rates and expected costs to repair or replace the products under warranty. We currently establish warranty reserves based on historical warranty costs for each product line. The weighted average warranty period covered is approximately 15 months. If actual return rates and/or repair and replacement costs differ significantly from our estimates, adjustments to cost of sales may be required in future periods.

Components of the reserve for warranty costs during fiscal 2013, 2012 and 2011 were as follows (in thousands):

	Fiscal		
	2013	2012	2011
Beginning balance	\$ 17,442	\$ 16,704	\$ 13,499
Additions related to current period sales	26,721	29,425	27,900
Warranty costs incurred in the current period	(27,975	) (28,263	) (24,671
Accruals resulting from acquisitions	1,735	—	178
Adjustments to accruals related to foreign exchange and other	585	(424	) (202
Ending balance	\$ 18,508	\$ 17,442	\$ 16,704

## Revenue Recognition

When a sales arrangement contains multiple elements, such as products and/or services, we allocate revenue to each element based on a selling price hierarchy. Using the selling price hierarchy, we determine the selling price of each deliverable using vendor specific objective evidence (“VSOE”), if it exists, and otherwise third-party evidence (“TPE”). If neither VSOE nor TPE of selling price exists, we use estimated selling price (“ESP”). We generally expect that we will not be able to establish TPE due to the nature of the markets in which we compete, and, as such, we typically will determine selling price using VSOE or if not available, ESP.

Our basis for establishing VSOE of a deliverable's selling price consists of standalone sales transactions when the same or similar product or service is sold separately. However, when services are never sold separately, such as product installation services, VSOE is based on the product's estimated installation hours based on historical experience multiplied by the standard service billing rate. In determining VSOE, we require that a substantial majority of the selling price for a product or service fall within a reasonably narrow price range, as defined by us. We also consider the geographies in which the products or services are sold, major product and service groups, and other environmental variables in determining VSOE. Absent the existence of VSOE and TPE, our determination of a deliverable's ESP involves evaluating several factors based on the specific facts and circumstances of these arrangements, which include pricing strategy and policies driven by geographies, market conditions, competitive landscape, correlation between proportionate selling price and list price established by management having the relevant authority, and other environmental variables in which the deliverable is sold.

For multiple element arrangements which include extended maintenance contracts, we allocate and defer the amount of consideration equal to the separately stated price and recognize revenue on a straight-line basis over the contract period.

We recognize revenue when all four revenue recognition criteria have been met: persuasive evidence of an arrangement exists, the product has been delivered or the service has been rendered, the price is fixed or determinable and collection is reasonably assured. Revenue from product sales is recorded when all of the foregoing conditions are met and risk of loss and title passes to the customer. Sales to customers are generally not subject to any price protection or return rights.

The vast majority of our sales are made to original equipment manufacturers (“OEMs”), distributors, resellers and end-users in the non-scientific market. Sales made to these customers do not require installation of the products by us and are not subject to other post-delivery obligations, except in occasional instances where we have agreed to perform installation or provide training. In those instances, we defer revenue related to installation services or training until

these services have been rendered. We allocate revenue from multiple element arrangements to the various elements based upon relative fair values.

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COHERENT, INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

2. SIGNIFICANT ACCOUNTING POLICIES (Continued)

Our sales to distributors, resellers and end-user customers typically do not have customer acceptance provisions and only certain of our sales to OEM customers and integrators have customer acceptance provisions. Customer acceptance is generally limited to performance under our published product specifications. For the few product sales that have customer acceptance provisions because of higher than published specifications, (1) the products are tested and accepted by the customer at our site or the customer accepts the results of our testing program prior to shipment to the customer, or (2) the revenue is deferred until customer acceptance occurs.

Sales to end-users in the scientific market typically require installation and, thus, involve post-delivery obligations; however, our post-delivery installation obligations are not essential to the functionality of our products. We defer revenue related to installation services until completion of these services.

For most products, training is not provided; therefore, no post-delivery training obligation exists. However, when training is provided to our customers, it is typically priced separately and is recognized as revenue as these services are provided.

We record taxes collected on revenue-producing activities on a net basis.

Research and Development

Research and development expenses include salaries, contractor and consultant fees, supplies and materials, as well as costs related to other overhead such as depreciation, facilities, utilities and other departmental expenses. The costs we incur with respect to internally developed technology and engineering services are included in research and development expenses as incurred as they do not directly relate to any particular licensee, license agreement or license fee.

We treat third party and government funding of our research and development activity, where we are the primary beneficiary of such work conducted, as a credit to research and development cost. Amounts offset against research and development costs were not material in any of the periods presented.

Foreign Currency Translation

The functional currencies of our foreign subsidiaries are generally their respective local currencies. Accordingly, gains and losses from the translation of the financial statements of the foreign subsidiaries are reported as a separate component of accumulated other comprehensive income ("OCI"). Foreign currency transaction gains and losses are included in earnings.

Derivatives

U.S. GAAP requires that all derivatives, whether designated in hedging relationships or not, be recorded on the balance sheet at fair value. If the derivative is designated as a fair value hedge, the changes in the fair value of the derivative and of the hedged item attributable to the hedged risk are recognized in earnings. If the derivative is designated as a cash flow hedge, the effective portions of the changes in the fair value of the derivative are recorded in OCI and are recognized in the income statement when the hedged item affects earnings. Ineffective portions of changes in the fair value of cash flow hedges are recognized in other income (expense).

Our objective of holding derivatives is to minimize the risks of foreign currency fluctuation by using the most effective methods to eliminate or reduce the impact of these exposures. Principal currencies hedged include the Euro, Korean Won, Japanese Yen, British Pound, Chinese Renminbi and Singapore dollar.

Forwards not designated as hedging instruments are also used to hedge the impact of the variability in exchange rates on accounts receivable and collections denominated in certain foreign currencies. Our forward contracts have maturities of two months or less and changes in fair value of these derivatives are recognized in other income (expense).

Comprehensive Income (Loss)

Comprehensive income (loss) is defined as the change in equity of a business enterprise during a period from transactions and other events and circumstances from non-owner sources and is presented in our Consolidated Statements of Comprehensive Income and in Note 15, "Accumulated Other Comprehensive Income (Loss)."



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## COHERENT, INC. AND SUBSIDIARIES

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

## 2. SIGNIFICANT ACCOUNTING POLICIES (Continued)

## Earnings Per Share

Basic earnings per share is computed based on the weighted average number of shares outstanding during the period, excluding unvested restricted stock. Diluted earnings per share is computed based on the weighted average number of shares outstanding during the period increased by the effect of dilutive employee stock awards, including stock options, restricted stock awards and stock purchase contracts, using the treasury stock method.

The following table presents information necessary to calculate basic and diluted earnings (loss) per share (in thousands, except per share data):

	Fiscal		
	2013	2012	2011
Weighted average shares outstanding—basic (1)	24,138	23,561	24,924
Dilutive effect of employee awards	417	465	540
Weighted average shares outstanding—diluted	24,555	24,026	25,464
Net income	\$66,355	\$62,962	\$93,238
Net income—basic	\$2.75	\$2.67	\$3.74
Net income—diluted	\$2.70	\$2.62	\$3.66

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(1) Net of unvested restricted stock

A total of 883; 99,912; and 2,416 potentially dilutive securities have been excluded from the dilutive share calculation for fiscal 2013, 2012 and 2011, respectively, as their effect was anti-dilutive.

## Stock-Based Compensation

We account for stock-based compensation using the fair value of the awards granted. We estimate the fair value of stock options granted using the Black-Scholes Merton model. We value restricted stock units using the intrinsic value method. We use a Monte Carlo simulation model to estimate the fair value of market-based performance restricted stock units. We use historical data to estimate pre-vesting option and restricted stock unit forfeitures and record stock-based compensation expense only for those options and awards that are expected to vest. We amortize the fair value of stock options and awards on a straight-line basis over the requisite service periods of the awards, which are generally the vesting periods. See Note 14 "Employee Stock Option and Benefit Plans" for a description of our stock-based employee compensation plans and the assumptions we use to calculate the fair value of stock-based employee compensation.

## Shipping and Handling Costs

We record costs related to shipping and handling of revenue in cost of sales for all periods presented.

## Advertising Costs

Advertising costs are expensed as incurred and were \$3.4 million, \$3.5 million and \$4.1 million in fiscal 2013, fiscal 2012 and fiscal 2011, respectively.

## Income Taxes

As part of the process of preparing our consolidated financial statements, we are required to estimate our income tax provision (benefit) in each of the jurisdictions in which we operate. This process involves us estimating our current income tax provision (benefit) together with assessing temporary differences resulting from differing treatment of items for tax and accounting purposes. These differences result in deferred tax assets and liabilities, which are included within our consolidated balance sheets.

We account for uncertain tax issues pursuant to ASC 740-10 (formerly FASB Financial Interpretation No. 48, "Accounting for Uncertainty in Income Taxes"), which creates a single model to address accounting for uncertainty in tax positions by prescribing a minimum recognition threshold that a tax position is required to meet before being recognized in the financial statements. This standard provides a two-step approach for evaluating tax positions. The first step, recognition, occurs



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COHERENT, INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

2. SIGNIFICANT ACCOUNTING POLICIES (Continued)

when a company concludes (based solely on the technical aspects of the matter) that a tax position is more likely than not to be sustained upon examination by a taxing authority. The second step, measurement, is only considered after step one has been satisfied and measures any tax benefit at the largest amount that is deemed more likely than not to be realized upon ultimate settlement of the uncertainty. These determinations involve significant judgment by management. Tax positions that fail to qualify for initial recognition are recognized in the first subsequent interim period that they meet the more likely than not standard or when they are resolved through negotiation or litigation with factual interpretation, judgment and certainty. Tax laws and regulations themselves are complex and are subject to change as a result of changes in fiscal policy, changes in legislation, evolution of regulations and court filings. Therefore, the actual liability for U.S. or foreign taxes may be materially different from our estimates, which could result in the need to record additional tax liabilities or potentially to reverse previously recorded tax liabilities. We record a valuation allowance to reduce our deferred tax assets to an amount that more likely than not will be realized. While we have considered future taxable income and ongoing prudent and feasible tax planning strategies in assessing the need for the valuation allowance, in the event we were to determine that we would be able to realize our deferred tax assets in the future in excess of our net recorded amount, an adjustment to the allowance for the deferred tax asset would increase income in the period such determination was made. Likewise, should we determine that we would not be able to realize all or part of our net deferred tax asset in the future, an adjustment to the allowance for the deferred tax asset would be charged to income in the period such determination was made. Federal income taxes have not been provided for on a portion of the unremitted earnings of foreign subsidiaries because such earnings are intended to be permanently reinvested. The total amount of unremitted earnings and accumulated translation adjustments of foreign subsidiaries for which we have not yet recorded federal and state income taxes was approximately \$335.4 million and \$52.7 million respectively, at fiscal 2013 year-end. The amount of federal and state income taxes that would be payable upon repatriation of such earnings are not practicably determinable.

Adoption of New Accounting Pronouncement and Update to Significant Accounting Policies

In July 2013, the Financial Accounting Standards Board (“FASB”) issued guidance that permits the Fed Funds Effective Swap Rate (OIS) to be used as a U.S. benchmark interest rate for hedge accounting purposes, in addition to the direct Treasury obligations of the U.S. government (UST) and London Interbank Offered Rate (LIBOR). The amendments also remove the restriction on using different benchmark rates for similar hedges. The amendments are effective prospectively for qualifying new or redesignated hedging relationships entered into on or after July 17, 2013. The adoption of this amendment did not have a material impact on our consolidated financial statements.

In July 2012, the FASB amended existing guidance related to goodwill and other intangible assets by giving an entity testing an indefinite-lived intangible asset for impairment the option to first assess qualitative factors to determine whether it is more likely than not (that is, a likelihood of more than 50 percent) that the fair value of an intangible asset is less than its carrying amount. If the entity determines, on the basis of qualitative factors, that the fair value of the indefinite-lived intangible asset is not more likely than not impaired, the entity would not need to calculate the fair value of the asset. The guidance does not revise the requirement to test indefinite-lived intangible assets annually for impairment or to test these assets for impairment between annual tests if there is a change in events or circumstances. This amended guidance was effective for annual and interim impairment tests performed for fiscal years beginning after September 15, 2012. We adopted this authoritative guidance in the fourth quarter of fiscal 2012. As of September 2013 and 2012, the implementation of this authoritative guidance did not have a material impact on our consolidated financial position, results of operations and cash flows in connection with our impairment testing.

Recently Issued Accounting Pronouncements

In July of 2013, the FASB issued amended guidance that resolves the diversity in practice for the presentation of an unrecognized tax benefit when a net operating loss carryforward, a similar tax loss, or a tax credit carryforward exists. This new accounting guidance requires the netting of unrecognized tax benefits ("UTBs") against a deferred tax asset for a loss or other carryforward that would apply in settlement of the uncertain tax positions. Under the new standard, UTBs will be netted against all available same-jurisdiction losses or other tax carryforwards that would be utilized, rather than only against carryforwards that are created by the UTBs. The new standard requires prospective adoption but allows retrospective adoption for all periods



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COHERENT, INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

2. SIGNIFICANT ACCOUNTING POLICIES (Continued)

presented. We will consider the FASB's amended guidance for our fiscal year beginning September 28, 2014. We do not expect the amended guidance to have a significant impact on our consolidated financial position, results of operations and cash flows.

In March 2013, the FASB issued guidance regarding the treatment of cumulative translation adjustment ("CTA") by a parent company upon de-recognition of a subsidiary or group of assets within a foreign entity. The objective is to resolve the diversity in practice regarding the release into net income of such CTA. The guidance is effective for us beginning in the second quarter of fiscal 2014. We are currently evaluating the potential impact, if any, of the adoption of this guidance on our consolidated financial position, results of operations and cash flows.

In February 2013, the FASB issued guidance which requires an entity to disclose additional information for items reclassified out of accumulated other comprehensive income ("AOCI"). For items reclassified out of AOCI and into net income in their entirety, entities are required to disclose the effect of the reclassification on each affected net income line item. For AOCI reclassification items that are not reclassified in their entirety into net income, a cross reference to other disclosures is required. This information may be provided either in the notes or parenthetically on the face of the statement that reports net income as long as all the information is disclosed in a single location. The guidance is effective for us beginning in the first quarter of fiscal 2014 and we plan to adopt this guidance at the effective date. We do not expect the adoption of this accounting standard will have an impact on our consolidated financial position, results of operations and cash flows.

In December 2011, the FASB issued guidance which requires an entity to disclose information about offsetting and related arrangements to enable financial statement users to evaluate the effect or potential effect of netting arrangements, including rights of setoff associated with the entity's recognized financial assets and liabilities, on the entity's financial position. The new disclosures will enable financial statement users to compare balance sheets prepared under U.S. GAAP and International Financial Reporting Standards ("IFRS"), which are subject to different offsetting models. The disclosures will be limited to financial instruments (and derivatives) subject to enforceable master netting arrangements or similar agreements. Similar agreements include derivative clearing agreements, global master repurchase agreements, and global master securities lending agreements. Financial instruments and transactions that will be subject to the disclosure requirements may include derivatives, repurchase and reverse repurchase agreements, and securities lending and borrowing arrangements. An entity should provide the disclosures required by those amendments retrospectively for all comparative periods presented. The guidance is effective for us beginning in fiscal 2014. We are currently evaluating the additional disclosures required, if any, from the adoption of this guidance.

3. RESTRUCTURING ACTIVITIES

During fiscal 2008, we initiated restructuring plans to decrease costs by consolidating facilities and reducing our workforce. During the second quarter of fiscal 2009, we announced our plans to close our facilities in Tampere, Finland and St. Louis, Missouri. The closure of our St. Louis site was completed in the fourth quarter of fiscal 2009. The closure of our Finland site was scheduled for completion by the end of fiscal 2010, but we delayed the closure due to increased demand for products manufactured in Finland. In the second quarter of fiscal 2011, we ceased manufacturing operations in our Finland facility and recognized a \$6.1 million gain, primarily in other income (expense), due to a non-recurring translation adjustment related to the dissolution of our Finland operations. We exited the facility in the third quarter of fiscal 2011. These closure plans resulted in charges primarily for employee termination and other exit related costs associated with a plan approved by management.

During the first quarter of fiscal 2010, we acquired the assets and certain liabilities of StockerYale, Inc's laser module product line in Montreal, Canada and transitioned those activities to other Coherent facilities in Salem, Massachusetts, Wilsonville, Oregon and Sunnyvale, California. The transfer was completed in the second quarter of fiscal 2011.

These closure plans resulted in charges primarily for employee termination and other exit related costs associated with a plan approved by management.

There were no new restructuring charges during fiscal 2013 and all charges related to restructuring activities discussed above were expensed as of the end of fiscal 2012. Restructuring charges during fiscal 2012 and fiscal 2011 are recorded in cost of sales, research and development and selling, general and administrative expenses in our consolidated statements of operations.

The following table presents our current liability as accrued on our balance sheets for restructuring charges. The table sets forth an analysis of the components of the restructuring charges and payments and other deductions made against the accrual for fiscal 2012 and 2011 (in thousands):

	Severance Related	Facilities Related Charges	Other Restructuring Costs	Total
Balances, October 2, 2010	\$912	\$17	\$1,303	\$2,232
Provision	218	—	680	898
Payments and other	(1,130)	(17)	(1,349)	(2,496)
Balances, October 1, 2011	—	—	634	634
Provision	—	—	—	—
Payments and other	—	—	(634)	(634)
Balances, September 29, 2012	\$—	\$—	\$—	\$—

The fiscal 2011 severance related costs were primarily comprised of severance pay, outplacement services, medical and other related benefits for employees being terminated due to the transition of activities out of Tampere, Finland. At September 29, 2012 and September 28, 2013, there were no remaining accrued restructuring costs.

The following table presents our restructuring charges incurred by segment (no charges were incurred in fiscal 2012 and 2013):

	By Segment		Total
	Commercial Lasers and Components	Specialty Laser Systems	
Costs incurred and charged to expense in fiscal 2011	\$898	\$—	\$898
Costs incurred and charged to expense in fiscal 2010	8,368	—	8,368
Costs incurred and charged to expense in fiscal 2009	8,674	6,763	15,437
Costs incurred and charged to expense in fiscal 2008	4,160	1,644	5,804
Cumulative costs incurred to date	\$22,100	\$8,407	\$30,507

#### 4. BUSINESS COMBINATIONS

##### Lumera Laser GmbH

On December 20, 2012, we acquired privately held Lumera Laser GmbH (Kaiserslautern, Germany) ("Lumera") for approximately \$51.5 million, excluding transaction costs. Lumera manufactures ultrafast solid state lasers for microelectronics, OEM medical and materials processing applications. Lumera has been included in our Specialty Lasers and Systems segment.

Our allocation of the purchase price is as follows (in thousands):

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## COHERENT, INC. AND SUBSIDIARIES

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Tangible assets:	
Inventories	\$7,364
Accounts receivable	2,770
Other tangible assets	4,380
Goodwill	24,640
Intangible assets:	
Existing technology	21,000
In-process R&D	1,800
Trade name	200
Customer lists	6,500
Backlog	900
Deferred tax liabilities	(9,300)
Liabilities assumed	(8,793)
Total	\$51,461

Results of operations for the business have been included in our consolidated financial statements subsequent to the date of acquisition and pro forma results of operations in accordance with authoritative guidance for prior periods have not been presented because the effect of the acquisition was not material to our prior period consolidated financial results.

None of the goodwill from this purchase is deductible for tax purposes.

The identifiable intangible assets are being amortized over their respective useful lives of less than one to six years.

In-process research and development ("IPR&D") consists of two projects that have not yet reached technological feasibility. Acquired IPR&D assets are initially recognized at fair value and are classified as indefinite-lived assets until the successful completion or abandonment of the associated research and development efforts. The value assigned to IPR&D was determined by considering the value of the products under development to the overall development plan, estimating the resulting net cash flows from the projects when completed and discounting the net cash flows to their present value. During the development period, these assets will not be amortized as charges to earnings; instead these assets will be subject to periodic impairment testing. Upon successful completion of the development process for the acquired IPR&D projects, the assets would then be considered finite-lived intangible assets and amortization of the assets will commence. The projects have not been completed as of September 28, 2013.

We expensed \$0.6 million of acquisition-related costs as selling, general and administrative expenses in our consolidated statements of operations for our fiscal year 2013, and expensed \$0.3 million of acquisition-related costs as selling, general and administrative expenses in our consolidated statements of operations for our fiscal year 2012.

#### Innolight Innovative Laser and Systemtechnik GmbH

On October 30, 2012, we acquired all of the outstanding shares of Innolight Innovative Laser and Systemtechnik GmbH ("Innolight") for approximately \$18.3 million, excluding transaction costs. Innolight provides a core technology building block for an emerging class of commercial, sub-nanosecond lasers for microelectronics manufacturing. Its semiconductor-based architecture delivers pulsed output that can be amplified by conventional or fiber amplifiers to ultimately deliver infrared, green or ultraviolet light capable of processing a range of materials. Innolight has been included in our Specialty Lasers and Systems segment.

Our allocation of the purchase price is as follows (in thousands):

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## COHERENT, INC. AND SUBSIDIARIES

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

## 4. BUSINESS COMBINATIONS (Continued)

Tangible assets	\$2,510	
Goodwill	8,312	
Intangible assets:		
Existing technology	8,500	
In-process R&D	430	
Trade name	100	
Customer lists	2,800	
Deferred tax liabilities	(3,836	)
Liabilities assumed	(480	)
Total	\$18,336	

Results of operations for the business have been included in our consolidated financial statements subsequent to the date of acquisition and pro forma results of operations in accordance with authoritative guidance for prior periods have not been presented because the effect of the acquisition was not material to our prior period consolidated financial results.

None of the goodwill from this purchase is deductible for tax purposes.

The identifiable intangible assets are being amortized over their respective useful lives of six to seven years.

IPR&D consists of two projects that have not yet reached technological feasibility. The projects have not been completed as of September 28, 2013.

We expensed \$0.2 million of acquisition-related costs as selling, general and administrative expenses in our consolidated statements of operations for our fiscal year 2013 and expensed \$0.1 million of acquisition-related costs as selling, general and administrative expenses in our consolidated statements of operations for our fiscal year 2012.

## MiDAZ Lasers Ltd

On July 23, 2012, we acquired all of the outstanding shares of MiDAZ Lasers Ltd "Midaz" for approximately \$3.8 million, excluding transaction fees. Midaz was a technology-based acquisition. We intend to utilize the acquired technology in low cost, compact pulsed solid state lasers. Midaz has been included in our Specialty Lasers and Systems segment.

Our allocation of the purchase price is as follows (in thousands):

Tangible assets	\$187	
Goodwill	2,809	
Intangible assets:		
Existing technology	1,800	
Deferred tax liabilities	(428	)
Liabilities assumed	(582	)
Total	\$3,786	

Results of operations for the business have been included in our consolidated financial statements subsequent to the date of acquisition and pro forma results of operations in accordance with authoritative guidance for prior periods

have not been presented because the effect of the acquisition was not material to our prior period consolidated financial results.

None of the goodwill from this purchase is deductible for tax purposes.

The identifiable intangible assets are being amortized over their respective useful life of seven years.

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## COHERENT, INC. AND SUBSIDIARIES

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

## 4. BUSINESS COMBINATIONS (Continued)

We expensed \$0.2 million of acquisition-related costs as selling, general and administrative expenses in our consolidated statements of operations in the fiscal year ended September 29, 2012.

## Hypertronics Pte Ltd

On January 5, 2011, we acquired all of the assets and certain liabilities of Hypertronics Pte Ltd for approximately \$14.5 million in cash. Hypertronics designs and manufactures laser-and vision-based tools for flat panel, storage, semiconductor and solar applications at facilities in Singapore and Malaysia. Hypertronics has been included in our Specialty Lasers and Systems segment.

Our allocation of the purchase price is as follows (in thousands):

Tangible assets	\$4,617
Goodwill	5,807
Intangible assets:	
Existing technology	3,120
In-process research and development	570
Customer lists	1,880
Trade name	410
Non-compete agreements	60
Liabilities assumed	(1,965       )
Total	\$ 14,499

The goodwill recognized from this acquisition resulted primarily from anticipated revenue growth and synergies of integrating Hypertronics scan vision technology and system capabilities with our laser technology and global sales, marketing, distribution and service network. The goodwill was included in our Specialty Lasers and Systems segment.

None of the goodwill from this purchase is deductible for tax purposes.

The identifiable intangible assets are being amortized over their respective useful lives of two to six years.

In-process research and development (“IPR&D”) consisted of seven interrelated projects to be incorporated into one product and had not yet reached technological feasibility at the time of purchase.

During the second quarter of fiscal 2012, we determined that one of the hardware projects classified as IPR&D acquired from Hypertronics would not be completed. As a result, \$0.2 million was expensed in the second fiscal quarter for that project. During the fourth quarter of fiscal 2012, we decided to no longer pursue orders of Hypertronics' legacy products and thus determined that an impairment review of the intangible assets was required. As a result of our analysis, we determined that the intangible assets were fully impaired and that the remaining hardware projects classified as IPR&D acquired from Hypertronics would not be completed. As a result, we recorded a \$4.0 million charge in amortization expense in the fourth quarter of fiscal 2012. We also wrote off \$0.3 million of inventory unique to these products that were not expected to be resold.

We expensed \$0.6 million of acquisition-related costs as selling, general and administrative expenses in our consolidated statements of operations in the fiscal year ended October 1, 2011.



Results of operations for the business have been included in our consolidated financial statements subsequent to the date of acquisition and pro forma results of operations in accordance with authoritative guidance for prior periods have not been presented because the effect of the acquisition was not material to our prior period consolidated financial results.

#### 5. FAIR VALUE OF FINANCIAL ASSETS AND LIABILITIES

We measure our cash equivalents and marketable securities at fair value. The fair values of our financial assets and liabilities are determined using quoted market prices of identical assets or quoted market prices of similar assets from active

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## COHERENT, INC. AND SUBSIDIARIES

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

markets. Level 1 valuations are obtained from real-time quotes for transactions in active exchange markets involving identical assets. Level 2 valuations are obtained from quoted market prices in active markets involving similar assets; these instruments, which mature within one year and are issued by counterparties with high credit ratings, include U.S. Treasury and international government obligations, investment-grade corporate bonds, certificates of deposit and commercial paper. Level 3 valuations would be based on unobservable inputs to a valuation model and include our own data about assumptions market participants would use in pricing the asset or liability based on the best information available under the circumstances; as of September 28, 2013 and September 29, 2012, we did not have any assets or liabilities valued based on Level 3 valuations.

Financial assets and liabilities measured at fair value as of September 28, 2013 and September 29, 2012 are summarized below (in thousands):

	Quoted Prices in Active Markets for Identical Assets September 28, 2013 (Level 1)	Significant Other Observable Inputs (Level 2)	Quoted Prices in Active Markets for Identical Assets September 29, 2012 (Level 1)	Significant Other Observable Inputs (Level 2)
Money market fund deposits(1)	\$ 12,468	\$—	\$ 10,340	\$—
Commercial paper(2)(7)	—	9,995	—	2,000
Certificates of deposit(3)	—	28,447	—	31,253
U.S. and international government obligations(2)(7)	—	109,263	—	110,967
Corporate notes and obligations(4)(7)	—	20,408	—	43,406
Foreign currency contracts(5)(8)	—	746	—	(21 )
Mutual funds—Deferred comp and supplemental plan(6)(9)	13,419	—	6,400	—

(1) Included in cash and cash equivalents on the Consolidated Balance Sheet. The carrying amounts approximate fair value due to the short-term maturities of the cash equivalents.

(2) Included in short-term investments on the Consolidated Balance Sheet.

(3) September 28, 2013: Included in cash and cash equivalents on the Consolidated Balance Sheet. The carrying amounts approximate fair value due to the short-term maturities of the cash equivalents.

September 29, 2012: Includes \$29,234 recorded in cash and cash equivalents and \$2,019 recorded in short-term investments on the Consolidated Balance Sheet. Valuations are based upon quoted market prices in active markets involving similar assets. The market inputs used to value these instruments generally consist of market yields, reported trades, broker/dealer quotes or alternative pricing sources with reasonable levels of price transparency. Pricing sources include industry standard data providers, security master files from large financial institutions, and other third party sources which are input into a distribution-curve-based algorithm to determine a daily market value. This creates a “consensus price” or a weighted average price for each security.

(4) September 28, 2013: Included in short-term investments on the Consolidated Balance Sheet.

September 29, 2012: Includes \$1,223 recorded in cash and cash equivalents and \$42,183 recorded in short-term investments on the Consolidated Balance Sheet.

(5) September 28, 2013: Includes \$1,270 recorded in prepaid expenses and other assets and \$524 recorded in other current liabilities on the Consolidated Balance Sheet (see Note 7).

September 29, 2012: Includes \$626 recorded in prepaid expenses and other assets and \$645 recorded in other current liabilities on the Consolidated Balance Sheet (see Note 7).



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## COHERENT, INC. AND SUBSIDIARIES

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

## 5. FAIR VALUE OF FINANCIAL ASSETS AND LIABILITIES (Continued)

(6) September 28, 2013: Includes \$1,361 recorded in prepaid expenses and other assets and \$12,058 recorded in other assets on the Consolidated Balance Sheet (see Note 14).

September 29, 2012: Includes \$2,891 recorded in prepaid expenses and other assets and \$3,509 recorded in other assets on the Consolidated Balance Sheet (see Note 14).

(7) Valuations are based upon quoted market prices in active markets involving similar assets. The market inputs used to value these instruments generally consist of market yields, reported trades, broker/dealer quotes or alternative pricing sources with reasonable levels of price transparency. Pricing sources include industry standard data providers, security master files from large financial institutions, and other third party sources which are input into a distribution-curve-based algorithm to determine a daily market value. This creates a "consensus price" or a weighted average price for each security.

(8) The principal market in which we execute our foreign currency contracts is the institutional market in an over-the-counter environment with a relatively high level of price transparency. The market participants usually are large commercial banks. Our foreign currency contracts' valuation inputs are based on quoted prices and quoted pricing intervals from public data sources and do not involve management judgment.

(9) The fair value of mutual funds is determined based on quoted market prices. Securities traded on a national exchange are stated at the last reported sales price on the day of valuation; other securities traded in over-the-counter market and listed securities for which no sale was reported on that date are stated as the last quoted bid price.

## 6. SHORT-TERM INVESTMENTS

We consider all highly liquid investments with maturities of three months or less at the time of purchase to be cash equivalents. Investments classified as available-for-sale are reported at fair value with unrealized gains and losses, net of related income taxes, recorded as a separate component of other comprehensive income ("OCI") in stockholders' equity until realized. Interest and amortization of premiums and discounts for debt securities are included in interest income. Gains and losses on securities sold are determined based on the specific identification method and are included in other income (expense).

Cash, cash equivalents and short-term investments consist of the following (in thousands):

	Fiscal 2013 Year-end			
	Cost Basis	Unrealized Gains	Unrealized Losses	Fair Value
Cash and cash equivalents	\$ 110,444	\$—	\$—	\$ 110,444
Short-term investments:				
Available-for-sale securities:				
Commercial paper	\$ 9,995	\$—	\$—	\$ 9,995
Certificates of deposit	—	—	—	—
U.S. Treasury and agency obligations	103,694	507	(1	) 104,200
International government obligations	5,040	28	(5	) 5,063
Corporate notes and obligations	20,352	66	(10	) 20,408
Total short-term investments	\$ 139,081	\$ 601	\$ (16	) \$ 139,666

	Fiscal 2012 Year-end			Fair Value
	Cost Basis	Unrealized Gains	Unrealized Losses	
Cash and cash equivalents	\$67,752	\$9	\$—	\$67,761
Short-term investments:				
Available-for-sale securities:				
Commercial paper	\$2,000	\$—	\$—	\$2,000
Certificates of deposit	2,017	2	—	2,019
International government obligations	2,004	14	—	2,018
U.S. Treasury and agency obligations	108,284	666	(2	) 108,948
Corporate notes and obligations	41,912	272	(1	) 42,183
Total short-term investments	\$156,217	\$954	\$(3	) \$157,168

None of the unrealized losses as of the end of fiscal 2013 or 2012 were considered to be other-than-temporary impairments. The amortized cost and estimated fair value of available-for-sale investments in debt securities at fiscal 2013 and 2012 year-ends, classified as short-term investments on our consolidated balance sheets, were as follows (in thousands):

	Fiscal Year-end		2012	
	2013	Estimated Fair Value	Amortized Cost	Estimated Fair Value
Investments in available-for-sale debt securities due in less than 1 year	\$139,081	\$139,666	\$154,200	\$155,149

During fiscal 2013, we received proceeds totaling \$78.8 million from the sale of available-for-sale securities and realized gross gains of less than \$0.1 million. During fiscal 2012, we received proceeds totaling \$77.9 million from the sale of available-for-sale securities and realized gross gains of less than \$0.1 million.

## 7. DERIVATIVE INSTRUMENTS AND HEDGING ACTIVITIES

All derivatives, whether designated in hedging relationships or not, are recorded on the balance sheet at fair value. We enter into foreign exchange forwards to minimize the risks of foreign currency fluctuation of specific assets and liabilities on the balance sheet; these are not designated as hedging instruments. Our derivative contracts do not contain any credit risk related contingent features and do not require collateral or other security to be furnished by us or the counterparties.

We maintain operations in various countries outside of the United States and have foreign subsidiaries that manufacture and sell our products in various global markets. The majority of our sales are transacted in U.S. dollars. However, we do generate revenues in other currencies, primarily the Japanese Yen, the Euro and the Korean Won. As a result, our earnings, cash flows and cash balances are exposed to fluctuations in foreign currency exchange rates. We attempt to limit these exposures through financial market instruments. We utilize derivative instruments, primarily forward contracts with maturities of three months or less, to manage our exposure associated with anticipated cash flows and net asset and liability positions denominated in foreign currencies. Gains and losses on the forward contracts are mitigated by gains and losses on the underlying instruments. We do not use derivative financial instruments for speculative or trading purposes. If a financial counterparty to any of our hedging arrangements experiences financial difficulties or is otherwise unable to honor the terms of the foreign currency hedge, we may experience material financial losses.

For derivative instruments that are not designated as hedging instruments, gains and losses are recognized in other income (expense).

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## COHERENT, INC. AND SUBSIDIARIES

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

The outstanding notional contract and fair value amounts of hedge contracts, with maximum maturity of three months are as follows (in thousands):

	U.S. Notional Contract Value		U.S. Notional Fair Value	
	September 28, 2013	September 29, 2012	September 28, 2013	September 29, 2012
Euro currency hedge contracts				
Purchase	\$46,248	\$61,779	\$47,299	\$62,404
Korean WON currency hedge contracts				
Sell	\$(17,345)	\$(39,039)	\$(17,545)	\$(39,559)
Chinese RMB currency hedge contracts				
Sell	\$(11,524)	\$(8,899)	\$(11,793)	\$(8,911)
Other foreign currency hedge contracts				
Purchase	\$6,677	\$—	\$6,788	\$—
Sell	\$(14,372)	\$(11,553)	\$(14,321)	\$(11,667)

The fair values of our derivative instruments are included in prepaid expenses and other assets and in other current liabilities in our Consolidated Balance Sheets (see Note 5); such amounts were not material as of September 28, 2013 and September 29, 2012.

The amount of non-designated derivative instruments' gain(loss) in the Consolidated Statements of Operations, included in other income (expense) for the fiscal year ended September 28, 2013 and September 29, 2012 is as follows (in thousands):

	Amount of Gain or (Loss) Recognized in Income on Derivatives	
	Fiscal Year Ended September 28, 2013	Fiscal Year Ended September 29, 2012
Derivatives not designated as hedging instruments		
Foreign exchange contracts	\$2,071	\$(2,729)

**8. GOODWILL AND INTANGIBLE ASSETS**

Goodwill is tested for impairment on an annual basis and between annual tests if events or circumstances indicate that an impairment loss may have occurred, and we write down these assets when impaired. We perform our annual impairment tests during the fourth quarter of each fiscal year using the opening balance sheet as of the first day of the fourth quarter, with any resulting impairment recorded in the fourth quarter of the fiscal year.

Goodwill represents the excess of the purchase price over the fair value of the net tangible and identifiable intangible assets acquired in each business combination. In September 2011, the FASB amended its guidance to simplify testing goodwill for impairment, allowing an entity to first assess qualitative factors to determine whether it is necessary to perform the two-step quantitative goodwill impairment test. If an entity determines as a result of the qualitative assessment that it is more likely than not (> 50% likelihood) that the fair value of a reporting unit is less than its carrying amount, then the quantitative test is required. Otherwise, no further testing is required. Moreover, an entity can bypass the qualitative assessment for any reporting unit in any period and proceed directly to step one of the impairment test, and then resume performing the qualitative assessment in any subsequent period. We adopted this accounting guidance for our impairment testing in fiscal 2012.

Coherent has two reporting units: Specialty Laser Systems and Commercial Lasers and Components. In our fiscal 2012 annual testing, we performed a qualitative assessment of the goodwill by reporting unit during the fourth quarter of fiscal 2012 using the opening balance sheet as of the first day of the fourth quarter and concluded that it was more likely than not that the

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fair value of each of the reporting units exceeded its carrying amount. In assessing the qualitative factors, we considered the impact of these key factors: macroeconomic conditions, fluctuations in foreign currency, market and industry conditions, our operating and competitive environment, regulatory and political developments, the overall financial performance of our reporting units including cost factors and budgeted-to-actual revenue results. We also considered market capitalization and stock price performance. Based on our assessment, goodwill in the reporting units was not impaired as of the first day of the fourth quarter of fiscal 2012. As such, it was not necessary to perform the two-step goodwill impairment test at that time.

In fiscal 2013, we elected to bypass the qualitative assessment and proceed directly to performing the first step of the goodwill impairment test. This election was made because we had last performed this impairment test in fiscal 2010 and we have subsequently added a substantial amount of goodwill balances as a result of our acquisitions of Midaz in the fourth quarter of fiscal 2012 and the acquisitions of Innolight and Lumera in the first quarter of fiscal 2013. We performed our Step 1 test during the fourth quarter of fiscal 2013 using the opening balance sheet as of the first day of the fourth quarter and noted no impairment. We determined the fair value of our reporting units for the Step 1 test using a 50-50% weighting of the Income (discounted cash flow) approach and Market (market comparable) approach. Management completed and reviewed the results of the Step 1 analysis and concluded that a Step 2 analysis was not required as the estimated fair values of both of our reporting units were substantially in excess of their carrying values. Between the completion of that testing and the end of the fourth quarter of fiscal 2013, we noted no indications of impairment or triggering events to cause us to review goodwill for potential impairment.

The changes in the carrying amount of goodwill by segment for fiscal 2013 and 2012 are as follows (in thousands):

	Commercial Lasers and Components (1)	Specialty Laser Systems (2)	Total
Balance as of October 1, 2011	\$6,365	\$69,589	\$75,954
Additions (see Note 4)	—	2,809	2,809
Translation adjustments and other	(2	) (1,072	) (1,074
Balance as of September 29, 2012	6,363	71,326	77,689
Additions (see Note 4)	—	32,952	32,952
Translation adjustments and other	—	2,767	2,767
Balance as of September 28, 2013	\$6,363	\$107,045	\$113,408

(1) Gross amount of goodwill for our CLC segment was \$25.7 million at September 28, 2013 and September 29, 2012. For both periods, the accumulated impairment loss for the CLC segment was \$19.3 million reflecting an impairment charge in fiscal 2009.

(2) The gross amount of goodwill for our SLS segment was \$109.4 million and \$73.7 million at September 28, 2013 and September 29, 2012. For both periods, the accumulated impairment loss for the SLS segment was \$2.4 million reflecting an impairment charge in fiscal 2003.

We evaluate long-lived assets and amortizable intangible assets whenever events or changes in business circumstances or our planned use of assets indicate that their carrying amounts may not be fully recoverable or that their useful lives are no longer appropriate. Reviews are performed to determine whether the carrying values of assets are impaired based on comparison to the undiscounted expected future cash flows identifiable to such long-lived and amortizable intangible assets. If the comparison indicates that impairment exists, the impaired asset is written down to its fair value.

During the second quarter of fiscal 2012, we determined that one of the hardware projects classified as in-process research and development ("IPR&D") acquired from Hypertronics would not be completed. As a result, \$0.2 million was included in research and development expense in the second fiscal quarter for that project. During the fourth quarter of fiscal 2012, we decided to no longer pursue orders of Hypertronics legacy products and determined that the carrying amounts of the amortizable intangible assets, including the remaining IPR&D, acquired from Hypertronics may not be recoverable and thus determined that an impairment review of the intangible assets was required. As a



result of our analysis, we determined that the intangible assets were fully impaired and that the remaining hardware projects classified as in-process research and development ("IPR&D") acquired from Hypertronics would not be completed. As a result, we recorded a \$4.0 million charge in amortization expense in the fourth quarter of fiscal 2012. We also considered the valuation of the goodwill recorded upon the acquisition of Hypertronics (approximately \$5.9 million at September 29, 2012) and determined that the goodwill was not

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## COHERENT, INC. AND SUBSIDIARIES

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

## 8. GOODWILL AND INTANGIBLE ASSETS (continued)

impaired, and no write-off is warranted, as the goodwill is related to the key strategic purpose of our acquisition - expansion into the Asian market with the addition of a full manufacturing facility.

During the year ended fiscal 2013, we did not have any impairment of intangible assets as a result of the impairment analysis.

The components of our amortizable intangible assets are as follows (in thousands):

	Fiscal 2013 Year-end			Fiscal 2012 Year-end		
	Gross Carrying Amount	Accumulated Amortization	Net	Gross Carrying Amount	Accumulated Amortization	Net
Existing technology	\$82,220	\$ (51,570 )	\$ 30,650	\$ 51,346	\$ (44,457 )	\$ 6,889
Customer lists	17,341	(7,465 )	9,876	7,849	(5,666 )	2,183
Trade name	710	(576 )	134	3,050	(2,749 )	301
Non-compete agreement	570	(558 )	12	689	(661 )	28
Production know-how (1)	—	—	—	910	(838 )	72
In-process research and development	2,299	—	2,299	—	—	—
Total	\$ 103,140	\$ (60,169 )	\$ 42,971	\$ 63,844	\$ (54,371 )	\$ 9,473

(1) For accounting purposes, when an intangible asset is fully amortized, it is removed from the disclosure schedule. Amortizable intangible assets include intangible assets acquired through business combinations as well as through direct purchases or licenses. All IPR&D projects outstanding at the end of fiscal 2011 were either written off as discussed above, or completed during fiscal 2012 and reclassified to "existing technology" intangible assets with finite lives.

The weighted average remaining amortization period for existing technology, customer lists and trade name are approximately 5 years, and the weighted average remaining amortization period for non-compete agreements is less than 1 year. Patents, order backlog and production know-how are fully amortized. Amortization expense for intangible assets during fiscal years 2013, 2012, and 2011 was \$9.8 million, \$10.4 million and \$8.1 million, respectively, which includes \$6.6 million, \$6.6 million and \$5.5 million, respectively, for amortization of existing technology and production know-how.

Estimated amortization expense for the next five fiscal years and all years thereafter are as follows (in thousands):

	Estimated Amortization Expense
2014	\$9,825
2015	9,315
2016	8,930
2017	7,842
2018	4,599
Thereafter	2,460
Total	\$42,971

## 9. BALANCE SHEET DETAILS

Prepaid expenses and other assets consist of the following (in thousands):

	Fiscal Year-end	
	2013	2012
Prepaid and refundable income taxes	\$ 23,939	\$ 20,634
Prepaid expenses and other	28,638	41,096
Total prepaid expenses and other assets	\$ 52,577	\$ 61,730

Other assets consist of the following (in thousands):

	Fiscal Year-end	
	2013	2012
Assets related to deferred compensation arrangements (see Note 14)	\$ 23,446	\$ 21,990
Deferred tax assets	37,637	37,160
Other assets	5,457	4,879
Total other assets	\$ 66,540	\$ 64,029

On June 8, 2010, we invested \$2.0 million in SiOnyx, Inc., a privately-held company focused on shallow junction photonics, used to enhance the performance of light sensing devices used in consumer, industrial, medical and defense related applications using black silicon processing. The investment is included in other assets and is being carried on a cost basis.

Other current liabilities consist of the following (in thousands):

	Fiscal Year-end	
	2013	2012
Accrued payroll and benefits	\$ 29,723	\$ 28,100
Accrued expenses and other	11,552	10,445
Reserve for warranty	18,508	17,442
Other taxes payable	6,147	15,457
Customer deposits	1,642	1,830
Deferred income	16,994	17,465
Total other current liabilities	\$ 84,566	\$ 90,739

Other long-term liabilities consist of the following (in thousands):

	Fiscal Year-end	
	2013	2012
Long-term taxes payable	\$ 15,715	\$ 21,281
Deferred compensation (see Note 14)	24,723	22,816
Deferred tax liabilities	10,487	726
Deferred income	2,734	2,191
Asset retirement obligations liability (see Note 2)	2,247	2,029
Other long-term liabilities	6,226	6,283
Total other long-term liabilities	\$ 62,132	\$ 55,326

## 10. SHORT-TERM BORROWINGS

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We have several lines of credit which allow us to borrow in the applicable local currency. We have a total of \$14.7 million of unsecured foreign lines of credit as of September 28, 2013. At September 28, 2013, we had used \$2.3 million of these available foreign lines of credit as guarantees. These credit facilities were used in Europe and Japan during fiscal 2013. In addition, our domestic line of credit consists of a \$50.0 million unsecured revolving credit account with Union Bank of California. The agreement will expire on May 31, 2014. The line of credit is subject to covenants related to financial ratios and tangible net worth with which we are currently in compliance. No amounts have been drawn upon our domestic line of credit as of September 28, 2013.

**11. LONG-TERM OBLIGATIONS**

The components of long-term obligations are as follows (in thousands):

	Fiscal Year-end	
	2013	2012
Capital leases	\$2	\$19
Current portion	(2	) (17
Long-term obligations	\$—	\$2

**12. COMMITMENTS AND CONTINGENCIES****Commitments**

We lease several of our facilities under operating leases.

Future minimum payments under our non-cancelable operating leases at September 28, 2013 are as follows (in thousands):

Fiscal	
2014	\$9,335
2015	7,466
2016	5,787
2017	5,220
2018	4,511
Thereafter through 2020	8,430
Total	\$40,749

Rent expense, exclusive of sublease income, was \$10.8 million, \$10.0 million and \$10.1 million in fiscal 2013, 2012 and 2011, respectively. There was no sublease income for fiscal 2013 and 2012, and sublease income was less than \$0.1 million for fiscal year 2011.

As of September 28, 2013, we had total purchase commitments for inventory over the next year of approximately \$40.2 million and purchase obligations for fixed assets and services of \$5.2 million compared to \$65.5 million of purchase commitments for inventory and \$6.8 million of purchase obligations for fixed assets and services at September 29, 2012.

**Contingencies**

We are subject to legal claims and litigation arising in the ordinary course of business, such as product liability, employment or intellectual property claims, including, but not limited to, the matters described below. Recently, IMRA America, Inc. (“Imra”) filed suit against two of our German subsidiaries alleging infringement of a German patent which had been licensed to Imra by the University of Michigan. The outcome of any such matters is currently not determinable. Although we do not expect that such legal claims and litigation will ultimately have a material adverse effect on our consolidated financial position, results of operations or cash flows, an adverse result in one or more matters could negatively affect our results in the period in which they occur.

Table of Contents**13. STOCK REPURCHASES AND DIVIDENDS**

On January 26, 2011, the Board authorized the repurchase of up to \$75.0 million of our common stock. The program was authorized for 12 months from the date of authorization.

On February 10, 2011, we announced that the Company would repurchase up to 1,271,100 shares of our common stock through a modified "Dutch Auction" tender offer. On March 14, 2011, we completed our tender offer, repurchased and retired 454,682 shares of outstanding common stock at a price of \$59.00 per share for a total of \$26.8 million excluding expenses. During the third and fourth quarters of fiscal 2011, we repurchased and retired an additional 1,024,409 shares of outstanding common stock at an average price of \$47.03 per share for a total of \$48.2 million, excluding expenses.

On August 25, 2011, we announced that the Board of Directors had authorized the repurchase of up to \$50.0 million of our common stock. The program was authorized for 12 months from the date of authorization. During fiscal 2011, we repurchased and retired 586,200 shares of outstanding common stock at an average price of \$42.67 per share for a total of \$25.0 million, excluding expenses.

During fiscal 2012, we repurchased and retired 543,200 shares of outstanding common stock at an average price of \$45.99 per share for a total of \$25.0 million, excluding expenses. There are no funds remaining authorized for repurchase at September 28, 2013 under this repurchase program.

On October 4, 2012, the Board of Directors authorized a buyback program whereby we were authorized to repurchase up to \$25.0 million of our common stock. The program was authorized for 12 months from the date of authorization. No shares were purchased under this program.

On December 10, 2012, we announced that the Board of Directors approved a \$1.00 per share special cash dividend on our outstanding common stock payable on December 27, 2012 to stockholders of record on December 19, 2012, resulting in a payment of \$24.0 million in the first quarter of fiscal 2013.

**14. EMPLOYEE STOCK AWARD, OPTION AND BENEFIT PLANS****Deferred Compensation Plans**

Under our deferred compensation plans ("plans"), eligible employees are permitted to make compensation deferrals up to established limits set under the plans and accrue income on these deferrals based on reference to changes in available investment options. While not required by the plan, the Company chooses to invest in insurance contracts and mutual funds in order to approximate the changes in the liability to the employees. These investments and the liability to the employees were as follows (in thousands):

	Fiscal Year-end	
	2013	2012
Cash surrender value of life insurance contracts	\$ 11,374	\$ 18,481
Fair value of mutual funds	13,433	6,400
Total assets	\$ 24,807	\$ 24,881
Total assets, included in:		
Prepaid expenses and other assets	\$ 1,361	\$ 2,891
Other assets	23,446	21,990
Total assets	\$ 24,807	\$ 24,881

	Fiscal Year-end	
	2013	2012
Total deferred compensation liability, included in:		
Other current liabilities	\$ 1,361	\$ 2,891
Other long-term liabilities	24,723	22,816
Total deferred compensation liability	\$ 26,084	\$ 25,707

Life insurance premiums loads, policy fees and cost of insurance that are paid from the asset investments and gains and losses from the asset investments for these plans are recorded as components of other income or expense; such amounts were a net gain of \$2.1 million in fiscal year 2013, a net gain of \$1.6 million (including a \$0.2 million death benefit) in fiscal year 2012 and a net gain of \$3.1 million (including a \$1.5 million death benefit) in fiscal year 2011. Changes in the obligation to plan participants are recorded as a component of operating expenses and cost of sales; such amounts were an expense of \$2.8 million in fiscal year 2013, an expense of \$2.3 million in fiscal year 2012 and an expense of \$2.6 million in fiscal year 2011. Liabilities associated with participant balances under our deferred compensation plans are affected by individual contributions and distributions made, as well as gains and losses on the participant's investment allocation election.

#### Coherent Employee Retirement and Investment Plan

Under the Coherent Employee Retirement and Investment Plan, we match employee contributions to the plan up to a maximum of 4% of the employee's individual earnings subject to IRS limitations. Employees become eligible for participation on their first day of employment and for Company matching contributions after completing one year of service. The Company's contributions (net of forfeitures) during fiscal 2013, 2012, and 2011 were \$3.4 million, \$3.2 million and \$3.0 million, respectively.

#### Employee Stock Purchase Plan

We have an Employee Stock Purchase Plan ("ESPP") whereby eligible employees may authorize payroll deductions of up to 10% of their regular base salary to purchase shares at the lower of 85% of the fair market value of the common stock on the date of commencement of the offering or on the last day of the six-month offering period. During fiscal 2013, 2012 and 2011, a total of 159,754 shares, 139,012 shares and 144,147 shares, respectively, were purchased by and distributed to employees at an average price of \$37.20, \$42.19 and \$34.47 per share, respectively. At fiscal 2013 year-end, we had 928,225 shares of our common stock reserved for future issuance under the plan.

#### Stock Award and Option Plans

We have a stock plan for which employees and non-employee directors are eligible participants. This plan is the 2011 Equity Incentive Plan (the "2011 Plan") which includes our options, time-based restricted stock units and market-based performance restricted stock units. In prior years, we have had a stock plan for which employees and service providers were eligible participants and a non-employee Directors' Stock Option Plan for which only non-employee directors were eligible participants. Those prior Plans have expired, and any future grants will be made from the 2011 Plan. Under the 2011 Plan, Coherent may grant options and awards (time-based restricted stock units and market-based performance restricted stock units) to purchase up to 6,882,000 shares of common stock, of which 6,007,510 shares remain available for grant at fiscal 2013 year end.

Employee options are generally exercisable between two and four years from the grant date at a price equal to the fair market value of the common stock on the date of the grant and generally vest 25% to 50% annually. The Company settles stock option exercises with newly issued shares of common stock. Grants to employees generally expire six years from the original grant date. Since adoption of the 2011 Plan, no options have been granted to employees. Director options were previously automatically granted to our non-employee directors. New directors now initially receive an award of restricted stock units of 3,500 shares which vest over a two year period. Beginning with the annual meeting of stockholders in 2011, the annual grant for non-employee directors became 3,500 shares of restricted stock units that vest on February 15 of the calendar year following the grant.

Restricted stock awards and restricted stock units are independent of option grants and are typically subject to vesting restrictions—either time-based or performance-based conditions for vesting. Until restricted stock vests, shares (including those



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COHERENT, INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

14. EMPLOYEE STOCK OPTION AND BENEFIT PLANS (continued)

issuable upon vesting of the applicable restricted stock unit) are subject to forfeiture if employment terminates prior to the release of restrictions and cannot be transferred.

• The service based restricted stock awards generally vest three years from the date of grant.

• The service based restricted stock unit awards are generally subject to annual vesting over three years from the date of grant.

The market-based performance restricted stock unit award grants are generally either subject to annual vesting over three years from the date of grant or subject to a single vest measurement three years from the date of grant,

• depending upon achievement of performance measurements ("Performance RSUs") based on the performance of the Company's Total Shareholder Returns (as defined) compared with the performance of the Russell 2000 Index.

The Company previously granted Performance RSUs during the second quarter of fiscal 2009 which had a single vesting measurement date of November 14, 2010. These RSUs would have vested anywhere between 0% and 300% of the targeted amount based upon achievement by the Company of (a) an annual revenue threshold amount and (b) adjusted EBITDA percentage targets. The Company determined that the performance target had not been met and these awards were canceled in the first quarter of fiscal 2011 with no shares vesting.

Fair Value of Stock Compensation

We recognize compensation expense for all share-based payment awards based on the fair value of such awards. The expense is recognized on a straight-line basis over the respective requisite service period of the awards.

Determining Fair Value

Stock Options

Valuation and amortization method—We estimate the fair value of stock options granted using the Black-Scholes-Merton option-pricing formula and a single option award approach. This fair value is then amortized on a straight-line basis over the requisite service periods of the awards, which is generally the vesting period.

Expected Term—The expected term represents the period that our stock-based awards are expected to be outstanding and was determined based on historical experience of similar awards, giving consideration to the contractual terms of the stock-based awards, vesting schedules and expectations of future employee behavior as influenced by changes to the terms of its stock-based awards.

Expected Volatility—Our process for computing expected volatility considers both historical volatility and market-based implied volatility; however our estimate of expected forfeitures is based on historical employee data and could differ from actual forfeitures.

Risk-Free Interest Rate—The risk-free interest rate used in the Black-Scholes-Merton valuation method is based on the implied yield currently available on U.S. Treasury zero-coupon issues with an equivalent remaining term.

Expected Dividend—The expected dividend assumption is based on our current expectations about our anticipated dividend policy.

The Company did not grant any stock options in fiscal 2013 or fiscal 2012. The fair values of the Company's stock options granted to employees for fiscal 2011, and of shares purchased under the stock purchase plan for fiscal 2013, 2012 and 2011 were estimated using the following weighted-average assumptions:



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## COHERENT, INC. AND SUBSIDIARIES

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

## 14. EMPLOYEE STOCK OPTION AND BENEFIT PLANS (continued)

	Employee Stock Option Plans			Employee Stock Purchase Plans		
	Fiscal			Fiscal		
	2013	2012	2011	2013	2012	2011
Expected life in years	—	—	6.0	0.5	0.5	0.5
Expected volatility	—	—	36.1	% 32.3	% 47.0	% 32.8
Risk-free interest rate	—	—	1.1	% 0.1	% 0.9	% 0.1
Expected dividends	—	—	—	—	—	—
Weighted average fair value per share	\$—	\$—	\$ 16.26	\$ 10.56	\$ 13.62	\$ 12.50

## Time-Based Restricted Stock Units

Time-based restricted stock units are fair valued at the closing market price on the date of grant.

## Market-Based Performance Restricted Stock Units

We grant market-based performance restricted stock units to officers and certain employees. The performance stock unit agreements provide for the award of performance stock units with each unit representing the right to receive one share of Coherent, Inc. common stock to be issued after the applicable award period. The final number of units awarded for this grant will be determined as of the vesting dates, based upon our total shareholder return over the performance period compared to the Russell 2000 Index and could range from a minimum of no units to a maximum of twice the initial award. The weighted average fair value for these performance units was determined using a Monte Carlo simulation model incorporating the following weighted average assumptions:

	Fiscal	
	2013	2012
Risk-free interest rate	0.33	% 0.39
Volatility	37.9	% 41.8
Weighted average fair value	\$ 48.48	\$ 71.59

We recognize the estimated cost of these awards, as determined under the simulation model, over the related service period, with no adjustment in future periods based upon the actual shareholder return over the performance period.

## Stock Compensation Expense

The following table shows total stock-based compensation expense included in the Consolidated Statements of Operations for fiscal 2013, 2012 and 2011 (in thousands):

	Fiscal 2013	Fiscal 2012	Fiscal 2011
Cost of sales	\$ 2,151	\$ 1,670	\$ 1,331
Research and development	1,851	1,628	1,474
Selling, general and administrative	14,889	13,015	10,158
Income tax benefit	(5,292)	(4,796)	(3,802)
	\$ 13,599	\$ 11,517	\$ 9,161

Total stock-based compensation cost capitalized as part of inventory during fiscal 2013 was \$2.2 million; \$2.1 million was amortized into income during fiscal 2013, which includes amounts capitalized in fiscal 2013 and amounts carried over from fiscal 2012. Total stock-based compensation cost capitalized as part of inventory during fiscal 2012 was \$1.8 million; \$1.7 million was amortized into income during fiscal 2012, which includes amounts capitalized in fiscal 2012 and amounts carried over from fiscal 2011. Management has made an estimate of expected forfeitures and is recognizing compensation costs only for those equity awards expected to vest.

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## COHERENT, INC. AND SUBSIDIARIES

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

## 14. EMPLOYEE STOCK OPTION AND BENEFIT PLANS (continued)

At fiscal 2013 year-end, the total compensation cost related to unvested stock-based awards granted to employees under the Company's stock option and award plans but not yet recognized was approximately \$15.3 million, net of estimated forfeitures of \$0.8 million. This cost will be amortized on a straight-line basis over a weighted-average period of approximately 1.0 years and will be adjusted for subsequent changes in estimated forfeitures.

At fiscal 2013 year-end, the total compensation cost related to options to purchase common shares under the ESPP but not yet recognized was approximately \$0.1 million. This cost will be amortized on a straight-line basis over a weighted-average period of approximately one month.

The stock option exercise tax benefits reported in the statement of cash flows results from the excess tax benefits arising from tax deductions in excess of the stock-based compensation cost recognized, determined on a grant-by-grant basis. During fiscal 2013, we have not generated any excess tax benefits as cash flows from financing activities. During fiscal 2012 and fiscal 2011 we recorded approximately \$1.3 million and \$5.1 million, respectively, of excess tax benefits as cash flows from financing activities.

## Stock Options &amp; Awards Activity

The following is a summary of option activity for our Stock Option Plans for fiscal 2013, 2012 and 2011 (in thousands, except per share amounts and remaining contractual term in years):

	Number of Shares	Weighted Average Exercise Price Per Share	Weighted Average Remaining Contractual Term in Years	Aggregate Intrinsic Value
Outstanding at October 2, 2010	1,893	\$ 28.96	4.0	\$ 21,279
Granted	24	44.74		
Exercised	(975	) 30.51		
Forfeitures	(21	) 24.97		
Expirations	(4	) 33.95		
Outstanding at October 1, 2011	917	\$ 27.80	4.2	\$ 13,952
Granted	—	—		
Exercised	(269	) 27.56		
Forfeitures	(1	) 26.16		
Expirations	(6	) 32.10		
Outstanding at September 29, 2012	641	\$ 27.86	3.5	\$ 9,823
Granted	—	—		
Exercised	(371	) 28.56		
Forfeitures	—	—		
Expirations	—	—		
Outstanding at September 28, 2013	270	\$ 26.90	3.5	\$ 9,299
Vested and expected to vest at September 28, 2013	270	\$ 26.90	3.5	\$ 9,299
Exercisable at September 28, 2013	262	\$ 26.35	3.4	\$ 9,167

The aggregate intrinsic value is calculated as the difference between the exercise price of the underlying options and the quoted price of our common stock for in-the-money options. During fiscal 2013, 2012 and 2011, the aggregate intrinsic value of options exercised under the Company's stock option plans were \$9.6 million, \$6.8 million and \$18.6 million, respectively, determined as of the date of option exercise.

The following table summarizes information about stock options outstanding at fiscal 2013 year-end:



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## COHERENT, INC. AND SUBSIDIARIES

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

## 14. EMPLOYEE STOCK OPTION AND BENEFIT PLANS (continued)

Range of Exercise Prices	Options Outstanding		Weighted Average Remaining Contractual Life (Years)	Options Exercisable	
	Number of Shares	Weighted Average Exercise Price per Share		Number of Shares	Weighted Average Exercise Price per Share
\$18.91 - \$20.20	24,900	\$20.15	5.53	24,900	\$20.15
\$23.16 - \$23.16	44,200	23.16	1.14	44,200	23.16
\$26.16- \$26.16	171,035	26.16	3.15	171,035	26.16
\$32.00- \$32.00	6,000	32.00	6.51	6,000	32.00
\$44.74 - \$44.74	24,000	44.74	7.98	16,000	44.74
\$18.91 - \$44.74	270,135	\$26.90	3.54	262,135	\$26.35

The following table summarizes our restricted stock award and restricted stock unit activity for fiscal 2013, 2012 and 2011 (in thousands, except per share amounts):

	Time Based Restricted Stock Units		Market-Based Performance Restricted Stock Units	
	Number of Shares(1)	Weighted Average Grant Date Fair Value	Number of Shares(2)	Weighted Average Grant Date Fair Value
Nonvested stock at October 2, 2010	481	\$26.22	—	\$—
Granted	191	45.44	101	49.77
Vested	(183)	) 26.17	—	—
Forfeited	(85)	) 29.20	—	—
Nonvested stock at October 1, 2011	404	\$34.71	101	\$49.77
Granted	250	53.59	95	\$63.85
Vested	(206)	) 32.66	(44)	) 53.18
Forfeited	(8)	) 49.07	—	—
Nonvested stock at September 29, 2012	440	\$47.81	152	\$57.55
Granted	273	44.03	97	48.48
Vested	(254)	) 43.06	(28)	) 49.50
Forfeited	(6)	) 45.59	(8)	) 53.30
Nonvested stock at September 28, 2013	453	\$48.22	213	\$54.63

(1) Service-based restricted stock vested during each fiscal year

(2) Performance-based awards and units included at 100% of target goal; under the terms of the awards, the recipient may earn between 0% and 200% of the award.

Restricted Stock Units are converted into the right to receive common stock upon vesting; prior to issuance, the Company permits the holders to satisfy their tax withholding requirements by net settlement, whereby the Company withholds a portion of the shares to cover the applicable taxes based on the fair market value of the Company's stock at the vesting date. The number of shares withheld to cover tax payments was 95,000 in fiscal 2013, 90,000 in fiscal 2012 and 70,000 in fiscal 2011; tax payments made were \$4.2 million, \$4.5 million and \$3.3 million, respectively.

At fiscal 2013 year-end, 6,007,510 options or restricted stock units were available for future grant under all plans. At fiscal 2013 year-end, all outstanding stock options have been issued under plans approved by our shareholders.

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## 15. ACCUMULATED OTHER COMPREHENSIVE INCOME (LOSS)

Accumulated other comprehensive income (net of tax) at fiscal 2013 and fiscal 2012 year-ends are substantially comprised of accumulated translation adjustments of \$54.4 million and \$40.4 million, respectively.

## 16. OTHER INCOME (EXPENSE), NET

Other income (expense) includes other-net which is comprised of the following (in thousands):

	Fiscal		
	2013	2012	2011
Foreign exchange gain (loss)	\$ (3,762	) \$ (451	) \$ 1,457
Translation adjustment related to dissolution of Finland (1)	—	—	6,511
Gain (loss) on deferred compensation investments, net (Note 14)	2,123	1,644	3,149
Other—net	170	374	(59
Other income (expense), net	\$ (1,469	) \$ 1,567	\$ 11,058

- (1) In the second quarter of fiscal 2011, the Company had substantially completed the liquidation of its Finland operations and recognized in other income the accumulated translation gains for this subsidiary previously recorded in accumulated other comprehensive income (loss) on the consolidated balance sheet.

## 17. INCOME TAXES

The provision for (benefit from) income taxes on income (loss) before income taxes consists of the following (in thousands):

	Fiscal		
	2013	2012	2011
Currently payable:			
Federal	\$ (1,796	) \$ (7,856	) \$ (14,408
State	(141	) (103	) 677
Foreign	27,152	38,259	31,098
	25,215	30,300	17,367
Deferred:			
Federal	(4,022	) 3,763	10,325
State	(16	) 289	2,358
Foreign	(4,036	) (6,692	) 541
	(8,074	) (2,640	) 13,224
Provision for income taxes	\$ 17,141	\$ 27,660	\$ 30,591

The components of income (loss) before income taxes consist of (in thousands):

	Fiscal 2013	2012	2011
United States	\$ (7,142	) \$ (9,212	) \$ 32,993
Foreign	90,638	99,834	90,836
Income before income taxes	\$ 83,496	\$ 90,622	\$ 123,829

The reconciliation of the income tax expense at the U.S. Federal statutory rate (35% in fiscal years 2013, 2012 and 2011) to actual income tax expense is as follows (in thousands):

	Fiscal 2013	2012	2011
Federal statutory tax expense	\$ 29,223	\$ 31,718	\$ 43,340
Valuation allowance	534	(141	) 1,456
Foreign taxes at rates less than U.S. rates, net	(8,219	) (1,938	) (2,818
Currency translation adjustments recognized	—	—	(2,424
Stock-based compensation	1,292	1,176	885
State income taxes, net of federal income tax benefit	(143	) 204	2,409
Research and development credit	(4,131	) (532	) (2,752
Deferred compensation	(257	) (325	) (759
Release of unrecognized tax benefits	(407	) (12	) (7,090
Release of interest accrued for unrecognized tax benefits	(160	) (1,372	) (2,672
Other	(591	) (1,118	) 1,016
Provision for income taxes	\$ 17,141	\$ 27,660	\$ 30,591
Effective tax rate	20.5	% 30.5	% 24.7

Coherent Korea received the final approval for a High-Tech tax exemption on March 26, 2013 from the Korean authorities. The High-Tech tax exemption is effective retroactively to the beginning of fiscal 2013 and is subject to capital contribution limitations. The impact of this tax exemption decreased Korean income taxes by approximately \$2.1 million in fiscal 2013. The benefit of the tax holiday on net income per share (diluted) was \$0.09.

Coherent Singapore had previously received a Pioneer Status tax exemption from the Singapore authorities effective from fiscal 2012 through fiscal 2017, and may be extended if certain additional requirements are satisfied. The tax holiday is conditional upon our meeting certain revenue, business spending and employment thresholds. Although Coherent Singapore had income in fiscal 2013, this amount was offset by a loss carryforward from fiscal 2012 and therefore we did not realize a benefit for the Singapore tax holiday in fiscal years 2013 and 2012.

The significant components of deferred tax assets and liabilities were (in thousands):

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## COHERENT, INC. AND SUBSIDIARIES

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

## 17. INCOME TAXES (continued)

	Fiscal year-end	
	2013	2012
Deferred tax assets:		
Reserves and accruals not currently deductible	\$ 25,987	\$ 25,217
Operating loss carryforwards and tax credits	65,590	62,720
Capital loss carryforwards	309	301
Deferred service revenue	2,221	2,135
Depreciation and amortization	—	2,590
Inventory capitalization	1,901	1,629
Stock-based compensation	6,229	6,503
Competent authority offset to transfer pricing tax reserves	4,328	7,901
	106,565	108,996
Valuation allowance	(13,359	) (9,087
	93,206	99,909
Deferred tax liabilities:		
Gain on issuance of stock by subsidiary	21,144	20,296
Depreciation and amortization	16,342	9,004
Accumulated translation adjustment	1,363	796
Other	5,758	10,510
	44,607	40,606
Net deferred tax assets	\$ 48,599	\$ 59,303

In determining our fiscal 2013, 2012 and 2011 tax provisions under ASC Subtopic 740, "Income Taxes", we calculated the deferred tax assets and liabilities for each separate tax entity. We then considered a number of factors including the positive and negative evidence regarding the realization of our deferred tax assets to determine whether a valuation allowance should be recognized with respect to our deferred tax assets. We determined that a valuation allowance was appropriate for a portion of the deferred tax assets of our California research and development tax credits, foreign tax attributes and net operating losses and capital loss carryforwards at fiscal 2013, 2012 and 2011 year-ends.

During fiscal 2013, we increased our valuation allowance on deferred tax assets to \$13.4 million, primarily due to the reduced ability to utilize California research and development tax credits.

The net deferred tax asset is classified on the consolidated balance sheets as follows (in thousands):

	Fiscal year-end	
	2013	2012
Current deferred income tax assets	\$ 21,713	\$ 23,368
Current deferred income tax liabilities	(264	) (499
Non-current deferred income tax assets	37,637	37,160
Non-current deferred income tax liabilities	(10,487	) (726
Net deferred tax assets	\$ 48,599	\$ 59,303

We have various tax attribute carryforwards which include the following:

Foreign net operating loss carryforwards are \$20.2 million, of which \$18.3 million have no expiration date and of which \$1.9 million are scheduled to expire beginning in fiscal year 2030. A valuation allowance totaling \$7.8 million has been recorded against the foreign net operating loss carryforwards since the recovery of the carryforwards are uncertain. California net operating loss carryforwards are \$19.8 million and are scheduled to



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## COHERENT, INC. AND SUBSIDIARIES

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

## 17. INCOME TAXES (continued)

expire in fiscal years 2017 to 2033. The tax benefit relating to approximately \$6.8 million of the state net operating loss carryforwards will be credited to additional paid-in-capital when recognized.

Federal capital loss carryforwards of \$0.8 million are scheduled to expire in fiscal year 2014 to 2015. State capital loss carryforwards of \$0.8 million are scheduled to expire in fiscal 2014 to 2015. Full valuation allowances have been recorded against the federal capital loss and the state capital loss carryforwards since the recovery of the carryforwards are uncertain.

Federal R&D credit carryforwards of \$20.5 million are scheduled to expire in fiscal years 2024 to 2033. The tax benefit relating to approximately \$0.9 million of the federal tax credit carryforwards will be credited to additional paid-in-capital when recognized. California R&D credit carryforwards of \$17.9 million have no expiration date. The tax benefit relating to approximately \$0.5 million of the state tax credit carryforwards will be credited to additional paid-in-capital when recognized. A valuation allowance totaling \$10.4 million, before federal benefit, has been recorded against California R&D credit carryforwards since the recovery of the carryforwards are uncertain. Other states R&D credit carryforwards of \$1.6 million are scheduled to expire in fiscal years 2014 to 2027. A valuation allowance totaling \$0.6 million, before federal benefit, has been recorded against Oregon R&D credit carryforwards since the recovery of the carryforwards are uncertain.

Federal foreign tax credit carryforwards of \$21.3 million are scheduled to expire in fiscal years 2016 to 2023. The tax benefit relating to approximately \$7.2 million of the federal foreign tax credit carryforwards will be credited to additional paid-in-capital when recognized.

Included in the net deferred tax asset balance is \$1.4 million of deferred tax liabilities related to the currency translation adjustment. The associated tax expenses are recorded as a part of other comprehensive income.

The American Taxpayer Relief Act of 2012 (“the Act”) was enacted on January 2, 2013. Under the Act, the federal research and development tax credit was retroactively extended for amounts paid or incurred after December 31, 2011 through December 31, 2013. The prior period effects of the change in the tax law were recognized in our second quarter of fiscal 2013, which is the quarter that the law was enacted. Accordingly, prior year research and development tax credits of approximately \$1.4 million less appropriate reserves were recognized in the second quarter of fiscal 2013.

We are subject to taxation and file income tax returns in the U.S. federal jurisdiction and in many state and foreign jurisdictions. For U.S. federal income tax purposes, all years prior to 2010 are closed. In our major foreign jurisdictions and our major state jurisdictions, the years prior to 2006 and 2009, respectively, are closed to examination. Earlier years in our various jurisdictions may remain open for adjustment to the extent that we have tax attribute carryforwards from those years. We believe that we have provided adequate reserves for any adjustments that may be determined by the tax authorities.

As of September 28, 2013, the total amount of gross unrecognized tax benefits including gross interest and penalties was \$23.2 million, of which \$17.9 million, if recognized, would affect our effective tax rate. As of September 29, 2012, we recorded gross unrecognized tax benefits including gross interest and penalties in the amount of \$27.6 million of which \$16.8 million, if recognized, would affect our effective tax rate. Our total gross unrecognized tax benefit was classified as long-term taxes payable in the consolidated balance sheets. We include interest and penalties related to unrecognized tax benefits within the provision for income taxes. As of September 28, 2013, the total amount of gross interest and penalties accrued was \$1.8 million and it is classified as long-term taxes payable in the consolidated balance sheets. As of September 29, 2012, we had accrued \$1.6 million for the gross interest and penalties related to the gross unrecognized tax benefits.

Management believes that it has adequately provided for any adjustments that may result from tax examinations. The Company regularly engages in discussions and negotiations with tax authorities regarding tax matters in various jurisdictions. It is reasonably possible that certain federal, foreign and state tax matters may be concluded in the next 12 months. Although the timing of the resolution and/or closure of audits is highly uncertain, it is reasonably possible that the balance of net unrecognized tax benefits including interest and penalties could be reduced by approximately

\$0.3 million to \$2.4 million in the next 12 months.

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## COHERENT, INC. AND SUBSIDIARIES

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

## 17. INCOME TAXES (continued)

A reconciliation of the change in gross unrecognized tax benefits, excluding interest and penalties, is as follows (in thousands):

	Fiscal year-end		
	2013	2012	2011
Balance as of the beginning of the year	\$ 25,967	\$ 30,301	\$ 43,254
Tax positions related to current year:			
Additions	1,008	615	739
Reductions	—	—	—
Tax positions related to prior year:			
Additions	1,127	99	496
Reductions	—	—	(1,125 )
Settlements	—	—	(913 )
Lapses in statutes of limitations	(6,724 )	(5,048 )	(12,150 )
Balance as of end of year	\$ 21,378	\$ 25,967	\$ 30,301

Our unrecognized tax benefits decreased from \$26.0 million in fiscal 2012 to \$21.4 million in fiscal 2013, excluding interest and penalties. This reduction is primarily related to the closure of various statutes of limitations.

A summary of the fiscal tax years that remain subject to examination, as of September 28, 2013, for our major tax jurisdictions is:

United States—Federal	2010—forward
United States—Various States	2009—forward
Netherlands	2007—forward
Germany	2006—forward
Japan	2007—forward
United Kingdom	2012—forward

## 18. SEGMENT AND GEOGRAPHIC INFORMATION

We are organized into two reportable operating segments: Specialty Lasers and Systems ("SLS") and Commercial Lasers and Components ("CLC"). This segmentation reflects the go-to-market strategies for various products and markets. While both segments work to deliver cost-effective solutions, SLS develops and manufacturers configurable, advanced-performance products largely serving the microelectronics, scientific research and government programs and OEM components and instrumentation markets. The size and complexity of many of our SLS products require service to be performed at the customer site by factory-trained field service engineers. CLC focuses on higher volume products that are offered in set configurations. The product architectures are designed for easy exchange at the point of use such that product service and repairs are based upon advanced replacement and depot (i.e., factory) repair. CLC's primary markets include materials processing, OEM components and instrumentation and microelectronics.

We have identified SLS and CLC as operating segments for which discrete financial information is available. Both units have dedicated engineering, manufacturing, product business management and product line management functions. A small portion of our outside revenue is attributable to projects and recently developed products for which a segment has not yet been determined. The associated direct and indirect costs are presented in the category of Corporate and other, along with other corporate costs as described below.

Our Chief Executive Officer has been identified as the chief operating decision maker (CODM) as he assesses the performance of the segments and decides how to allocate resources to the segments. Income (loss) from operations is the measure of profit and loss that our CODM uses to assess performance and make decisions. As assets are not a measure used to assess the performance of the company by the CODM, asset information is not tracked or compiled by segment and is not available to be reported in our disclosures. Income (loss) from operations represents the net sales less the cost of sales and direct operating expenses incurred within the operating segments as well as allocated

expenses such as shared sales and

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manufacturing costs. We do not allocate to our operating segments certain operating expenses which we manage separately at the corporate level. These unallocated costs include stock-based compensation and corporate functions (certain research and development, management, finance, legal and human resources) and are included in the results below under Corporate and other in the reconciliation of operating results. Management does not consider unallocated Corporate and other costs in its measurement of segment performance.

The following table provides net sales and income (loss) from operations for our operating segments (in thousands):

	Fiscal		
	2013	2012	2011
Net sales:			
Specialty Laser Systems	\$ 571,644	\$ 548,848	\$ 519,736
Commercial Lasers and Components	238,482	220,240	283,098
Total net sales	\$ 810,126	\$ 769,088	\$ 802,834
Income from operations:			
Specialty Laser Systems	\$ 115,931	\$ 118,789	\$ 116,383
Commercial Lasers and Components	12,411	9,191	37,709
Corporate and other	(43,443	) (39,150	) (42,083
Total income from operations	\$ 84,899	\$ 88,830	\$ 112,009

The following table provides a reconciliation of our total income (loss) from operations to net income (in thousands):

	Fiscal		
	2013	2012	2011
Reconciliation of Income From Operations to Net Income			
Total income from operations	\$ 84,899	\$ 88,830	\$ 112,009
Total other income, net	(1,403	) 1,792	11,820
Income before income taxes	83,496	90,622	123,829
Provision for income taxes	17,141	27,660	30,591
Net Income	\$ 66,355	\$ 62,962	\$ 93,238

#### Geographic Information

Our foreign operations consist primarily of manufacturing facilities in Europe and Asia-Pacific and sales offices in Europe and Asia-Pacific. Sales, marketing and customer service activities are conducted through sales subsidiaries throughout the world. Geographic sales information for fiscal 2013, 2012 and 2011 is based on the location of the end customer. Geographic long-lived asset information presented below is based on the physical location of the assets at the end of each year.

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## COHERENT, INC. AND SUBSIDIARIES

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

## 18. SEGMENT AND GEOGRAPHIC INFORMATION (continued)

Sales to unaffiliated customers are as follows (in thousands):

SALES	Fiscal		
	2013	2012	2011
United States	\$ 188,204	\$ 184,958	\$ 208,868
Foreign countries:			
Japan	156,152	168,912	166,911
South Korea	185,737	130,754	117,918
Germany	93,855	92,162	100,759
Europe, other	58,500	62,266	79,751
Asia-Pacific, other	73,794	80,834	71,813
Rest of World	53,884	49,202	56,814
Total foreign countries sales	621,922	584,130	593,966
Total sales	\$ 810,126	\$ 769,088	\$ 802,834

Long-lived assets, which include all non-current assets other than goodwill, intangibles and deferred taxes, by geographic region, are as follows (in thousands):

LONG-LIVED ASSETS	Fiscal Year-end	
	2013	2012
United States	\$ 79,939	\$ 79,618
Foreign countries:		
Germany	43,410	43,572
Europe, other	3,192	3,106
Asia-Pacific	14,693	13,666
Total foreign countries long-lived assets	61,295	60,344
Total long-lived assets	\$ 141,234	\$ 139,962

## Major Customers

We had one customer who accounted for 14% of consolidated revenue during fiscal 2013; we had two customers who each accounted for 11% of consolidated revenue during fiscal 2012. These customers purchased primarily from our SLS segment. There were no major customers over 10% of revenues for fiscal 2011.

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## QUARTERLY FINANCIAL INFORMATION (UNAUDITED)

Summarized quarterly financial data for the years ended September 28, 2013 and September 29, 2012 are as follows (in thousands, except per share amounts):

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
Fiscal 2013:				
Net sales	\$ 183,202	\$ 200,058	\$ 213,725	\$ 213,141
Gross profit	77,635	76,331	83,264	85,041
Net income	14,153	15,002	(1) 16,685	20,515
Net income per basic share	\$0.60	\$0.62	\$0.69	\$0.84
Net income per diluted share	\$0.58	\$0.61	\$0.68	\$0.83
Fiscal 2012:				
Net sales	\$ 190,767	\$ 193,284	\$ 196,383	\$ 188,654
Gross profit	80,359	77,648	80,245	77,733
Net income	17,051	16,155	(2) 17,208	12,548 (3)
Net income per basic share	\$0.73	\$0.69	\$0.73	\$0.53
Net income per diluted share	\$0.71	\$0.67	\$0.72	\$0.52

(1) The second quarter of fiscal 2013 includes a \$1,398 benefit from the renewal of the R&D tax credit for fiscal 2012.

(2) The second quarter of fiscal 2012 includes a \$1,647 benefit from the release of tax reserves and related interest as a result of the closure of open tax years.

The fourth quarter of fiscal 2012 includes a \$4,260 after tax charge due to the write-off of previously acquired (3) intangible assets and inventories and a \$2,790 benefit due to decreases in valuation allowances against deferred tax assets.

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INDEX TO EXHIBITS

Sequentially

Exhibit Number	Exhibit
21.1	Subsidiaries
23.1	Consent of Independent Registered Public Accounting Firm
24.1	Power of Attorney (see signature page)
31.1	Certification of Chief Executive Officer pursuant to Exchange Act Rule 13a-14(a)/15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Certification of Chief Financial Officer pursuant to Exchange Act Rule 13a-14(a)/15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1	Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2	Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.

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All other exhibits required to be filed as part of this report have been incorporated by reference. See item 15 for a complete index of such exhibits.