COHERENT INC
Form 10-K/A
May 17, 2005

# UNITED STATES SECURITIES AND EXCHANGE COMMISSION

**WASHINGTON, D.C. 20549**

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# FORM 10-K/A

**Amendment No. 4**

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**(Mark One)**

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

**For the Fiscal Year Ended October 2, 2004**

**or**

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

**Commission File Number: 0-5255**

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# COHERENT, INC.

| | |
|---|---|
| **Delaware** | **94-1622541** |

(State or other jurisdiction of incorporation or organization) | (I.R.S. Employer 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 |
|---|---|---|
| None | | None |

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

**Common Stock, $.01 par value**

**Common Stock Purchase Rights**

(Title of Class)

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 ý No o

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. ý

Indicate by check mark whether the registrant is an accelerated filer (as defined in Rule 12b-2 of the Act). Yes ý No o

As of December 1, 2004, 30,554,982 shares of common stock were outstanding. The aggregate market value of the voting shares (based on the closing price reported by the NASDAQ National Market System on April 2, 2004) of Coherent, Inc., held by nonaffiliates was $617,038,552. 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 Act. This determination of affiliate status is not necessarily conclusive.

**EXPLANATORY NOTE**

This Annual Report on Form 10-K/A ( Form 10-K/A ) is being filed as Amendment No. 4 to our Annual Report on Form 10-K for the fiscal year ended October 2, 2004, which was filed with the Securities and Exchange Commission (SEC) on December 15, 2004 (the Original Filing ). We are filing this Amendment No. 4 to reflect restatements of our consolidated balance sheets at October 2, 2004 and September 27, 2003, and our consolidated statements of operations, stockholders equity and cash flows for the fiscal years ended October 2, 2004, September 27, 2003, and September 28, 2002, and the related notes thereto to correct the accounting for our deferred compensation plans (the Restatement ). For a more detailed description of the Restatement, see Note 20 Restatement of the Notes to Consolidated Financial Statements.

Our fiscal year ends on the Saturday closest to September 30. Fiscal years 2004, 2003 and 2002 ended on October 2, September 27 and September 28, respectively. For convenience, we use September 30 as our fiscal year-end dates throughout this Annual Report in order to correspond to the accompanying consolidated financial statements.

This Form 10-K/A amends and restates Item 1. Business of Part I; Item 6. Selected Financial Data, Item 7. Management s Discussion and Analysis of Results of Operations and Financial Condition, and Item 9A. Controls and Procedures of Part II; and Item 15 Financial Statements of Part IV of the Original Filing, as amended, in each case, solely as a result of, and to reflect, the Restatement. Pursuant to the rules of the SEC, Item 15 of Part IV of the Original Filing has been amended to contain the consents of our independent registered public accountants and currently-dated certifications from our principal executive officer and principal financial officer, as required by Sections 302 and 906 of the Sarbanes-Oxley Act of 2002. The consents of our independent registered public accountants are attached to this Form 10-K/A as Exhibits 23.1 and 23.2. The certifications of our principal executive officer and our principal financial officer are attached to this form 10-K/A as Exhibits 31.1, 31.2, 32.1 and 32.2.

Except for the foregoing amended information, this Form 10-K/A continues to describe conditions as of the date of the Original Filing, and we have not updated the disclosures contained herein to reflect events that have occurred subsequent to that date. Other events occurring after the date of the Original Filing or other information necessary to reflect subsequent events have been disclosed in reports filed with the SEC subsequent to the Original Filing.

**PART I.**

This Annual Report contains forward-looking statements. These forward-looking statements include, without limitation, statements regarding our future:

net sales;

results of operations;

gross profits;

research and development projects and expenses;

selling, general and administrative expenses;

warranty reserves;

legal proceedings;

claims against third parties for infringement of our proprietary rights;

benefits from our acquisition of Positive Light, Inc.;

liquidity and sufficiency of existing cash, cash equivalents and short-term investments for near-term requirements;

development and acquisition of new technology and intellectual property;

write-downs for excess or obsolete inventory;

competitors and competitive pressures;

growth of applications for our products and increase of market share;

obtain components and materials in a timely manner;

identify alternative sources of supply for components;

achieve adequate manufacturing yields;

impact of recent acquisitions;

leverage of power and energy management products into our next generation products;

operating efficiencies and minimization of redundant costs;

compliance with environmental regulations;

participation in the bio-agent detection market;

leveraging of our technology portfolio and application engineering;

optimize our leadership position in existing markets;

collaborative customer and industry relationships;

emphasis on supply chain management;

use of financial market instruments;

simplifications of our foreign legal structure and reduction of our presences in certain countries; and

focus on long-term improvement of return on invested capital.

In addition, we include forward-looking statements under the Our Strategy and Future Trends sections set forth below in Business.

You can identify these and other forward-looking statements by the use of the words such as may, will, could, would, should, expects, p anticipates, estimates, intends, potential, continue, or the negative of such terms, or other comparable terminology. Forward-looking statemo 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 Results of Operations and Financial Condition 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.

**ITEM 1. BUSINESS**

**GENERAL**

**Business Overview**

Our fiscal year ends on the Saturday closest to September 30. Fiscal years 2004, 2003 and 2002 ended on October 2, September 27 and September 28, respectively. Fiscal year 2004 includes 53 weeks, whereas fiscal years 2003 and 2002 include 52 weeks. For convenience, we use September 30 as our fiscal year-end dates throughout this Annual Report in order to correspond to the accompanying consolidated financial statements.

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 and market lasers, laser-based systems, precision optics 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 have two reportable business segments: Electro-Optics and Lambda Physik, both of which work with customers to provide cost-effective photonics-based solutions. Our Electro-Optics segment focuses on markets such as semiconductor and related manufacturing, materials processing, original equipment manufacturer (OEM) laser components and instrumentation, scientific research and government programs and graphic arts and display. Lambda Physik AG (Lambda Physik), our 95.01% owned subsidiary with headquarters located in Göttingen, Germany, focuses on markets using lasers for the production of thin-film transistors (TFT) used in flat panel displays, microlithography applications in the semiconductor industry, ink jet printers, automotive, environmental research, scientific research, medical OEMs, materials processing and micro-machining applications.

We were originally incorporated in California on May 26, 1966 and reincorporated in Delaware on October 1, 1990.

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. 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, as soon as reasonably practicable after we file them electronically with or furnish them to the Securities and Exchange Commission (SEC). Information contained on our web site is not part of this Annual Report on Form 10-K/A or our other filings with the SEC.

**INDUSTRY BACKGROUND**

The word laser is an acronym for light amplification by stimulated emission of radiation. A laser works by causing an energy source to excite, or pump, an optical gain medium, converting the energy from the source into an emission of photons, the fundamental particles of light. These

photons stimulate the release of more photons in the gain medium as they are reflected back and forth between the mirrors that make up the laser s resonator. The resulting build-up in the number of photons is usually emitted in the form of a light beam, the laser beam, through a partially reflective mirror at the output end of the laser.

The four types of lasers commonly available today are gas, liquid, semiconductor and solid-state, each of which derives its classification from the lasing material it uses. Laser beams can be emitted in either continuous waves or in pulses with varying repetition rates, can have different operating wavelengths and emission bandwidths, and can emit light in a wide range of energies and powers. Depending on the application, lasers can be designed for a specific power, pulse width, repetition rate and wavelength. In addition, the laser s cost of ownership can dictate its suitability for a particular application.

As lasers become less expensive, smaller and more reliable, they are increasingly replacing conventional tools and enabling technological advances in a variety of applications and industries including microtechnologies and nanotechnologies; semiconductor inspection; microlithography; measurement, test and repair of electronic circuits; medical and biotechnology; consumer electronics; industrial process and quality control; materials processing; imaging and printing; display; and research and development. Ultraviolet (UV) lasers are profiting from the trend towards miniaturization, which is a driver of innovation and growth in many markets. The short wavelength of lasers that emit light in the UV spectral region make it possible to produce extremely small structures with maximum precision consistent with the latest state of the art technology.

**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.

**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 that 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** 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.

**Emphasize supply chain management** We will continue to focus on operational efficiency through an emphasis on supply chain management with the explicit intent of improving gross margins and increasing inventory turns.

**Focus on long-term improvement of Return on Invested Capital** We will continue to focus on long-term improvement of return on invested capital.

**APPLICATIONS**

Our products address a broad range of applications. Both of our reportable business segments are focused on several areas of the photonics market including: microelectronics, graphic arts and display, materials processing, scientific research and government programs and OEM components and instrumentation.

**Microelectronics**

The use of semiconductors has expanded beyond computer systems to a wide array of applications such as telecommunications and data communication systems, automotive products, consumer goods, medical products, household appliances, industrial automation and control systems.

Semiconductor manufacturers are continually seeking to improve their process and design technologies to manufacture smaller, more powerful and more reliable devices at a lower cost per function. A major factor in fabricating such devices is the ability to reduce circuit geometries, measured in nanometers (a billionth of a meter), and defined in terms of critical, or smallest, feature size. Reduced circuit geometries permit semiconductor manufacturers to increase the number of integrated components per area of silicon.

Lasers are particularly useful in manufacturing products that require fine precision and small feature sizes such as semiconductor and microelectronic devices where beam shape and delivered power are important. We provide lasers to semiconductor equipment manufacturers for use in lithography, mask writing, wafer inspection, mask repair and packaging processes for their semiconductor manufacturing systems.

***Deep ultraviolet (DUV) lithography***

Lithography is one of the most critical and expensive steps in the manufacturing process of complex semiconductor devices fabricated on silicon wafers. This process requires a system that projects light through a photomask containing the master image of a particular circuit layer onto a light sensitive material coated on the wafer. The critical feature size of a semiconductor device depends upon the resolution capability of the lithography system. Resolution capability is a function of the projected wavelength of the light source and the numerical aperture of the lens. A shorter wavelength or higher numerical aperture enables smaller feature sizes.

We currently provide, through our 95.01% owned Lambda Physik subsidiary, *NovaLine* lasers with stable, line-narrowed, 2 kilohertz (kHz) operation at 248 nanometers (nm) (20 W); 4 kHz operation at 193nm (20 W); and we developed the new dual-chamber 193nm *LithoTex* (50 W) at 4kHz with spectral purity less than 0.2 pm, FWHM. In December 2004, our Lambda Physik subsidiary decided to discontinue future product development and investments in the semiconductor lithography market. As a result of this decision, we

anticipate recognizing a charge of between $3.0 million and $6.0 million in the quarter ending January 1, 2005, primarily to recognize the write-downs of potentially excessive and obsolete inventories.

***Direct writing of photomasks***

The photomask used in the lithography process is made by a laser beam that directly writes a circuit pattern of a semiconductor chip onto a piece of chrome-coated quartz glass. The mask, which is conceptually similar to a negative in photography, is used in lithography systems to make numerous copies of the pattern image on semiconductor wafers. Our *Innova Sabre* and *Innova SabreFreD* ion lasers and our *NovaTex* excimer lasers are used in laser systems for these applications.

***Semiconductor inspection, metrology, test and repair***

As semiconductor device geometries decrease in size, devices become increasingly susceptible to smaller defects during each phase of the manufacturing process. One of the semiconductor industry s responses to the increasing vulnerability of semiconductor devices to smaller defects has been to employ defect detection and inspection that is closely linked to the manufacturing process. Automated inspection systems are used to detect and locate defects as small as 0.1 microns, which may not be observable by conventional optical microscopes. These detection systems use advanced image processing and innovative laser scanning technologies to achieve high sensitivity and speed.

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 inspection, measurement and testing products to be reliable and have long lifetimes.

Our *AZURE*, *Compass 315M, Compass 415M* and *Verdi* diode-pumped solid-state lasers are used to detect defects in photomasks, semiconductor chips and printed circuit boards. The *Innova iLine* argon ion laser is used to inspect the photomasks and patterned wafers. Our *Vector* laser is used to repair defects that may occur in the photomask or semiconductor device.

The fabrication process typically creates numerous patterned layers on each wafer. Laser-based systems have been developed to measure the characteristics of metal or opaque layers in order to determine the functionality and conformance of these devices. Our *Vitesse* laser generates an ultrafast laser light pulse that produces a localized temperature rise in the materials, which generates a sound wave, a portion of which is reflected back to the surface. By measuring the returning echoes, the laser system can detect layer thickness, adhesion and composition.

***Flat panel display manufacturing***

The high volume consumer market is driving the production of flat panel displays in applications such as digital cameras, personal digital assistants (PDAs), mobile telephones, car navigation systems, laptop computers and television monitors. The most common type of flat panel

display is the active-matrix crystal display, which uses a matrix of TFT switches to control each pixel of the screen.

The conversion of amorphous silicon to polycrystalline silicon induced by excimer lasers, commonly referred to as excimer laser annealing (ELA), is a pivotal technology for the next generation of TFT devices. In the ELA process, the excimer laser light is absorbed into the amorphous silicon without heating the underlying substrate. As a result, it is possible to use inexpensive glass substrates instead of quartz, which makes the ELA process potentially more economical than previous techniques. Because the ELA technique leaves the substrate virtually unaffected, there are many potential applications for the ELA process including the use of plastic as a substrate material, which would enable flexible high brightness displays. The *Lambda STEEL*, developed and marketed by Lambda Physik, is a high-powered 315 W excimer laser designed for industrial TFT annealing.

Our *Avia* and *Diamond* lasers are also used in the production of flat panel displays for cutting, patterning, marking and yield improvement.

***Advanced packaging and interconnects***

Lasers are used for via hole drilling of rigid and flexible printed circuit boards. Microvias are essential for enabling high-density circuitry commonly used in mobile handsets and advanced computing systems. Our *Avia*™ solid-state ultraviolet laser, *Diamond*™ carbon dioxide, or $CO_2$, and *GEM*™ *QS* $CO_2$ family of lasers are used for this application. The ability of our pulsed lasers to operate at very high repetition rates translates into faster drilling speeds and increased throughput in such materials processing applications. Lasers also produce smaller, cleaner holes than conventional cutting tools, and laser beams do not wear down from use as do conventional drills.

Lasers are also increasingly being used in scribing, machining and drilling microelectronic materials and components and in microelectronics manufacturing to adjust electronic components. Our *Vector*, *Avia*, *Diamond* and *GEM QS* lasers are used for these applications. Lasers are also being used for direct writing of circuit patterns directly on printed circuit boards. Our *Paladin* laser is used for this application.

**Graphic arts and display**

The printing industry has traditionally depended upon silver-halide films and chemicals to engrave printing plates. This chemical engraving process is accomplished in several time consuming steps. Working with professionals in the printing industry, we design semiconductor and diode-pumped lasers that are used in complex computer-to-plate printing systems that simplify the engraving process.

Our *Compass 315M* DPSS and semiconductor lasers are widely used for computer-to-plate printing, an environmentally-friendly process that saves production time by writing directly to plates.

Our *Innova* ion lasers and *Paladin* DPSS lasers are used to write data on master disks that are used to mass-produce compact disks and digital video disks for consumer use.

Our *Sapphire™ 460* laser is 90% smaller, consumes 98% less power and dissipates 98% less heat than a comparable air-cooled argon-ion laser. It is used for graphic arts applications, including photo finishing, film writing and the emerging area of laser projection used for cinema and television.

Our diode laser bars, recognized as an industry leader in both high slope efficiency and high temperature performance, have enabled new applications in both the commercial and military markets including imaging in the reprographics market.

**Materials processing**

Lasers are widely accepted today as part of many important manufacturing applications. While many laser companies have developed high power lasers for the increasingly competitive area of metal processing, we have chosen to concentrate our efforts on developing compact low to medium power lasers specifically for the growing area of nonmetals processing and micromachining. This includes such applications as the cutting and joining of plastics using both our $CO_2$ and semiconductor lasers; the cutting, perforating and scoring of paper and packaging materials; and various cutting and patterning applications in the textile industry.

Our fiscal 2001 acquisition of DeMaria Electro-Optics Systems, Inc. (DEOS) has also enabled us to play a leading role as an OEM supplier to the laser marking and coding industry. This area is growing as laser marking is starting to seriously compete with ink jet coding due to both aesthetic and environmental pressures. In fiscal 2003, we were successful with lasers used commercially for cutting and fading fabric and for processing leather in the garment industry.

At the end of the size and wavelength spectrum, the *AVIA* UV lasers are now being used extensively in the processing and micromachining of a wide range of materials (and industries) including both silicon and glass. These technically important materials are being laser processed to produce medical devices, microelectromechanical systems (MEMS) and in flat panel display and semiconductor manufacturing.

In 2002, Lambda Physik received its first order for excimer lasers used in the treatment of engine cylinder surfaces in the automotive industry and in 2004, the first excimer laser treated diesel engines were made commercially available.

Our *LPX* excimer laser models are high duty cycle lasers, offering high energy per pulse with modest repetition rates for scientific and industrial applications. They are used for marking surface mounts and medical devices, stripping thin wires in disk drives, cleaning bare semiconductor wafers and writing fiber bragg gratings for optical telecommunications.

**Scientific research and government programs**

The scientific market has historically provided an ideal test market for leading-edge laser technology, including water-cooled gas lasers, high-energy flash lamp-pumped Yttrium Aluminum Garnet (YAG) lasers and ultrafast systems. Our installed base includes tens of thousands of lasers. Current applications for lasers in the scientific market include pump lasers for ultrafast (UF) and continuous wave (CW) systems, CW tunable systems, UF oscillator and amplifiers, and non-linear generation systems (SHG, THG, and OPO s). Main scientific applications include biology (multiphoton and confocal microscopy), physics (atomic and molecular spectroscopy, atom cooling, non-linear optics, X-ray generation, solid state and semiconductor studies), chemistry (quantum control, time-resolved and Raman spectroscopy) and engineering (material processing, remote sensing, metrology).

Our *Mira* Titanium Sapphire laser and *RegA* regenerative amplifier are examples of ultrafast laser systems used for these applications.

Our *Innova* ion lasers are also sold to instrument manufacturers, the largest component of which is bio-instrumentation, for applications such as cell sorting, DNA and protein sequencing, as well as drug and clinical screening.

Our optically pumped (OPS) laser, the *Sapphire,* is sold for several bio-instrumentation applications including flow cytometry, drug discovery and DNA sequencing.

Our *Chameleon* laser combines a unique blend of features and hands-off performance, making it an ideal tool for Multi-Photon Excitation (MPE) microscopy and a powerful tool for many other fields of ultrafast research such as time-resolved photoluminescence, nonlinear spectroscopy, fluorescence upconversion, quantum optics, materials characterization and terahertz imaging.

Our *MBR* and *899* CW tunable lasers provide unsurpassed resolution and stability for spectroscopy applications.

Our diode-pumped *Verdi* laser has established itself as the benchmark in reliability for any pumping application where Ti:Sapphire lasers like our *Mira, RegA* and *899* are used. A number of *Verdi* lasers are currently used as laboratory tools to pump Coherent lasers, as well as lasers from our competitors.

Our DEOS subsidiary provides custom waveguide $CO_2$ lasers, far-infrared lasers and other systems to a wide variety of commercial and government customers. In some cases, these custom products are only slightly modified versions of our standard commercial and scientific laser products. In other cases, a custom product may incorporate significant modifications while still building on the design expertise acquired in the development of our high-volume commercial laser products. We are also heavily involved in the development of optically pumped far-infrared (FIR) lasers like the *SIFIR-50*, a THz laser system. These designs utilize many aspects of our highly reliable sealed resonator technologies to produce compact and dependable turn-key systems with FIR operation.

The integration of our fiscal 2003 acquisition of Positive Light, Inc. (PLI), a recognized leading designer and manufacturer of advanced solid-state lasers for the scientific and industrial markets, with our scientific business has enabled us to gain access to one of the largest scientific markets, the high-energy UF amplifier systems, which covers energy ranges from 1 mJ and above and peak powers up to 50 Terawatt. PLI products are used for a variety of physics and chemistry applications, inclusive of X-ray generation and non-linear optics.

**OEM components and instrumentation**

Our substantial experience with optics, optical coatings, and diode lasers for optical pumping and harmonic generation enable our OEM components business. We provide value-added optical solutions and both directly-coupled and fiber-coupled optical pumping diode laser packages to laser manufacturers participating in other OEM markets such as materials processing, scientific, and medical.

Instrumentation is one of our more mature commercial applications. Representative applications within this segment include flow cytometry, high-throughput screening for pharmaceutical discovery, genomic and proteomic analysis, Raman spectroscopy, forensics, veterinary science, and bio-threat detection. Our OPS laser, the *Sapphire,* is sold for several bio-instrumentation applications including DNA sequencing, flow cytometry and drug discovery. Our *Innova* ion lasers are also sold to bio-instrument manufacturers for applications such as cell sorting, DNA and protein sequencing, as well as drug and clinical screening.

***Flow cytometry***

Flow cytometry is a laser-based micro fluorescence technique for analyzing single cells or populations of cells in a heterogeneous mixture. Its numerous applications include cell biology, immunology, reproductive biology, oncology, and infectious disease such as Acquired Immune Deficiency Syndrome (AIDS). Flow cytometry is both a powerful research tool and an indispensable mainstream clinical diagnostic and prognostic tool. Commercially available instruments typically measure more than six simultaneous discriminating factors at analysis speeds of thousands of cells per second and many instruments have the capability to selectively sort individual cells for subsequent analysis or cell culture. The recent design trend in flow cytometry is toward more compact, powerful, and reliable instruments. Our *Sapphire* solid-state 488nm laser, *Compass 215M* and *Radius* laser diode modules are the lasers of choice in the current generation of cutting-edge instrumentation replacing the bulkier, inefficient and sometimes unreliable air-cooled argon-ion and helium neon laser systems that were used in the past.

***Genomics and Proteomics***

Laser-based fluorescence techniques abound within the study of Genomics and Proteomics (human genome and proteome) and allied fields. As with the flow cytometry application, a challenge to manufacturers of analytical devices is to produce instruments of increasing complexity and capability, while at the same time minimizing their size. This is particularly important in fields such as

these where often times many instruments are deployed in a single location for the purpose of parallel processing. Our *Sapphire*, *Compass 215M* and *Radius* lasers are used in instrument techniques ranging from DNA sequencing to micro array scanners, to lab-on-chip and fluorescence correlation spectroscopy.

***Raman spectroscopy***

Raman spectroscopy is the spectral measurement of inelastic scattering of monochromatic radiation from molecular species. Depending on the molecular species, physical state thereof, and the experimental paradigm, laser sources for Raman can range from infrared to UV. Raman measurements are useful for process monitoring, environmental monitoring, and biomedical applications to name a few. Our *Innova* and *Compass* product lines are widely deployed in Raman applications, both at the commercial and scientific level. Exciting new research at the university level also suggests that our powerful tunable deep-UV source, the *Indigo*, will prove to be a very useful tool in deciphering protein secondary structure.

***Bio-agent detection***

A number of laser-based techniques for point source and standoff detection of pathogens or other bio-toxins are being explored in the government and private sectors. Systems of this type could be deployed to guard military facilities, major sporting events or other large gatherings of citizens, or vital infrastructure components such as subways, airports, or industrial hubs. We have a number of laser systems under evaluation for such systems and are well positioned to actively participate in this segment.

***Forensics***

Lasers have been employed in criminal forensics for a number of decades. Applications include latent fingerprint detection and trace evidence illumination and identification. In the past, laser usage was often limited to forensics labs due to the physical size and complexities of the lasers. Portable models seldom generated enough output for use in high ambient light conditions and for large-scale sweeps of the crime scene. Owing to recent advances in optical output versus physical size, forensic scientists now have the capability to bring an unprecedented level of latent fingerprint and trace evidence detection directly to the crime scene. Our *Incriminator*™ *532nm 10 W* fiber-coupled laser system directly addresses the needs of large-scale criminal investigation organizations by providing a superior combination of high brightness and portability to bear on the most difficult forensic analysis.

***Medical OEM***

We sell a variety of components and lasers to medical laser companies in end-user applications such as ophthalmology, aesthetic, surgical, therapeutic and dentistry. *Innova* ion laser tubes and our *GEM* series $CO_2$ lasers are widely deployed in ophthalmic, aesthetic and surgical markets. Additionally, our *Compass 215M* series and *Sapphire 488* series lasers are deployed in the retinal scanning market in diagnostic imaging systems.

**FUTURE TRENDS**

**Microelectronics**

After several years of process development, lasers are now used in mass production applications and the industry is benefiting in the form of enhanced performance and increased productivity. Having experienced strong recovery across all segments during fiscal 2004, the microelectronics industry has showed some signs of stabilization, however, we anticipate capital spending to recover as the industry sees stronger capacity utilization. We anticipate future demands in the advanced packaging market will shift towards the use of ultraviolet laser-based tools, as they are capable of producing sub-50 micron features that are critical for next generation chip-scale and wafer-level packages. Our recent introduction of the high-power, *Avia Thor* laser will increase the throughput of packaging tools, thereby enhancing productivity and lowering cost-of-ownership.

**Graphic arts and display**

The graphic arts and display market experienced a migration in technologies towards the use of direct diode laser systems as these systems have been adopted at a much faster rate during fiscal 2004. If the adoption of newer digital technologies continues beyond fiscal 2004 levels, we anticipate this will have the effect of driving purchases of new printing technology. As we move into fiscal 2005, we anticipate a number of our newer products such as a version of our *Paladin* laser and new diode laser technology will gain traction in the marketplace.

**Materials processing**

Anticipated drivers for expansion in the materials processing market include providing aggressive gains in cost-of ownership for products and continuing increased expansion into geographical areas. The market for materials processing in Asian countries drove much of the growth in the first half of fiscal 2004, but has since stabilized, primarily due to foreign policies established to slow economic growth. We anticipate growth to resume once the effects of these policies are felt and active measures to stimulate the economy begin to arise.

**Scientific research and government programs**

The scientific research market has historically grown at a rate similar to the growth rate experienced in the general U.S. economy, however, demand was up sharply in fiscal 2004, partially due to our acquisition of PLI. We anticipate modest growth rates in fiscal 2005 and that applications in ultrashort pulses and in bio-research will be the drivers of anticipated growth within the scientific research market.

**OEM components and instrumentation**

The instrumentation market has seen a migration from the use of mature laser technologies, mainly ion lasers, to new technologies primarily based on solid state and semiconductors. Because of this migration, new markets are expected to surface in areas such as security, including the detection of bio-agents and the monitoring of people and goods. These markets are likely to require an increased number of lasers, however, the majority of these activities are still in the research and development stage and we expect only moderate impacts on the laser industry in fiscal 2005, with increases anticipated in future years. Furthermore, we anticipate future opportunities in microscopy, lab-on chip and DNA sequencing based on our continuous product enhancements.

**PRODUCTS**

We design, manufacture and market lasers, laser-based systems, precision optics and related accessories for a diverse group of customers. The following table shows selected products together with their applications, the markets they serve and the technologies upon which they are based.

| Market Segment | Application | Products | Technology |
|---|---|---|---|
| Microelectronics | DUV lithography | NovaLine | Excimer |
| | | LithoTex | Excimer |
| | Photomask writing | SabreFreD | Frequency doubled ion |
| | | Innova | Ion |
| | | NovaTex | Excimer |
| | Semiconductor inspection and metrology | Vitesse | Ultrafast |
| | | Compass series | DPSS |
| | | Enterprise | Ion, DPSS, OPS |
| | | AZURE, Indigo | DPSS |
| | | Sapphire | OPS |
| | Marking | Avia | DPSS |
| | Flat panel display (TFT annealing) | Lambda STEEL series | Excimer |
| | Advanced packaging and interconnects | Avia | DPSS |
| | | Diamond & Gem Series | $CO_2$ |
| | | FAP family | Semiconductor |
| Graphic arts and display | Computer-to-plate printing | Single-stripe diodes | Semiconductor |
| | | Fiber coupled diodes | Semiconductor |
| | | Diode bars | Semiconductor |
| | | Compass series | DPSS |
| | Writing data to master disks | Innova family | Ion |
| | | AZURE | DPSS |
| | | Radius | Semiconductor |
| | Entertainment | Innova family | Ion |
| | | Viper | DPSS |
| | Photo finishing | Sapphire | OPS |
| | | Compass | DPSS |
| | Laser projection | Sapphire | OPS |
| Materials processing | Marking, welding, engraving, cutting and drilling | FAP family | Semiconductor |
| | | Diamond | $CO_2$ |
| | Automotive diesel engine production | Lambda STEEL series | Excimer |
| | Rapid prototyping | Avia | DPSS |
| Scientific research and government programs | Pump source for solid-state lasers | FAP family, Diode bars | Semiconductor |
| | | Diode bars | Semiconductor |
| | Pump source for Ultrafast and CW Tunable lasers | Verdi, Vitesse, Evolution | DPSS |
| | Regenerative amplification | Legend | DPSS |
| | | Terawatt | Ultrafast |
| | Multiphoton excitation microscopy | Mira, Chameleon | Ultrafast |

| | | |
|---|---|---|
| Pollution analysis | COMPexPro | Excimer |
| Metrology (measuring technology) | OPTexPro | Excimer |
| | COMPexPro | Excimer |
| Spectroscopy | COMPexPro | Excimer |
| | Chameleon, Indigo | DPSS |
| | Mira, RegA, OPO | Ultrafast |
| | 899, MBR, MBD | CW Tunable |
| | Innova family | Ion |
| | ScanMatePro | Pulsed Dyelaser |
| Physical chemistry | COMPexPro | Excimer |
| Photochemistry | COMPexPro | Excimer |
| Laser diagnostics and measurement | Modemaster | Electronics |
| | Fieldmaster | Electronics |
| | Labmaster | Electronics |

| Market Segment | Application | Products | Technology |
|---|---|---|---|
| Scientific research and government programs (continued) | Thermal imaging | Infrared optics | Optical fabrication and coating |
| | Laser components | Optics for lasers | Optical fabrication and coating |
| OEM components and instrumentation | Confocal microscopy | Enterprise<br>Sapphire | Ion<br>OPS |
| | DNA sequencing | Compass<br>Sapphire | DPSS<br>OPS |
| | Flow cytometry/cell sorting | Innova family<br>Compass<br>Sapphire<br>Radius | Ion<br>DPSS<br>OPS<br>Laser Diode Module |
| | Drug discovery | Innova family<br>Compass<br>Sapphire<br>Radius | Ion<br>DPSS<br>OPS<br>Laser Diode Module |
| | Raman spectroscopy | Innova family<br>Compass | Ion<br>DPSS |
| | Forensics | Incriminator<br>Innova family | DPSS<br>Ion |
| | Laser Doppler velocimetry | Verdi<br>Innova family | DPSS<br>Ion |
| | Bio-agent detection | Compass, AVIA<br>Radius | DPSS<br>Laser Diode Module |
| | Fluorescence spectroscopy | Innova family<br>Compass<br>Sapphire<br>Radius | Ion<br>DPSS<br>OPS<br>Laser Diode Module |
| | Medical (OEM) | OPTex, COMPex<br>Diode bars<br>Innova family<br>Compass<br>Sapphire<br>Diamond | Excimer<br>Semiconductor<br>Ion<br>DPSS<br>OPS<br>$CO_2$ |

We design, manufacture and market a wide variety of lasers, laser-based systems and optical components and instruments, some of which are described below.

***Semiconductor lasers***

Semiconductor lasers use the same principles as more conventional types of lasers but miniaturize the entire assembly into a monolithic structure using semiconductor wafer fabrication processes. The advantages of this type of laser include smaller size, longer life, enhanced reliability and greater efficiency. We manufacture a wide range of semiconductor laser products with wavelengths ranging from 650nm to 1000nm and output powers ranging from less than 1 W for individual emitters to 60 W for bars, to several hundred watts for stacked bars. These products are available in various forms of complexity including the following: bar diodes on heat sinks, fiber-coupled single emitters and bars, stacked bars and fully integrated modules and microprocessor-controlled units that contain power supplies and active coolers. Our infrared semiconductor lasers, which are manufactured from proprietary materials grown in our facility in Tampere, Finland, differ from most other lasers in that they contain no aluminum in the active region. This provides our lasers with longer lifetimes and the ability to operate at broader temperature ranges.

Our OPS laser is a semiconductor chip that is pumped by a semiconductor laser. A wide range of wavelengths can be achieved by varying the materials used in this device and doubling the frequency of the laser beam. The OPS is a compact, rugged, high power, single-mode laser. Our frequency doubled OPS lasers are all solid-state devices operating continuously in the blue region of the optical spectrum and are particularly well suited to the bio-instrumentation and graphic art markets.

Another primary application for our semiconductor lasers is for use in computer-to-plate printing machines. These machines contain a series of semiconductor lasers that are used to direct the printing of computer images directly to paper without the need for film or developing chemicals.

Our semiconductor lasers are also used in machine-processing applications such as soldering connections on printed circuit boards and welding flat panel displays and in medical applications for the treatment of the wet classical form of age-related macular degeneration and hair removal. They are also used as the pump laser in DPSS laser systems that are manufactured by us and several of our competitors.

***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; repair, test and measurement; computer-to-plate printing; writing data to master disks; entertainment; photo finishing: marking, welding, engraving, cutting and drilling; drug discovery; forensics; laser Doppler velocimetry; bio-agent detection; medical; rapid prototyping; DNA sequencing; flow cytometry; laser pumping and spectroscopy.

**SALES AND MARKETING**

We market our products domestically through a direct sales force. Our foreign sales are made principally to customers in Europe, Japan and other Asia-Pacific countries. We sell internationally through direct sales personnel located in Japan, the United Kingdom, Germany, Italy, Austria, France, Belgium, the Netherlands, Korea and the People s Republic of China, as well as through independent representatives in other parts of the world. Foreign sales accounted for 61% of our total net sales in both fiscal 2004 and fiscal 2003 and 60% of net sales in fiscal 2002. Sales made to independent representatives and distributors are generally priced in U.S. dollars. Foreign sales that we make directly to customers are generally 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. Our products are broadly distributed and no one customer accounted for more than 10% of total net sales during fiscal 2004, 2003 or 2002.

We maintain a customer support and field service staff in major markets within the United States, Europe, Japan 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 one-year 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.

**RESEARCH AND DEVELOPMENT**

We are committed to the development of new products, as well as the improvement and refinement of existing products, including better cost-of-ownership. We are primarily focusing our research and development efforts on the development of microelectronics, materials processing and bio-instrumentation markets and excimer lasers for DUV lithography and ELA. Research and development expenditures for fiscal 2004 were $62.7 million, or 12.7% of net sales, compared to $51.0 million, or 12.6% of net sales, for fiscal 2003 and $52.4 million, or 13.2% of net sales, for fiscal 2002. We maintain separate research and development staffs for both of our reportable business segments. 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. In the first quarter of fiscal 2003, we terminated the activities of our Coherent Telecom-Actives Group (CTAG) operating segment. Expenditures

for research and development related to CTAG were $1.9 million in fiscal 2003 and $6.3 million in fiscal 2002.

In fiscal 2002, we formed a Technical Advisory Board to facilitate our assessment of new and emerging technologies across a broad range of disciplines affecting the field of photonics. The Technical Advisory Board is comprised of outside experts in various disciplines within the photonics universe and will assist our internal Technology Council in the evaluation of emerging opportunities and lend their expertise to our technology review process.

**MANUFACTURING**

***Strategies***

One of our core manufacturing strategies is to tightly control our supply of key parts, components and assemblies. We believe this is essential in order to maintain high quality products and enable rapid development and deployment of new products and technologies.

Committed to quality and customer satisfaction, we design and produce many of our own components and sub-assemblies in order to retain quality control. We provide customers with 24-hour technical expertise and quality that is ISO certified at our principal manufacturing sites. In June 2003, we transferred our printed circuit board manufacturing activities in Auburn, California, to a global electronics contract manufacturer, Venture, which has factories in North America, Asia and Europe. We also completed the restructuring of our $CO_2$ operations, resulting in the consolidation of all $CO_2$ manufacturing operations at our Bloomfield, Connecticut location. In fiscal 2004, Lambda Physik consolidated the manufacturing operations of its German subsidiary into its Göttingen facility.

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 both ion and $CO_2$ laser production, optics fabrication, optics coating and assembly operations, as well as the wafer growth for our 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 and crystals, used in the manufacture of our products from sole source or limited source suppliers. Some of these suppliers are relatively small private companies that may discontinue their operations at any time. We typically purchase our components and materials through purchase orders and we have no guaranteed supply arrangement with any of these suppliers. 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. Once identified, we would experience further delays from 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. 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, would impair our ability to meet scheduled product deliveries to our customers and could cause customers to cancel orders.

We rely exclusively on our own production capability to manufacture certain strategic components, optics and optical systems, semiconductor lasers, lasers and laser-based systems. Because we manufacture, package and test these components, products and systems at our own facilities, and such items may not be readily available from other sources, any interruption in our manufacturing would adversely affect our business. In addition, our failure to achieve adequate manufacturing yields at our manufacturing facilities may materially and adversely affect our operating results and financial condition.

***Operations***

Our electro-optical products are manufactured at sites in Santa Clara and Auburn, California; Portland, Oregon; East Hanover, New Jersey; Bloomfield, Connecticut; Lübeck, Germany; Leicester, England; Glasgow, Scotland; and Tampere, Finland. Our ion lasers, a portion our DPSS lasers (*Verdi*, *Avia* and *Vitesse),* semiconductor lasers, and ultrafast scientific lasers are manufactured in Santa Clara, California and Glasgow, Scotland. Our $CO_2$ lasers are manufactured in Bloomfield, Connecticut. Our optical component products are manufactured at our facilities in Auburn, California and Leicester, England. Our laser instrumentation products and test and measurement equipment are manufactured in Portland, Oregon. We manufacture exotic crystals in East Hanover, New Jersey. We make DPSS lasers at our facility in Lübeck, Germany, including the *315M* and *501Q* lasers. Our facility in Tampere, Finland grows the aluminum-free materials that are incorporated into our semiconductor lasers. We make a range of advanced solid-state lasers used in developing applications including scientific research and semiconductor test equipment in Glasgow, Scotland.

Our excimer laser products, including the lasers used in DUV lithography systems and Lambda Physik s DPSS product, are manufactured at Lambda Physik s facilities in Göttingen, Germany.

**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. We currently hold more than approximately 400 U.S. and foreign patents and we have approximately 60 additional pending patent applications that have been filed. The issued patents cover various products in all of the major markets that we serve.

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.

We believe that we own or have the right to use the basic patents covering our products. However, the laser industry is characterized by a very large number of patents, many of which are of questionable validity and some of which appear to overlap with other issued patents. As a result, there is a significant amount of uncertainty in the industry regarding patent protection and infringement. A U.S. patent application is published eighteen months after the claimed priority date unless it is stated by the applicant that the application will not be filed in a foreign country, in which case the application is maintained in secrecy until a patent is issued. Foreign-filed patent applications are maintained in secrecy for up to eighteen months. Because of this we can conduct only limited searches to determine whether our technology infringes any patents held by others.

In recent years, there has been a significant amount of litigation in the United States involving patents and other intellectual property rights. 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. These claims and any resulting lawsuit, if successful, could subject us to significant liability for damages and 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 also could force us to do one or more of the following:

stop selling, incorporating 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, which license may not be available on reasonable terms, or at all; or

redesign the products that use the infringed intellectual property.

If we are forced to take any of these actions, our business may be seriously harmed. Although we carry general liability insurance, our insurance may not cover potential claims of this type or may not be adequate to indemnify us for all liability that may be imposed.

We may, in the future, initiate claims or litigation against third parties for infringement of our proprietary rights to protect these rights or to determine the scope and validity of our proprietary rights or the proprietary rights of competitors. These claims could result in costly litigation and the diversion of our technical and management personnel.

**COMPETITION**

Competition is very intense in the various laser markets in which we provide products. In the microelectronics, materials processing, scientific research and government programs and graphic arts and display markets we compete against a number of companies, including Newport Corporation s Spectra-Physics Lasers business unit; JDS Uniphase Corp.; Cymer, Inc.; Gigaphoton, Inc.; Rofin-Sinar Technologies, Inc.; Lightwave Electronics Corp.; and Excel Technology, Inc. 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. Several of our competitors that have large market capitalizations or cash reserves are 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 competitors 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 market and we are likely to compete with new companies in the future. We expect to encounter potential customers that, due to existing relationships with our competitors, are committed to the products offered by these competitors. As a result of the foregoing factors, competitive pressures may result in price reductions, reduced margins and loss of market share.

**BACKLOG**

At September 30, 2004, our backlog of orders scheduled for shipment was approximately $154.6 million compared to $127.7 million at September 30, 2003 and $124.4 million at September 30, 2002. Orders used to compute backlog are generally cancelable without substantial penalties. Historically, the rate of cancellation experienced by us has not been significant. Backlog at September 30, 2004 was higher than backlog at September 30, 2003 in both our Electro-Optics and Lambda Physik reportable segments. Backlog at September 30, 2003 was higher than backlog at September 30, 2002 in our Electro-Optics reportable segment and lower than backlog at September 30, 2002 in our Lambda Physik reportable segment. Backlog at September 30, 2002 was lower than at September 30, 2001 in both reportable segments.

**EMPLOYEES**

As of September 30, 2004, we had 2,218 full-time employees. Approximately 346 of our employees are involved in research and development; 1,149 of our employees are involved in operations, manufacturing, service and quality assurance; and 723 of our employees are involved in sales, marketing, finance, legal 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.

**ACQUISITIONS**

During fiscal 2003, we acquired Molectron Detector, Inc. (Molectron) of Portland, Oregon and PLI of Los Gatos, California for approximately $11.5 million and $38.9 million in cash, respectively. Molectron designs and manufactures laser test and measurement equipment used across all photonics-based applications and markets. The acquisition of Molectron has enabled us to leverage their well-regarded power and energy management products into our next generation products in both the scientific research and commercial markets. PLI designs and manufactures advanced solid-state lasers for the scientific research and industrial markets. The acquisition of PLI has enabled us to gain market share in the scientific research and industrial markets through additional product and service offerings.

In fiscal 2003, we initiated a tender offer to purchase the remaining 5,250,000 (39.62%) outstanding shares of our Lambda Physik subsidiary for approximately $10.50 per share. As a result of the tender offer and the purchase of additional outstanding shares subsequent to the tender offer, we owned 95.01% of the outstanding shares of Lambda Physik at September 30, 2004. The acquisition of these additional shares has enabled us to increase operating efficiencies by providing management and technical expertise, as well as minimizing redundant administrative costs. In May 2004, a resolution was passed at Lambda Physik s shareholders meeting that permits us to acquire all remaining shares outstanding. In November 2004, we agreed to increase the price to be paid to those minority shareholders who did not accept the squeeze out proposal to approximately $18.88 per share in exchange for their agreement to waive rights to a court appraisal. We anticipate that the Göttingen court will approve the merger in the first calendar quarter of 2005. Once the approval is in place, we plan to purchase the remaining shares of Lambda Physik and complete the integration.

**RESTRUCTURINGS AND CONSOLIDATION**

In fiscal 2004, our Lambda Physik subsidiary initiated and completed plans to restructure its manufacturing sites in Göttingen, Germany, to optimize operating efficiency. As a result, we recognized a charge of $1.1 million ($1.0 million net of minority interest) in fiscal 2004 related to these initiatives.

In fiscal 2003, we undertook several initiatives aimed at both changing business strategy and improving operational efficiencies. Changes in business strategy included the termination of the activities of CTAG. In order to improve operational efficiencies, we outsourced the production of printed circuit boards, reassessed the planned utilization of certain long-lived assets at various operating sites and consolidated the activities of a foreign subsidiary. As a direct result of these initiatives, we recognized $31.1 million in restructuring, impairment and other charges in fiscal 2003. These initiatives are discussed further in Management s Discussion and Analysis of Results of Operations and Financial Condition.

**GOVERNMENT REGULATION**

***Environmental regulation***

Our operations are subject to various federal, state and local environmental protection regulations governing the use, storage, handling and disposal of hazardous 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. We believe that compliance with federal, state and local environmental protection 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.

**SEGMENT INFORMATION**

Financial information relating to segment operations for the years ended September 30, 2004, 2003 and 2002, is set forth in Note 18, Segment Information of our Notes to Consolidated Financial Statements.

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

Financial information relating to foreign and domestic operations for the years ended September 30, 2004, 2003 and 2002, is set forth in Note 18, Segment Information of our Notes to Consolidated Financial Statements.

**PART II**

**ITEM 6. SELECTED CONSOLIDATED FINANCIAL DATA**

The following information has been restated to reflect corrections to the Original Filing that are further discussed in the section entitled Explanatory Note in the forepart of this Form 10-K/A and under Restatement in Note 20 of the Notes to Consolidated Financial Statements. The following selected consolidated financial data for each of the last five fiscal years have been derived from our audited financial statements. The following selected consolidated financial data reflects our former Medical segment as discontinued operations. See Note 3, Discontinued Operations in our Notes to Consolidated Financial Statements.

The information set forth below is not necessarily indicative of results of future operations and should be read in conjunction with Management s Discussion and Analysis of Results of Operations and Financial Condition and the restated Consolidated Financial Statements and Notes to Consolidated Financial Statements.

| | Year Ended | | | | |
|---|---|---|---|---|---|
| **Consolidated financial data** | **Oct. 2, 2004(5)** | **Sept. 27, 2003(4)** | **Sept. 28, 2002(3)** | **Sept. 29, 2001(2)** | **Sept. 30, 2000(1)** |
| | **(as restated)** | | | | |
| | **(In thousands, except per share data)** | | | | |
| Net sales | $ 494,954 | $ 406,235 | $ 397,324 | $ 477,945 | $ 383,983 |
| Gross profit | $ 207,403 | $ 148,591 | $ 161,147 | $ 200,179 | $ 176,237 |
| Income (loss) from continuing operations | $ 17,142 | $ (46,788) | $ (71,982) | $ 25,476 | $ 60,463 |
| Income (loss) from continuing operations per share (6): | | | | | |
| Basic | $ 0.57 | $ (1.59) | $ (2.50) | $ 0.92 | $ 2.39 |
| Diluted | $ 0.56 | $ (1.59) | $ (2.50) | $ 0.88 | $ 2.21 |
| Shares used in computation (6): | | | | | |
| Basic | 30,179 | 29,448 | 28,786 | 27,709 | 25,252 |
| Diluted | 30,544 | 29,448 | 28,786 | 28,817 | 27,319 |
| Total assets (excluding discontinued operations) | $ 757,326 | $ 705,195 | $ 800,342 | $ 871,747 | $ 590,551 |
| Long-term obligations | $ 14,215 | $ 27,911 | $ 43,345 | $ 58,159 | $ 68,647 |
| Other long-term liabilities | $ 49,128 | $ 29,008 | $ 55,860 | $ 53,097 | $ 32,143 |
| Minority interest in subsidiaries | $ 5,402 | $ 7,475 | $ 49,602 | $ 49,367 | $ 48,855 |
| Stockholders equity | $ 584,052 | $ 539,688 | $ 553,328 | $ 595,525 | $ 461,008 |

(1) Includes a $33.5 million after-tax gain on issuance of stock by our Lambda Physik AG subsidiary.

(2) Includes a $5.8 million after-tax charge for write-offs of inventory and open purchase commitments in our Lambda Physik segment. Also includes a $1.6 million after-tax charge for the write-off of purchased in-process research and development associated with the acquisitions of DEOS and MicroLas.

(3) Includes a $79.2 million after-tax impairment charge on our Lumenis common stock; a $6.7 million after-tax asset impairment charge resulting primarily from a decision to cease most of our activities related to the telecom passives component market; a $3.0 million tax benefit relating to a refund of prior year taxes; $1.0 million after-tax gain on sale of real estate; $0.7 million after-tax and minority interest royalty revenues; and a $0.7 million after-tax and minority interest non-recurring favorable inventory adjustment.

(4) Includes a $10.2 million impairment charge on our Lumenis common stock; a $9.2 million after-tax charge related to the termination of activities in our Telecom-Actives group; a $7.9 million after-tax charge for the write-down of manufacturing facilities and equipment to net realizable value due to excess capacity and consolidation of operations; a $6.3 million charge for the write-off of purchased in-process research and development associated with our acquisition of Positive Light, Inc and step acquisition of Lambda Physik; a $5.6 million valuation allowance against Lambda Physik s deferred tax assets; a $2.7 million after-tax impairment charge to write down our Lincoln, California facility to net realizable value; a $2.3 million after-tax charge to write down our loan to Picometrix, Inc. (Picometrix) to net realizable value; a $1.8 million, net of minority interest, impairment charge to write off goodwill associated with Lambda Physik s lithography business; severance costs at Lambda Physik of $1.3 million, after-tax and net of minority interest; a $1.0 million after-tax charge related to early lease termination costs associated with our Santa Clara, California facility; a $2.1 million tax benefit relating to refund of prior years taxes; a customer contract settlement fee of $2.0 million, after-tax and net of minority interest received by Lambda Physik; and a gain of $1.5 million related to the sale of 5.2 million shares of Lumenis, Ltd.

(5) Fiscal 2004 includes 53 weeks, whereas all other fiscal years presented include 52 weeks. Includes $3.9 million of net sales from an entity consolidated under Financial Accounting Standards Board Interpretation No. 46R (FIN 46R); additionally, this entity s net

income of $0.5 million was eliminated through minority interest. Fiscal 2004 also includes a $0.6 million after-tax gain on the sale of certain technology and a $2.0 million after-tax recovery on the sale of a previously impaired note receivable.

(6) See Note 2, Significant Accounting Policies and Note 17, Earnings (Loss) Per Share in our Notes to Consolidated Financial Statements for an explanation of the determination of the number of shares used in computing income (loss) per share.

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

The following discussion 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 risk 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 Risk Factors and elsewhere in this Annual Report. See Special Note Regarding Forward Looking Statements at the beginning of the Annual Report.

**Restatement**

**We have restated our consolidated financial statements for fiscal years 2000 through 2004 to correct the accounting for our deferred compensation plans.** The impact of the restatements on our consolidated financial statements for fiscal 2004, 2003 and 2002 are discussed in Note 20 of the Notes to Consolidated Financial Statements included elsewhere in this Annual Report. All information included in this Management s Discussion and Analysis of Results of Operations and Financial Condition has been correspondingly corrected to give effect to such restatement.

**KEY PERFORMANCE INDICATORS**

The following is a summary of some of the quantitative performance indicators (as defined below) that may be used to assess our results of operations and financial condition (dollars in thousands):

| | Year Ended September 30, | | |
|---|---|---|---|
| | 2004 | 2003 | 2002 |
| | | (Dollars in thousands) | |
| Bookings - Electro-Optics | $ 427,906 | $ 337,976 | $ 301,277 |
| Bookings - Lambda Physik | $ 93,912 | $ 67,493 | $ 85,658 |
| Net sales - Electro-Optics | $ 409,293 | $ 324,308 | $ 307,622 |
| Net sales - Lambda Physik | $ 85,661 | $ 81,927 | $ 89,702 |
| Gross profit as a % of net sales - Electro-Optics | 44.2% | 39.2% | 41.8% |
| Gross profit as a % of net sales - Lambda Physik | 30.9% | 26.2% | 36.7% |
| Research and development as a % of net sales | 12.7% | 12.6% | 13.2% |
| Cash provided by continuing operations | $ 69,126 | $ 21,332 | $ 101,489 |
| DSO in inventories | 76.2 | 88.7 | 80.8 |
| DSO in receivables | 70.4 | 64.8 | 69.3 |
| Capital spending as a % of net sales | 9.4% | 6.3% | 10.0% |

Definitions and analysis of these performance indicators are as follows:

**Bookings**

Bookings represent orders expected to be shipped within 12 months. Bookings are generally cancelable without substantial penalty and, historically, we generally have not experienced a significant rate of cancellation. Bookings for a period are calculated by adding current period net sales to the increase or decrease in ending backlog during the period.

In our Electro-Optics segment, fiscal 2004 bookings increased 26.6% from fiscal 2003. Current year bookings, compared to fiscal 2003, increased in the microelectronics, scientific and government programs, OEM components and instrumentation and materials processing markets, partially offset by decreases in the graphic arts and display market. Fiscal 2003 bookings increased 12.2% from fiscal 2002, with increases in the scientific and government programs, graphic arts and display, microelectronic and materials processing markets, partially offset by decreases in the OEM components and instrumentation market.

The continued strength in our microelectronics bookings is a direct result of our prior investment decisions. Today, a significant portion of our revenue is derived from sales to customers investing in emerging manufacturing technologies. This has allowed us to

withstand recent downturns in capacity-driven demand. Orders for lasers used in wafer processing were mixed. Emerging technologies for use in the 65nm and 45nm nodes remained strong, especially for photomask inspection and repair tools. Demand for lasers for wafer metrology tools has been stable. Bookings for the wafer inspection market slowed down as these are mostly capacity driven. Service revenues across all applications were healthy. Bookings in the advanced packaging market were led by increasing interconnect density and demand for motherboards and chip packages for consumer electronics. Many of the laser-based tools sold into this market are dual-head systems, which means they contain two lasers of different wavelengths, ultraviolet and infrared. This configuration allows manufacturers to process different materials and feature sizes. We believe future demand will shift towards the ultraviolet for two reasons. First, the ultraviolet tools are capable of producing sub-50 micron features that are critical for next generation chip-scale and wafer-level packages. Second, our recent introduction of the high-power, *Avia Thor* laser will increase the throughput of the packaging tools, thereby enhancing productivity and lowering cost-of-ownership. Order volume was solid for laser direct imaging for printed circuit board manufacturing and market penetration continued to increase. The keys to broader penetration are higher throughput and more leverage on the cost-of-ownership model. We are committed to addressing both drivers with our next platform, the *Paladin 8000* , which we expect to have in production next spring.

For scientific and government programs, demand was up sharply in both the U.S. and Europe, while demand in Asia slowed. We received record orders for our Chameleon hands-free femtosecond laser system from the biological imaging market. The Chameleon is a critical component in producing high-resolution, 3-dimensional images. We also experienced strong demand for our high performance UF amplifiers for biological imaging and high-energy physics.

Bookings increased in the OEM components and instrumentation market as we continue to expand our share in the bioinstrumentation market with the addition of two new moderate volume OEM accounts for our Sapphire product and organic growth of the market. There are new opportunities for a higher power Sapphire laser. Among these opportunities is confocal microscopy, a technique used to resolve 3D structure in a variety of samples from biological tissues to semiconductors. We have established a presence in this market with our first volume order for the 200mW Sapphire. Future applications for the high power Sapphire include lab-on-a-chip and DNA sequencing. Activity in the medical market laser was also solid paced by orders for carbon dioxide lasers, diode lasers, and optics.

The year-on-year growth in the materials processing market was disappointing since we believe this is an under-penetrated market. There are several factors that influenced the results. The Asian market, and China specifically, drove much of the growth through the first half of fiscal 2004. Then, growth slowed due to new credit policies established mid-year by the Chinese central government to slow economic growth and high energy prices resulted in reduced investments for manufacturing infrastructure. Lastly, the market is looking for aggressive gains in the cost-of-ownership, which requires more than simple changes to the existing product portfolio. To this end, we are planning to introduce several new products for medium to high-volume marking, engraving and desktop manufacturing. We expect these products to contribute revenues in the upcoming quarters.

The decrease in graphic arts and display orders is due more to technology migration than market conditions. Direct diode lasers have been adopted at a much faster rate during fiscal 2004. They displaced certain types of visible lasers due to their size, efficiency and cost. In fact, the difference in average selling prices (ASP) between a direct diode laser and a visible diode-pumped solid-state laser can be more than $5,000 per unit. The volume gains have been insufficient to offset the ASP reduction. As we move into fiscal 2005, we expect a number of newer products, such as a version of our Paladin laser and new diode laser technology; will gain traction in the marketplace.

In our Lambda Physik segment, fiscal 2004 bookings increased 39.1% from fiscal 2003. Bookings increases in the industrial and scientific and medical markets were partially offset by decreases in the lithography market. Fiscal 2003 bookings decreased 21.2% from fiscal 2002 bookings, with decreases in the lithography and industrial markets partially offset by increases in the scientific and medical market.

Bookings in the industrial market continued to dominate orders. Demand for lasers used to produce LTPS (low-temperature poly-silicon) flat panel displays remained solid, with increasing penetration of LTPS displays and more rapid deployment of OLEDs driving the strength in orders. We encountered increased activity in the ink-jet market where Lambda Physik s excimer lasers are used to drill nozzles in the ink-jet heads. In addition, we are seeking several new applications in product security and display technologies.

Bookings in the scientific and medical market increased primarily due to our OPTex lasers in the medical market. We are also experiencing renewed interest from the scientific market stemming from laser-assisted deposition of exotic materials. While still in a research mode, these techniques could rapidly migrate into the commercial realm.

Bookings decreased in the lithography market primarily due to shifts in technology mix, whereby demands for high productivity wafer scanners at 248nm and 193nm have surfaced. To address these demands, Lambda Physik introduced the LithoTex™, its new high-power 193nm laser at Semicon West in fiscal 2004.

**Net Sales**

Net sales include sales of lasers, laser-based systems, precision optics, related accessories and service contracts. Net sales for fiscal 2004 increased 26.2% in our Electro-Optics segment and 4.6% in our Lambda Physik segment from fiscal 2003. Net sales for fiscal 2003 increased 5.4% in our Electro-Optics segment and decreased 8.7% in our Lambda Physik segment from fiscal 2002. For a more complete description of the reasons for changes in net sales, we refer you to the Results of Operations section of this Annual Report.

**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 in fiscal 2004 increased from 39.2% to 44.2% in our Electro-Optics segment and increased from 26.2% to 30.9% in our Lambda Physik segment from fiscal 2003. Gross profit percentage for fiscal 2003 decreased from 41.8% to 39.2% in our Electro-Optics segment and decreased from 36.7% to 26.2% in our Lambda Physik segment from fiscal 2002. For a more complete description of the reasons for changes in gross profit percentage, we refer you to the Results of Operations section of this Annual Report.

**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 spending to be an important indicator in managing our business as investing in new technologies is a key to future growth. R&D percentage increased from 12.6% in fiscal 2003 to 12.7% in fiscal 2004 and decreased from 13.2% in fiscal 2002 to 12.6% in fiscal 2003. For a more complete description of the reasons for changes in R&D percentage, refer to the Results of Operations section of this Annual Report.

**Net Cash Provided by Continuing Operating Activities**

Net cash provided by continuing 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, including tax refunds, over cash paid to our vendors for expenses and inventory purchases to run our business. This amount represents cash generated by current operations to pay for equipment, technology, and other investing activities, to repay debt, fund acquisitions and for other financing purposes. We believe this is an important performance indicator since cash generation over the long term is essential to maintaining a healthy business and providing funds to help fuel growth. We believe generating consistent cash from operations is an indication that our products are achieving a high level of customer satisfaction and we are appropriately monitoring our expenses and inventory levels. For a more complete description of the components of cash flows from continuing operating activities, we refer you to the Consolidated Statements of Cash Flows and the Changes in Financial Condition section of this Annual Report.

**Daily Sales Outstanding in Inventories**

We calculate daily sales outstanding (DSO) in inventories as net inventories at the end of the period divided by net sales of the period and then multiplied by the number of days in the period, using 360 days for years. This indicates how well we are managing our inventory levels, with lower DSO in inventories resulting in more working capital available. The more money we have tied up in inventory, the less money we have available for research and development, acquisitions, expansions, marketing and other activities to grow our business. Our DSO in inventories for fiscal 2004 decreased 12.5 days from fiscal 2003 to 76.2 days. The improvement in DSO in inventories is primarily due to better management of inventory levels in relation to sales volumes.

**Daily Sales Outstanding in Receivables**

We calculate daily 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. This indicates how well we are managing our collection of receivables, with lower DSO in receivables resulting in more working capital available. The more money we have tied up in receivables, the less money we have available for research and development, acquisitions, expansions, marketing and other activities to grow our business. Our DSO in receivables for fiscal 2004 increased 5.6 days from fiscal 2003. The deterioration in DSO in receivables is primarily due to increased sales volumes towards the end of fiscal 2004 compared to the end of fiscal 2003.

**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. This indicates the extent to which we are expanding or modernizing our operations, including investments in technology. Management monitors capital spending levels as this assists management in measuring our cash flows, net of capital expenditures. Our capital spending percentage increased from 6.3% to 9.4% compared to fiscal 2003 primarily due to our purchase of our previously leased facility in Santa Clara, California, in the first quarter of fiscal 2004. Our capital spending percentage decreased from 10.0% in fiscal 2002 to 6.3% in fiscal 2003 primarily due to higher investments in the expansion of manufacturing capacity in fiscal 2002. We anticipate that capital spending for fiscal 2005 will be approximately 5% to 6% of net sales.

**SIGNIFICANT EVENTS**

On June 3, 2003, we initiated a tender offer to purchase the 5,250,000 (39.62%) outstanding shares of our Lambda Physik subsidiary that were owned by other shareholders (the minority interest) for approximately $10.50 per share. During fiscal 2003, we purchased 4,489,823 outstanding shares of Lambda Physik for approximately $47.7 million, resulting in a total ownership percentage of 94.26% (inclusive of shares previously owned) as of September 30, 2003. During fiscal 2004, we purchased an additional 98,677 of outstanding shares of Lambda Physik for approximately $1.3 million, resulting in a total ownership percentage of 95.01% (inclusive of shares previously owned) as of September 30, 2004. On May 5, 2004, a resolution was passed at Lambda Physik s shareholders meeting that permits us to acquire all remaining shares in accordance with the German Stock Corporation Act. Upon acquisition of the minority interest, we plan on converting Lambda Physik from a stock corporation to a limited liability company, which will result in the Lambda Physik shares being de-listed from the Frankfurt Stock Exchange. On November 2, 2004, we agreed to increase the price to be paid to those minority shareholders who did not accept the squeeze out proposal to approximately $18.88 per share in exchange for their agreement to waive rights to a court appraisal. On November 17, 2004, the Göttingen court approved this definitive agreement and, as a result, the registration of the squeeze out resolution of the May 5, 2004 shareholders meeting has been applied for. We anticipate that the Göttingen court will approve the merger in the first calendar quarter of 2005 following a statutory notification and review period. Once the approval is in place, we plan to purchase the remaining shares of Lambda Physik and complete the integration.

In September 2004, we sold our note receivable from Picometrix for $4.0 million, resulting in a recovery of approximately $3.2 million of the impairment charge previously recognized in fiscal 2003 (see Note 8 Balance Sheet Details in our Notes to Consolidated Financial Statements).

In December 2004, our Lambda Physik subsidiary decided to discontinue future product development and investments in the semiconductor lithography market. As a result of this decision, we anticipate recognizing a charge of between $3.0 million and $6.0 million in the quarter ending January 1, 2005, primarily to recognize the write-downs of potentially excessive and obsolete inventories.

**RESULTS OF OPERATIONS YEARS ENDED SEPTEMBER 30, 2004, 2003 AND 2002**

Fiscal 2004 includes 53 weeks, whereas fiscal 2003 and fiscal 2002 included 52 weeks.

***Consolidated Summary***

| | Year Ended September 30, | | |
|---|---|---|---|
| | **2004** | **2003** | **2002** |
| **Net sales** | 100.0% | 100.0% | 100.0% |
| **Cost of sales** | 58.1% | 63.4% | 59.4% |
| **Gross profit** | 41.9% | 36.6% | 40.6% |
| **Operating expenses:** | | | |
| Research and development | 12.7% | 12.6% | 13.2% |
| In-process research and development | | 1.6% | |
| Selling, general and administrative | 23.2% | 26.1% | 23.2% |
| Restructuring, impairment and other charges (recoveries) | (0.7)% | 8.6% | 2.8% |
| Intangibles amortization | 1.4% | 1.3% | 0.9% |
| Total operating expenses | 36.6% | 50.2% | 40.1% |
| **Income (loss) from operations** | 5.3% | (13.6)% | 0.5% |

| | | | |
|---|---|---|---|
| **Other income (expense):** | | | |
| Interest and dividend income | 0.5% | 1.3% | 2.5% |
| Interest expense | (0.6)% | (1.0)% | (1.3)% |
| Foreign exchange gain (loss) | 0.1% | (0.4)% | (0.2)% |
| Write-down of Lumenis investment | | (2.5)% | (26.2)% |
| Other net | 0.2% | 1.8% | 0.0% |
| Total other income (expense), net | 0.2% | (0.8)% | (25.2)% |
| **Income (loss) from continuing operations before income taxes and minority interest** | 5.5% | (14.4)% | (24.7)% |
| Provision (benefit) for income taxes | 2.1% | (1.8)% | (6.7)% |
| **Income (loss) from continuing operations before minority interest** | 3.4% | (12.6)% | (18.0)% |
| Minority interest in subsidiaries (earnings) losses | 0.0% | 1.0% | (0.1)% |
| **Net income (loss) from continuing operations** | 3.4% | (11.6)% | (18.1)% |
| Gain on disposal of Medical segment | 0.1% | 0.2% | 0.5% |
| **Net income (loss)** | 3.5% | (11.4)% | (17.6)% |

Income from continuing operations for fiscal 2004 was $17.1 million ($0.56 per diluted share), including a recovery of $3.2 million on the sale of our Picometrix note receivable and a $1.2 million gain related to the sale of certain technology.

Loss from continuing operations for fiscal 2003 was $46.8 million ($1.59 per diluted share) including restructuring, impairment and other charges of $35.2 million, a $10.2 million impairment charge related to the write-down of our shares of Lumenis, a $6.3 million write-off of purchased in-process research and development (IPR&D) related to the acquisitions of PLI and 33.88% of Lambda Physik, a $5.6 million net of minority interest charge to reflect the establishment of a valuation allowance against Lambda Physik s deferred tax assets and severance costs at Lambda Physik of $2.5 million ($2.2 million net of minority interest), partially offset by a settlement fee of $4.4 million ($3.4 million net of minority interest) received by Lambda Physik related to the cancellation of a customer contract dating back to the fourth quarter of fiscal 2001, gains of $2.1 million relating to refunds of prior year taxes and a gain of $1.5 million related to the sale of 5.2 million shares of Lumenis. The fiscal 2003 restructuring, impairment and other charges of $35.2 million included a $14.8 million restructuring and impairment charge related to the termination of activities of our CTAG operating segment, impairment charges of $9.6 million relating to manufacturing facilities and equipment due to excess capacity and consolidation of operations, a $3.7 million allowance against our note receivable from Picometrix, a $3.1 million write-down of our Lincoln, California facility to estimated net realizable value at December 28, 2002, goodwill impairment of $2.4 million ($1.8 million net of minority interest) and $1.7 million of early lease termination costs relating to our operating lease for our facility in Santa Clara, California, partially offset by the recovery of $0.1 million in excess of estimated net realizable value for assets previously impaired and classified as held for sale.

During fiscal 2002, loss from continuing operations was $72.0 million ($2.50 per diluted share), including impairment charges of $115.3 million, a $3.0 million tax benefit related to a refund of prior year taxes, a gain on sale of real estate of $1.7 million, royalty revenue of $2.0 million ($1.5 million net of minority interest) and a non-recurring favorable inventory adjustment of $1.6 million ($1.2 million net of minority interest). The fiscal 2002 impairment charges included a $104.2 million write-down of the value of the Lumenis stock we acquired as a result of the April 2001 sale of our Medical segment to Lumenis, as well as an $11.0 million charge for equipment impairment due to management s decision to cease most of our activities related to the telecom passives component market.

The fiscal 2004 increase in income from continuing operations as compared to fiscal 2003 was primarily attributable to the prior year s larger restructuring, impairment and other charges, higher sales volumes, higher gross margins as a percentage of sales, the prior year s impairment charge on Lumenis shares, the prior year s IPR&D charges, the prior year s higher valuation allowance provision against Lambda Physik s deferred tax assets and the current year s recovery on the sale of our Picometrix note receivable, partially offset by higher research and development spending, higher selling, general and administration expenses and the prior year s gain on settlement contracts.

The fiscal 2003 decrease in loss from continuing operations as compared to fiscal 2002 was primarily attributable to fiscal 2002 s impairment charges, fiscal 2003 s gain on settlement contracts and fiscal 2003 s gain on sale of Lumenis shares, partially offset by fiscal 2003 s restructuring, impairment and other charges, lower gross margins as a percentage of sales, fiscal 2003 s impairment charge on Lumenis shares, fiscal 2003 s IPR&D charges, fiscal 2003 s valuation allowance against Lambda Physik s deferred tax assets, fiscal 2003 s severance costs at Lambda Physik, lower interest and dividend income, fiscal 2002 s gain on sales of real estate, fiscal 2002 s royalty revenue and fiscal 2002 s favorable inventory adjustment.

***Net Sales***

The following table sets forth, for the periods indicated, the amount of net sales for our operating segments and their relative percentages of total net sales.

| | Year Ended September 30, | | | | | |
|---|---|---|---|---|---|---|
| | 2004 | | 2003 | | 2002 | |
| | Amount | Percentage of total net sales | Amount | Percentage of total net sales | Amount | Percentage of total net sales |
| | (Dollars in thousands) | | | | | |
| **Consolidated:** | | | | | | |
| Domestic | $ 192,877 | 39.0% | $ 157,171 | 38.7% | $ 159,247 | 40.1% |
| Foreign | 302,077 | 61.0% | 249,064 | 61.3% | 238,077 | 59.9% |
| Total | $ 494,954 | 100.0% | $ 406,235 | 100.0% | $ 397,324 | 100.0% |
| | | | | | | |
| **Electro-Optics:** | | | | | | |
| Domestic | $ 181,405 | 36.7% | $ 142,310 | 35.0% | $ 140,371 | 35.3% |
| Foreign | 227,888 | 46.0% | 181,998 | 44.8% | 167,251 | 42.1% |
| Total | $ 409,293 | 82.7% | $ 324,308 | 79.8% | $ 307,622 | 77.4% |
| | | | | | | |
| **Lambda Physik:** | | | | | | |
| Domestic | $ 11,472 | 2.3% | $ 14,861 | 3.7% | $ 18,876 | 4.8% |
| Foreign | 74,189 | 15.0% | 67,066 | 16.5% | 70,826 | 17.8% |
| Total | $ 85,661 | 17.3% | $ 81,927 | 20.2% | $ 89,702 | 22.6% |

**Consolidated**

During fiscal 2004, net sales increased by $88.7 million, or 22%, to $495.0 million from $406.2 million in fiscal 2003 as a result of increased sales volumes in both reportable segments. Foreign sales increased $53.0 million, or 21%, and domestic sales increased $35.7 million, or 23%. Foreign sales were 61% of net sales in both fiscal 2004 and 2003. We anticipate that our microelectronics and material processing markets will show the greatest growth potential in the future as feature sizes continue to shrink and new materials are introduced. The scientific research and OEM components and instrumentation markets are projected to show more modest growth, while the graphic arts and display market continues to hold solid opportunities. Lambda Physik s growth in fiscal 2004 was led by strength in the industrial market and we believe this trend should continue.

During fiscal 2003, net sales increased by $8.9 million, or 2%, to $406.2 million from $397.3 million in fiscal 2002 as a result of increased sales volumes in the Electro-Optics segment, partially offset by decreased sales volumes in the Lambda Physik segment. Foreign sales increased $11.0 million, or 5%, while domestic sales decreased $2.1 million, or 1%. Foreign sales were 61% of net sales in fiscal 2003 and 60% in fiscal 2002.

**Electro-Optics**

Electro-Optics net sales increased by $85.0 million, or 26%, in fiscal 2004 to $409.3 million from $324.3 million in fiscal 2003. Foreign sales increased by $45.9 million, or 25%, and domestic sales increased by $39.1 million, or 27%, from fiscal 2003. Sales increased across all five primary market segments: microelectronics, scientific research and government programs, OEM components and instrumentation, materials processing and graphic arts and display and were impacted favorably by the strengthening of the Euro, Yen and Pound Sterling against the U.S. dollar. Microelectronics application sales increased $51.4 million, or 95%, compared to fiscal 2003, primarily due to improving fundamentals in the semiconductor equipment and consumer electronics markets. Net sales within the scientific research and government programs lines of business improved by $16.4 million, or 16%, compared to fiscal 2003, primarily as a result of the increase in sales from our acquisition of PLI ($7.2 million), increased sales from new scientific products and the consolidation of Picometrix ($3.9 million) for six months in fiscal 2004. OEM components and instrumentation application sales increased $8.6 million, or 9%, primarily due to significantly increased bioinstrumentation volumes. Materials processing application sales increased $8.3 million, or 16%, primarily due to strong orders for marking, engraving and textile processing. Sales in the graphic arts and display applications increased $0.3 million, or 1%, from fiscal 2003. Although we experienced increases in orders received over the past several quarters and we continue to have a sizeable backlog of orders, current market conditions make it difficult to predict future orders.

Electro-Optics net sales increased by $16.7 million, or 5%, in fiscal 2003 to $324.3 million from $307.6 million in fiscal 2002. Foreign sales increased by $14.8 million, or 9%, and domestic sales increased by $1.9 million, or 1%, from fiscal 2002. Sales

increased primarily due to the acquisitions of Molectron and PLI and across all five primary market segments: microelectronics, graphic arts and display, materials processing, scientific research and government programs, and OEM components and instrumentation. Net sales within the scientific and government lines of business improved by approximately $4.8 million, or 5%, compared to fiscal 2002 primarily as a result of the increase in sales from PLI ($9.6 million), partially offset by a decline in other scientific business. The microelectronics market application net sales increased $3.9 million, or 8%, from fiscal 2002 due to improving fundamentals in the semiconductor equipment and consumer electronics markets. Graphic arts and display benefited from a transition to more environmentally friendly digital processes in both the computer-to-plate and photo-finishing applications, resulting in a $3.4 million, or 16% increase in sales from fiscal 2002. The materials processing market application net sales increased $2.3 million, or 5%, from fiscal 2002 as the laser replaced conventional machine tools for cutting, marking, and coding, and benefited from an increase in sales to Asia, although growth was somewhat tempered as a result of the spread of SARS in the region. Our OEM components and instrumentation net sales increased $2.2 million, or 2%, resulting from increased demand and sales of bio-instrumentation products offset by a decline in sales to Lumenis. Additionally, the strengthening of the Euro and Yen against the U.S. dollar also resulted in an increase to net sales.

In fiscal 2004 and 2003, no customers accounted for greater than 10% of Electro-Optics net sales.

**Lambda Physik**

Lambda Physik net sales increased by $3.7 million, or 5%, in fiscal 2004 to $85.7 million from $81.9 million in fiscal 2003. Foreign sales increased by $7.1 million, or 11%, while domestic sales decreased by $3.4 million, or 23%. Net sales increased primarily due to the strengthening of the Euro and Yen against the U.S. dollar, higher sales volumes in the industrial market due to increases in the flat panel and ink jet system business and increased demand with medical OEM customers, partially offset by lower systems sales volumes in the lithography market.

Lambda Physik net sales decreased by $7.8 million, or 9%, in fiscal 2003 to $81.9 million from $89.7 million in fiscal 2002. Domestic sales decreased by $4.0 million, or 21%, and foreign sales decreased by $3.8 million, or 5%. The decrease in sales was primarily due to lower sales volumes in the industrial market due to weakness in the flat panel business, lower royalty revenue and lower demand with medical OEM customers, partially offset by the strengthening of the Euro against the U.S. dollar and higher sales volumes in the lithography market due to the introduction of the new 193nm wavelength lasers, following a period of decline caused by the downturn in the semiconductor industry.

In fiscal 2004, one customer accounted for 31% of Lambda Physik s net sales. In fiscal 2003, one customer accounted for 18% of Lambda Physik s net sales while another customer accounted for 11% of Lambda Physik net sales.

***Gross Profit***

**Consolidated**

The consolidated gross profit rate increased by 5.3% to 41.9% in fiscal 2004 from 36.6% in fiscal 2003. The increase in the gross profit rate was primarily due to more effective leveraging of manufacturing overhead (2.6%) due to higher sales volumes and consolidation of manufacturing operations; more favorable manufacturing variances (0.8%) resulting from outsourcing the manufacture of certain components and the sale of

previously written down inventories; favorable product mix (0.8%) with lower shipments of low margin OEM components products, higher ASPs on scientific products and higher shipments of higher margin microelectronics products in the Electro-Optics segment as well as higher sales of Lambda Physik s high margin industrial systems, partially offset by lower ASPs in Electro-Optics bioinstrumentation market and lower sales of high margin lithography systems and higher sales of lower margin medical and scientific products in the Lambda Physik segment, lower warranty expenses (0.6%) in Lambda Physik s lithography business and lower additional inventory provisions (0.5%) in the Electro-Optics segment.

Our consolidated gross profit rates have been and will continue to be affected by a variety of factors including foreign and domestic sales mix, 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, foreign currency fluctuations and field service margins. We plan to add 2 to 4 percentage points to the Electro-Optics gross profit over the next 24 months. We expect to accomplish this by better exercising our buying power to reduce material costs, strengthening of our supply chain and migrating to more common components and product platforms. Lambda Physik s gross profit will benefit from a full year of improved product reliability, reduced warranty costs and improving margins on service contracts but will impacted by charges recognized from its decision to discontinue future development in the semiconductor lithography market.

The consolidated gross profit rate decreased by 4.0% to 36.6% in fiscal 2003 from 40.6% in fiscal 2002. The decrease in the gross profit rate was primarily due to changes in product mix with higher shipments of lower margin commercial solid state systems to the materials

processing market in the Electro-Optics segment (1.6%) and lower shipments of higher margin industrial systems in the Lambda Physik segment (1.2%), higher manufacturing expenses as a percentage of sales in the Lambda Physik segment (0.6%) due to lower sales volumes, higher inventory valuation reserve requirements due to a lower forecasted outlook for the lithography business and higher warranty expenses in both segments.

**Electro-Optics**

The gross profit rate increased by 5.0% to 44.2% of net sales in fiscal 2004 from 39.2% in fiscal 2003. The increase was primarily due to more effective leveraging of manufacturing overhead (2.7%) due to higher sales volumes and consolidation of manufacturing operations, more favorable manufacturing variances (0.9%) resulting from outsourcing the manufacture of certain components and the sale of previously written down inventories, favorable product mix (0.6%) with lower shipments of low margin OEM components products, higher average selling prices (ASPs) on scientific products and higher shipments of higher margin microelectronic products, partially offset by lower ASPs in the bioinstrumentation market and lower additional inventory provisions (0.6%).

The gross profit rate decreased by 2.6% to 39.2% in fiscal 2003 from 41.8% in fiscal 2002. The decrease was primarily due to higher shipments of lower margin commercial CO2 gas laser systems to the materials processing market (1.9%) and higher warranty expenses due to new product introductions (1.1%), partially offset by more favorable manufacturing variances (0.5%) due to lower scrap and rework charges.

**Lambda Physik**

The gross profit rate increased by 4.7% to 30.9% in fiscal 2004 from 26.2% in fiscal 2003. The increase in gross profit rate was due to lower warranty expenses (3.2%) primarily in the lithography business and changes in mix (1.5%) with higher sales of high margin TFT and ink jet industrial systems, partially offset by lower sales of high margin lithography systems and higher sales of lower margin medical and scientific products.

The gross profit rate decreased by 10.5% to 26.2% in fiscal 2003 from 36.7% in fiscal 2002. The decrease in the gross profit rate was primarily due to changes in mix (7.0%) with lower shipments of higher margin industrial systems and higher manufacturing expenses as a percentage of sales (3.5%), as well as due to lower sales volumes, higher inventory valuation reserve requirements due to a lower forecasted outlook for the lithography business and higher warranty expenses in the industrial business.

**Operating Expenses**

| | Year Ended September 30, | | | | | |
|---|---|---|---|---|---|---|
| | 2004 | | 2003 | | 2002 | |
| | Amount | Percentage of total net sales | Amount | Percentage of total net sales | Amount | Percentage of total net sales |
| | (Dollars in thousands) | | | | | |
| Research and development | $ 62,705 | 12.7% | $ 51,025 | 12.6% | $ 52,401 | 13.2% |
| In-process research and development | | | 6,338 | 1.6% | | |
| Selling, general and administrative | 115,043 | 23.2% | 106,147 | 26.1% | 92,201 | 23.2% |
| Restructuring, impairment and other charges | (3,093) | (0.7)% | 35,163 | 8.6% | 11,015 | 2.8% |
| Intangibles amortization | 6,698 | 1.4% | 5,147 | 1.3% | 3,427 | 0.9% |
| Total operating expenses | $ 181,353 | 36.6% | $ 203,820 | 50.2% | $ 159,044 | 40.1% |

**Research and development**

Fiscal 2004 research and development (R&D) expenses increased $11.7 million, or 23%, from fiscal 2003 and increased to 12.7% from 12.6% of net sales. The increase is primarily due to increased labor and material spending related to new projects in our Electro-Optics ($5.1 million) and Lambda Physik ($2.3 million) segments, the impact of the strengthening of the Euro against the U.S. dollar ($3.0 million) and the consolidation of Picometrix under FIN 46R ($1.3 million). We anticipate R&D expenses to continue to be approximately 12% of net sales in fiscal 2005.

Fiscal 2003 R&D expenses decreased $1.4 million, or 3%, from fiscal 2002 and decreased to 12.6% from 13.2% of net sales. The decrease is primarily due to the termination of our CTAG operations in the first quarter of fiscal 2003 ($4.4 million) and lower spending on projects in our Electro-Optics and Lambda Physik segments ($1.9 million), partially offset by the strengthening of the Euro against the U.S. dollar in our Lambda Physik segment ($3.3 million) and increased research and development activities related to individually addressable semiconductor laser bar products in our Electro-Optics segment ($1.1 million). Fiscal 2003 and 2002 research and development expenses included $1.9 million and $6.3 million, respectively, for our CTAG operating segment, which was terminated in the first quarter of fiscal 2003.

**In-process research and development**

Fiscal 2003 IPR&D expense of $6.3 million resulted from our acquisition of PLI ($4.4 million) and our acquisition of an additional 33.88% of the minority interest ownership of Lambda Physik ($1.9 million). The values assigned to purchased IPR&D were determined by identifying research projects in areas for which technological feasibility were not established and that had no alternative future use. The values were determined by estimating the costs to develop the acquired in-process technologies into commercially viable products, estimating the resulting net cash flows from such projects, and discounting the net cash flows back to their present value.

**Selling, general and administrative**

Fiscal 2004 selling, general and administrative (SG&A) expenses increased by $8.9 million, or 8%, from fiscal 2003, but decreased as a percentage of net sales from 26.1% to 23.2%. The dollar increase was primarily due to the strengthening of the Euro and Yen against the U.S. dollar ($2.8 million), higher consulting and depreciation expense related to our investments in information technology systems ($2.1 million), higher headcount related expenses ($1.4 million), higher facilities expenses due to building remodeling and consolidations ($1.4 million), higher legal, audit and tax consulting expenses ($1.1 million), higher sales commissions due to higher sales volumes ($0.9 million), the consolidation of Picometrix under FIN 46R ($0.8 million), higher marketing communications expenses ($0.5 million), partially offset by the fiscal 2003 severance costs in our Lambda Physik segment ($2.5 million). We are focused on reducing SG&A as a percent of sales. We anticipate SG&A expenses will be approximately 22% of net sales in fiscal 2005.

Fiscal 2003 selling, general and administrative expenses increased by $13.9 million, or 15%, from fiscal 2002, and increased as a percentage of net sales from 23.2% to 26.1%. The increase was primarily due to higher charges from gains or losses on deferred compensation plan liabilities ($4.7 million), the acquisitions of Molectron and PLI ($4.1 million), the impact of the strengthening of the Euro against the U.S. dollar ($3.1 million), severance costs in our Lambda Physik segment ($2.5 million), our investments in information technology systems ($2.4 million), higher tax consulting and audit fees ($0.9 million) and increased sales commissions ($0.7 million) as a result of higher sales volumes, partially offset by the termination of our CTAG operations in the first quarter of fiscal 2003 ($2.1 million) and lower headcount related spending ($1.2 million).

**Restructuring, impairment and other charges**

In fiscal 2004, restructuring, impairment and other charges were primarily due to a $3.2 million recovery on the sale of our note receivable from Picometrix.

In fiscal 2003, restructuring, impairment and other charges consisted of: (1) a $14.8 million charge related to the termination of our CTAG operations for the write-down of equipment to net realizable value; an accrual for the estimated contractual obligation for lease and other facility costs of the building formerly occupied by CTAG, net of sublease income; and the write-down of our option to purchase Picometrix; (2) $9.6 million of charges relating to manufacturing facilities and equipment due to excess capacity and consolidation of operations; (3) a $3.7 million charge to write-down the value of our note receivable from Picometrix to net realizable value; (4) a $3.1 million charge to write-down our Lincoln, California land, buildings and improvements and equipment to their estimated net realizable value; (5) a charge of $2.4 million due to the write-off of goodwill associated with Lambda Physik s lithography business; and (6) $1.7 million of early lease termination costs relating to our operating lease for our facility in Santa Clara, California, partially offset by the recovery of $0.1 million in excess of estimated net realizable value for assets previously impaired and classified as held for sale.

**Intangibles amortization**

Amortization of intangible assets increased $1.6 million, or 30%, from fiscal 2003 to fiscal 2004 primarily due to the acquisition of an additional 34.6% of the outstanding shares of our Lambda Physik subsidiary ($0.9 million) and our fiscal 2003 acquisition of PLI ($0.7 million). We anticipate intangibles amortization expense to continue to be approximately 1% of net sales in fiscal 2005.

Fiscal 2003 intangibles amortization expense increased by $1.7 million, or 50% from fiscal 2002, primarily due to the acquisitions of PLI ($0.9 million), Molectron ($0.6 million) and an additional 33.88% of Lambda Physik ($0.2 million) in fiscal 2003.

**Other income (expense)**

Other income, net, was $1.2 million in fiscal 2004 compared to net expense of $3.2 million in fiscal 2003. This change was primarily due to the fiscal 2003 $10.2 million other-than-temporary write-down of our investment in Lumenis common stock, $2.4 million more favorable foreign currency exchange net gains and a gain of $1.2 million in fiscal 2004 related to the sale of certain technology,

partially offset by a $4.4 million settlement fee received by Lambda Physik relating to the cancellation of a customer contract in fiscal 2003, $2.8 million lower interest and dividend income due to lower interest rates and lower cash balances, a gain of $1.5 million in fiscal 2003 on our sale of Lumenis shares, and $0.5 million lower investment gains, net of expenses, associated with our deferred compensation plans.

Other expense, net, decreased by $97.1 million in fiscal 2003 to $3.2 million from $100.3 million in fiscal 2002. The decrease was primarily due to $94.0 million lower write-downs of our investment in Lumenis; $4.7 million lower interest and dividend income due to lower interest rates and lower cash balances; $4.5 million higher investment gains, net of expenses, associated with our deferred compensation plans; and the gain on sale of real estate of $1.7 million in fiscal 2002, partially offset by a $4.4 million settlement fee received by Lambda Physik relating to the cancellation of a customer contract in fiscal 2003 and a gain of $1.5 million in fiscal 2003 on our sale of Lumenis shares.

**Income taxes**

The effective tax rate on income from continuing operations (before minority interest) for fiscal 2004 of 37.8% was higher than the statutory rate of 35.0% primarily due to fiscal 2004 s additional valuation allowance provision related to losses at Lambda Physik and higher state income taxes, net of federal taxes, partially offset by benefits from R&D tax credits, the benefit realized related to amounts previously written off related to our Scotland operations for which no benefit was originally recorded and the benefit from lower foreign tax rates.

The effective tax rate on loss from continuing operations (before minority interest) for fiscal 2003 of 12.6% differed from the statutory rate of 35.0% primarily due to: (1) valuation allowance provisions related to capital loss limitations with respect to losses recorded on the write-down of Lumenis stock and the impairment of the Lincoln, California facility; (2) valuation allowances recorded on deferred tax assets at Lambda Physik; and (3) the nondeductibility of IPR&D and goodwill impairment charges; partially offset by benefits from R&D tax credits and state income taxes, net of federal benefits.

The effective tax rate on loss from continuing operations (before minority interest) for fiscal 2002 of 27.1% differed from the statutory rate of 35.0% primarily due to valuation allowance provisions related to capital loss limitations with respect to losses recorded on the write-down of Lumenis stock, partially offset by state income taxes, net of federal benefits, a benefit from a refund of prior year taxes, a benefit from higher foreign taxes paid and benefits from R&D tax credits.

**Minority interest in subsidiaries earnings (losses)**

Minority interest in subsidiaries losses decreased $4.0 million from $4.2 million in fiscal 2003 to $0.2 million in fiscal 2004, primarily due to our acquisition of additional shares of Lambda Physik during fiscal 2003 and 2004 ($3.5 million) and the consolidation of Picometrix s earnings in accordance with FIN 46R ($0.5 million). As of September 30, 2004, minority shareholders owned 4.99% of the shares of Lambda Physik. In fiscal 2004, we sold our note receivable from Picometrix, therefore, we are no longer considered its primary beneficiary. As a result, the operating activities of Picometrix will not have any effect on minority interest in future periods.

Minority interest in subsidiaries losses was $4.2 million during fiscal 2003 compared to minority interest in subsidiaries earnings of $0.4 million during fiscal 2002 due to net losses incurred by our Lambda Physik segment incurred in fiscal 2003 compared to net income in fiscal 2002. At September 30, 2003, minority shareholders owned 5.74% of the shares of Lambda Physik.

**FINANCIAL CONDITION**

***Liquidity and capital resources***

**Sources and Uses of Cash**

Historically, our primary source of cash has been provided through operations. Other sources of cash include proceeds received from the sale of stock through public offerings and employee stock option and purchase plans, as well as through debt borrowings. Our historical uses of cash have primarily been for capital expenditures, acquisitions of businesses and payments of principal and interest on outstanding debt obligations. 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:

| | Year Ended September 30, | | |
|---|---|---|---|
| | 2004 | 2003 | 2002 |
| | (in thousands) | | |
| Net cash provided by operating activities | $ 69,126 | $ 21,332 | $ 101,489 |
| Sales of shares under employee stock plans | 7,793 | 13,161 | 9,568 |
| Capital expenditures | (46,634) | (25,678) | (39,930) |
| Acquisition of businesses, net of cash acquired | (2,737) | (94,880) | |
| Net payments on debt borrowings | (14,399) | (34,295) | (17,812) |

Net cash provided by operating activities increased by $47.8 million to $69.1 million for fiscal 2004 compared to net cash provided by operating activities of $21.3 million for fiscal 2003. Net cash provided by operating activities decreased by $80.2 million to $21.3 million for fiscal 2003 compared to net cash provided by operating activities of $101.5 million for fiscal 2002. The increase in cash provided by operating activities from fiscal 2003 to fiscal 2004 was primarily due to the reclassification of our short-term investments from trading securities to available-for-sale securities (resulting in a change in classification of net investments from the operating section to the investing section in the statement of cash flows) and income tax refunds received in fiscal 2004, partially offset by increased trade receivables. The decrease in cash provided by operating activities from fiscal 2002 to fiscal 2003 was primarily due to higher fiscal 2003 loss from operations exclusive of non-cash charges and increased inventories. We believe that our cash flow provided by operating activities will be adequate to cover our current working capital needs, debt service requirements 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. We continue to follow our strategy to further strengthen our financial position by primarily using available cash flow to fund operations and to reduce the amount of debt we have outstanding.

We intend to continue pursuing acquisition opportunities at prices 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 through unrestricted cash balances, cash flows from operations, additional borrowings or 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 from time to time and the willingness of potential sellers to accept it as full or partial payment.

Additional sources of cash available to us were a multi-currency line of credit and bank credit facilities totaling $44.7 million as of September 30, 2004, of which $44.2 million was unused and available. These credit facilities were used in Europe during fiscal 2004. Our domestic lines of credit include a $12.5 million unsecured revolving account from Union Bank of California, which expires January 31, 2005. No amounts have been drawn upon our domestic lines of credit as of September 30, 2004.

Our ratio of current assets to current liabilities was 4.3:1 at September 30, 2004 compared to 3.9:1 at September 30, 2003. The increase in our ratio from September 30, 2003 to September 30, 2004 is primarily due to increases in short-term investments, accounts receivable, current deferred tax assets, cash and cash equivalents and inventories, partially offset by decreases in prepaid income taxes. Our cash position, working capital and debt obligations are as follows:

| | September 30, | |
|---|---|---|
| | 2004 | 2003 |
| Cash and cash equivalents | $ 87,659 | $ 76,541 |
| Working capital | $ 345,643 | $ 297,869 |
| Total debt obligations | $ 27,915 | $ 42,051 |

**Debt Obligations and Restricted Cash, Cash Equivalents and Short-term Investments**

During fiscal 2002, we amended the notes used to finance our acquisition of Star Medical (Star notes). The amendment included modifications of certain covenants associated with the notes and allowed a prepayment of a portion of the principal balance. As a result, in October 2002 we prepaid $7.3 million of the principal balance with no prepayment penalty. The Star notes originally included financial covenants such as maintaining a minimum tangible net worth, minimum consolidated debt to capitalization ratio, fixed charge coverage ratio, as well as non-financial covenants such as providing quarterly statements to the note holders. In September 2003, we amended the agreement to relinquish all financial covenant requirements. In place of the covenants, the amendment requires that we place cash and short-term investment balances in an amount equal to 120% of the principal balance in a restricted collateral account. At September 30, 2004, $15.2 million and $15.2 million of current and non-current restricted cash, cash equivalents and short-term investments, respectively, were related to the Star notes (see Note 10 Long-Term Obligations in our Notes to Consolidated Financial Statements).

Our $12.5 million unsecured revolving account agreement from Union Bank of California is subject to standard covenants related to financial ratios, profitability and dividend payments. As of September 30, 2004, we were in compliance with these covenants.

As part of our tender offer to purchase the remaining outstanding shares of Lambda Physik, we were required by local regulations to have funds available for the offer in an account located in Germany. As of September 30, 2004, we had $8.4 million restricted for the purchase of the remaining outstanding shares of Lambda Physik, which are included in non-current restricted cash, cash equivalents and short-term investments on our consolidated balance sheets.

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

We have no off-balance sheet arrangements as defined by Regulation S-K. The following summarizes our contractual obligations at September 30, 2004 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 | $ 27,675 | $ 13,460 | $ 13,963 | $ 252 | $ |
| Operating lease payments (1) | 25,158 | 6,159 | 9,503 | 4,330 | 5,166 |
| Capital lease payments | 242 | 242 | | | |
| Purchase commitments with suppliers | 20,010 | 20,010 | | | |
| Purchase obligations | 6,159 | 6,159 | | | |
| Total | $ 79,244 | $ 46,030 | $ 23,466 | $ 4,582 | $ 5,166 |

(1) Operating lease payments are exclusive of sublease income.

***Changes in financial condition***

Cash provided by operating activities in fiscal 2004 was $69.1 million, which included depreciation and amortization of $36.2 million, net income from continuing operations of $17.1 million, cash provided by operating assets and liabilities of $10.2 million and increases in net deferred tax assets of $6.0 million, partially offset by other items aggregating $0.4 million.

Cash used for investing activities in fiscal 2004 of $54.6 million included $46.6 million used to acquire property and equipment primarily due to the purchase of the Santa Clara, California facility, manufacturing equipment and investments in information technology, $24.5 million, net, used to purchase available-for-sale securities, $2.7 million used primarily to purchase additional shares of Lambda Physik and to buy-out the minority shareholders of Microlas and Optomech, $0.9 million used to pay premiums on life insurance and other of $2.9 million, partially offset by a $15.6 million decrease in restricted cash due to a Star note payment, $4.0 million received from the sale of the Picometrix note receivable, $3.0 million provided by proceeds from dispositions of property and equipment and $0.4 million in distributions received under deferred compensation plan arrangements.

Cash used for financing activities in fiscal 2004 of $4.8 million included net debt repayments of $14.3 million, partially offset by $7.8 million generated from our employee stock purchase and stock option plans and an increase in cash overdraft of $1.7 million.

Changes in exchange rates in fiscal 2004 provided $1.3 million, primarily due to the strengthening of the Euro and Japanese Yen in relation to the U.S. dollar.

Discontinued operations during fiscal 2004 provided $0.2 million resulting from the collection of a receivable from a customer of our discontinued medical segment that had been fully reserved.

**ADOPTION OF ACCOUNTING STANDARDS**

The Financial Accounting Standards Board (FASB) issued Interpretation No. 46 (FIN 46), Consolidation of Variable Interest Entities in January 2003, and a revised interpretation of FIN 46 (FIN 46R) in December 2003. FIN 46 requires certain variable interest entities to be consolidated by the primary beneficiary of the entity if the equity investors in the entity do not have the characteristics of a controlling financial interest or do not have sufficient equity at risk for the entity to finance its activities without additional subordinated financial support from other parties. The provisions of FIN 46 were effective immediately for all arrangements entered into after January 31, 2003. Since January 31, 2003, we have not invested in any entities that we believe are variable interest entities for which we are the primary beneficiary. For arrangements entered into prior to February 1, 2003, we were required to adopt the provisions of FIN 46R in the second quarter of fiscal 2004.

During the second quarter of fiscal 2004, we evaluated our loan agreement with Picometrix, Inc. (see Note 8 Balance Sheet Details in our Notes to Consolidated Financial Statements) and determined that Picometrix was a variable interest entity as defined by FIN 46. Furthermore, we concluded that we were the primary beneficiary as defined by FIN 46 and were required to consolidate Picometrix at April 3, 2004. The assets and liabilities of Picometrix were measured at their respective fair values as of April 3, 2004, resulting in the consolidation of $3.5 million of assets, $2.3 million of liabilities and $0.6 million of intangible assets (consisting of existing technology to be amortized over approximately 8 years), partially offset by minority interest of $1.1 million. We were also required to include the results of operations of Picometrix in our consolidated financial statements subsequent to April 3, 2004. As a result, we included net sales of approximately $3.9 million and income from continuing operations of $0.5 million related to Picometrix in fiscal 2004. The $0.5 million of income from continuing operations was allocated to the minority interest, accordingly, the consolidation of Picometrix had no impact on our net income in fiscal 2004. On September 30, 2004, we sold our note receivable from Picometrix and concluded that we were no longer considered the primary beneficiary of Picometrix, thus, consolidation of the assets and liabilities of Picometrix was not required under FIN 46 at September 30, 2004.

**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 (GAAP). 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 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 one-year 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 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, which is determined based on the price charged for each deliverable on a standalone basis except for certain products sold in the scientific market for which the fair value of installation is determined based on third party evidence of fair value.

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 result in material adverse effects 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 original equipment manufacturers (OEMs) customer sales 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 by the customer s acceptance of 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 and, thus, no post-delivery training obligation exists. However, when training is provided to our customers, it is typically priced separately and is recognized as revenue after these services have been provided**.**

***Long-Lived Assets***

We evaluate long-lived 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 either the discounted expected future cash flows (in the case of goodwill) or to the undiscounted expected future cash flows (for all other long-lived assets). If the comparison indicates that impairment exists, the impaired asset is written down to its fair value. Significant management judgment is required in the forecast of future operating results that are used in the preparation of expected discounted and undiscounted cash flows.

In fiscal 2003, we recorded a goodwill impairment charge of $2.4 million ($1.8 million net of minority interest) related to Lambda Physik s lithography business as a result of significant changes in the economic outlook for this business. At September 30, 2004, we had $88.6 million of goodwill and purchased intangible assets on our consolidated balance sheet, the value of which we believe is reasonable based on the discounted estimated future cash flows of the associated products and technologies.

During fiscal 2003, we recorded a charge of $6.5 million for the write-down of equipment and leasehold improvements resulting primarily from management s decision to cease most of our activities related to the telecom actives and passives components markets.

During fiscal 2003, we also recorded a charge of $3.1 million to write down the value of land, buildings and improvements and equipment at our Lincoln, California facility to net realizable value. On July 30, 2003, we completed the sale of the land, buildings and improvements and equipment at net realizable value.

During fiscal 2003, we recorded a charge of $6.2 million to write down the value of equipment and building improvements at our operating sites in Auburn, California; Tampere, Finland and Barendrecht, the Netherlands to net realizable value, as well as a charge of $3.4 million to write-down long-lived assets at our facility located on Glasgow, Scotland to net realizable value.

At September 30, 2004, we had $166.1 million of property and equipment on our consolidated balance sheet.

It is reasonably possible that the estimates of anticipated future net revenue, the remaining estimated economic life of the products and technologies, or both, could differ from those used to assess the recoverability of these assets. In that event, additional impairment charges or shortened useful lives of certain long-lived assets may be required.

***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. We write-down our demo inventory by amortizing the cost of demo inventory over a two-year period from the fourth month after it is placed in service. During the year ended September 30, 2003, we recorded $2.7 million of additional inventory write-downs due to a decrease in anticipated future demand and significant changes in the economic outlook for Lambda Physik s lithography business. 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. Differences between actual results and previous estimates of excess and obsolete inventory could materially affect our future results of operations.

***Warranty Reserves***

We provide warranties on certain of our product sales (generally one year) and allowances for estimated warranty costs are recorded at the time 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. If actual return rates and/or repair and replacement costs differ significantly from our estimates, adjustments to recognize additional cost of sales may be required in future periods.

***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 for the amount that is not more likely than not to 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 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 deferred tax asset would be charged to income in the period such determination was made.

During fiscal 2004, our valuation allowance on deferred tax assets increased by $1.9 million, including $3.8 million against deferred tax assets at Lambda Physik, partially offset by the utilization of $1.8 million of our capital loss carryforwards in the U.S. During fiscal 2003, our valuation allowance on deferred tax assets increased by $14.6 million, including $7.8 million against deferred tax assets at Lambda Physik and increased allowances related to net capital loss carryforwards in the U.S. 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 expect to realize more or less of the deferred tax assets, an adjustment to the valuation allowance will affect income in the period such determination is made.

Federal income taxes have not been provided for on a portion of the unremitted earnings of foreign subsidiaries either because such earnings are intended to be permanently reinvested or because foreign tax credits are available to offset any planned distributions of such earnings. We are currently assessing the potential impact of the provisions recently enacted as part of the American Jobs Creation Act of 2004.

**RISK FACTORS**

***Risks Related to our Business***

**We may experience quarterly and annual fluctuations in our net sales and operating results in the future, which may result in volatility in our stock price.**

Our net sales and operating results may vary significantly from quarter to quarter and from year to year in the future. A number of factors, many of which are outside of our control, may cause these variations, including:

general economic uncertainties;

fluctuations in demand for, and sales of, our products or prolonged downturns in the industries that we serve;

ability of our suppliers to produce and deliver components and parts, including sole or limited source components, in a timely manner, in the quantity and quality desired and at the prices we have budgeted;

timing or cancellation of customer orders and shipment scheduling;

fluctuations in our product mix;

foreign currency fluctuations;

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;

rate of market acceptance of our new products;

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;

level of capital spending of our customers;

potential obsolescence of our inventory; and

costs related to acquisitions of technology or businesses.

In addition, we often recognize a substantial portion of our sales in the last month of the quarter. Our expenses for any given quarter are typically based on expected sales and if sales are below expectations in any given quarter, the adverse 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, 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 common 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. There has not always been a direct correlation between this volatility and the performance of particular companies subject to these stock price fluctuations. These factors, as well as general economic and political conditions or investors concerns regarding the credibility of corporate financial statements and the accounting profession, may have a material adverse affect on the market price of our stock in the future.

**We are exposed to risks associated with worldwide economic slowdowns and related uncertainties.**

Concerns about consumer and investor confidence, volatile corporate profits and reduced capital spending, and international conflicts and terrorist and military activity could cause a slowdown in customer orders or cause customer order cancellations. In addition, political and social turmoil related to international conflicts and terrorist acts may put further pressure on economic conditions in the United States and abroad. Unstable political, social and economic conditions make it difficult for our customers, our suppliers and us to accurately forecast and plan future business activities. In particular, it is difficult to develop and implement strategy, sustainable business models and efficient operations, as well as effectively manage supply chain relationships. If such conditions persist, our business, financial condition and results of operations could suffer.

**We depend on sole source or limited source suppliers for some of the key components and materials, including exotic materials 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. Some of these suppliers are relatively small private companies that may discontinue their operations at any time. We typically purchase our components and materials through purchase orders and we have no guaranteed supply arrangement with any of these suppliers. 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. 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. 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, would impair our ability to meet scheduled product deliveries to our customers and could cause customers to cancel orders.

We rely exclusively on our own production capability to manufacture certain strategic components, optics and optical systems, 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.

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

Our future success depends on the continued growth of the markets for lasers, laser systems, precision optics 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 the 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 historically been the industry s high quality, high priced supplier of laser systems. We have, in the past, experienced decreases in the average selling prices of some of our products. We anticipate that as competing products become more widely available, the average selling price of our products may decrease. If we are unable to offset the anticipated decrease in our average selling prices 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 our products. Furthermore, as average selling prices 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 average selling prices 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 new technologies or products that replace them or render them obsolete.

Over the last three fiscal years, our research and development expenses have been in the range of 11% to 13% of net sales. 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 effectively transfer production processes, 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 sales that could harm our financial condition and results of operations.**

For fiscal years 2004, 2003 and 2002, 61%, 61% and 60%, respectively, of our net sales were derived from customers outside of the Untied States. We anticipate that foreign sales will continue to account for a significant portion of our revenues in the foreseeable future. The global economic slowdown has already had and could continue to have a negative effect on various foreign markets in which we operate. This may cause us to simplify our foreign legal entity structure and reduce our presence in certain countries, which may negatively affect the overall level of business in such countries. A portion of our foreign sales occurs through our foreign sales subsidiaries and the remainder of our foreign sales result from exports to foreign distributors, resellers and customers. Our foreign operations and sales are subject to a number of risks, including:

- longer accounts receivable collection periods;
- the impact of recessions 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; and
- preference for locally produced products.

We are also subject to the risks of fluctuating foreign 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. For

additional discussion about our foreign currency risks, see Item 7A Quantitative and Qualitative Disclosures About Market Risk.

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

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.

**We could become subject to litigation regarding intellectual property rights, which could seriously harm our business.**

In recent years, there has been significant litigation in the United States involving patents and other intellectual property rights. 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. 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, our business may be seriously harmed. We do not have insurance to cover potential claims of

this type.

We may, in the future, initiate claims or litigation against third parties for infringement of our proprietary rights to protect these rights or to determine the scope and validity of our proprietary rights or the proprietary rights of competitors. These claims could result in costly litigation and the diversion of our technical and management personnel.

**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.**

Our future success depends upon the continued services of our executive officers and other key engineering, sales, marketing, manufacturing and support personnel. None of our key employees, except for employees associated with recent acquisitions in the United States, are bound by an employment agreement for any specific term and these personnel may terminate their employment at any time. In addition, we do not have key person life insurance policies covering any of our employees.

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.

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

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 customer s 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 revenue to offset those 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 companies, including Newport Corporation s Spectra-Physics Lasers business unit; JDS Uniphase Corp.; Cymer, Inc.; Gigaphoton, Inc.; Rofin-Sinar Technologies, Inc.; Lightwave Electronics Corp.; and Excel Technology, Inc. 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. Several of our competitors that have larger market capitalizations or more cash reserves 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 competitors 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 market 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. As a result of the foregoing factors, we expect that competitive pressures may result in price reductions, reduced margins and loss of market share.

**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 revenues.**

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 technical complexity of our products, 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 such yields or product reliability, our business, operating results, financial condition and customer relationships would be adversely affected. We provide warranties on certain 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. If actual return rates and/or repair and replacement costs differ significantly from our estimates, adjustments to recognize additional cost of sales may be required in future periods.

Our customers may discover defects in our products after the products have been fully deployed and operated under 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;
- 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.

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

**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 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, some of our suppliers may need at least six 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 and operating results.

**Our increased reliance on contract manufacturing may adversely impact our financial results and operations.**

We have changed our manufacturing strategy to increase sourcing from contract manufacturers. Our ability to resume internal manufacturing operations for those products has been 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. The inability of any contract manufacturer to meet our cost, quality, performance and availability standards could adversely impact our financial condition or results of operations. 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.

**We may not achieve the expected benefits of integration with Lambda Physik.**

We are in the process of reviewing the operational efficiency of Lambda Physik s operations and expect to achieve efficiencies by integrating some of Lambda Physik s operations into other Coherent operations. However, integrating the operations of Lambda Physik into our operations is a complex, time consuming and expensive process. The complexity of the technologies and operations being integrated and the disparate corporate cultures being combined may increase the difficulty of integration. Management s focus on the integration of operations may distract attention from our day-to-day business and may disrupt key research and development, marketing or sales efforts. In addition, it is common in the technology industry for aggressive competitors to attract customers and recruit key employees away from companies during the integration phase of an acquisition.

**The inability to continue to reduce expenses and contain our costs could harm our operating results.**

We are continuing efforts to reduce our expense structure. Additional measures to contain costs and reduce expenses may be undertaken if revenues and market conditions do not continue to improve. A number of factors could preclude us from successfully bringing costs and expenses in line with our revenues, such as our inability to accurately forecast business activities or deterioration of our revenues. If we are unable to continue to reduce expenses and contain our costs, this could harm our operating results.

**If we fail to manage our growth effectively, our business could be disrupted, which could 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. We continue to expand the scope of our operations domestically and internationally. The growth in sales, combined with the challenges of managing geographically-dispersed operations, has placed, and our anticipated growth in future operations will continue to place, a significant strain on our management systems and resources. The failure to effectively manage our growth could disrupt our business and harm our operating results.

**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 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;

incur debt;

assume liabilities; or

incur expenses related to in-process research and development, impairment of goodwill and amortization.

These purchases also involve numerous risks, including:

problems combining the acquired operations, technologies or products;

unanticipated costs or liabilities;

diversion of management s attention from our core businesses;

adverse effects on existing business relationships with suppliers and customers; and

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

We cannot assure you that we will be able to successfully integrate any businesses, products, technologies or personnel that we might acquire in the future, which may harm our business.

**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 Tampere, Finland site and 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.

**The adoption of certain environmental regulations will require us to redesign some of our products if we are to continue to be able to sell them in Europe.**

The European Union has enacted The Restriction on Hazardous Substances in Electronic Equipment (ROHS) and Waste Electrical and Electronic Equipment (WEEE) directives that will require us to redesign some of our products if we are to continue selling them in Europe. These directives come into force August 13, 2005 and July 1, 2006, respectively. We have launched a major program to bring our products into compliance with ROHS and WEEE, but there can be no guarantee that we will be successful. Failure to comply can result in the inability to sell non-compliant products into Europe, a market currently accounting for approximately one-third of our revenues, which would have a material adverse affect on our business and financial results.

Private companies outside of Europe, most notably in Japan, are undertaking similar green initiatives. Noncompliance would result in similar risks.

**If our facilities were to experience catastrophic loss, our operations would be seriously harmed.**

Our facilities could be subject to a catastrophic loss from fire, flood, earthquake 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 at any of our facilities could disrupt our operations, delay production, shipments and revenue 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.

**Provisions of our charter documents, Delaware law, our Common Shares Rights Plan 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;

limiting the ability of our stockholders to act by written consent; 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 and years of service to us. 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.

Our common shares rights agreement permits the holders of rights to purchase shares of our common stock to exercise the stock purchase rights following an acquisition of or merger by us with another corporation or entity, following a sale of 50% or more of our consolidated assets or earning power, or the acquisition by an individual or entity of 20% or more of our common stock. Our successor or acquirer is required to assume all of our obligations and duties under the common shares rights agreement, including in certain circumstances the issuance of shares of its capital stock upon exercise of the stock purchase rights. The existence of our common shares rights agreement may have the effect of delaying, deferring or preventing a change of control and, as a consequence, may discourage potential acquirers from making tender offers for our shares.

**Our financial results could be affected by potential changes in the accounting rules governing the recognition of stock-based compensation expense**

We measure compensation expense for our employee stock compensation plans under the intrinsic value method of accounting prescribed by APB Opinion No. 25, Accounting for Stock Issued to Employees. Under this method, we recognized compensation charges related to stock compensation plans of $26,000, $43,000 and $0 in fiscal years 2004, 2003 and 2002, respectively. In accordance with SFAS No. 123, Accounting for Stock-Based Compensation, we provide disclosures of our operating results as if we had applied the fair value method of accounting (pro-forma basis). Beginning in the second quarter of fiscal 2003, we provide such disclosures in our Quarterly Reports on Form 10-Q in accordance with SFAS No. 148, Accounting for Stock-Based Compensation -Transition and Disclosure. Had we accounted for our compensation expense under the fair value method of accounting prescribed by SFAS No. 123, the charges would have been significantly higher than the intrinsic value method used by us, totaling $14.4 million, $17.6 million and $19.0 million in fiscal 2004, 2003 and 2002, respectively. The Financial Accounting Standards Board has announced changes to accounting rules concerning the recognition of stock option compensation expense. Beginning in the fourth quarter of fiscal 2005, when these changes are expected to be implemented, we and other companies will be required to measure compensation expense using the fair value method, which will adversely affect our results of operations by increasing our losses by the additional amount of such stock option charges.

**Failure to maintain effective internal controls over financial reporting could have a material adverse effect on our business, operating results and stock price.**

Beginning with our annual report for our fiscal year ended October 1, 2005, Section 404 of the Sarbanes-Oxley Act of 2002 will require us to include a report by our management on our internal controls over financial reporting. Such report must contain an

assessment by management of the effectiveness of our internal controls over financial reporting as of the end of our fiscal year and a statement as to whether or not such internal controls are effective. Such report must also contain a statement that our independent auditors have issued an attestation report on management s assessment of such internal controls.

In order to achieve timely compliance with Section 404, in fiscal 2003 we began a process to document and evaluate our internal controls over financial reporting. Our efforts to comply with Section 404 have resulted in, and are likely to continue to result in, significant costs, the commitment of time and operational resources and the diversion of management s attention. If our management identifies one or more material weaknesses in our internal controls over financial reporting, we will be unable to assert such internal controls are effective. If we are unable to assert that our internal controls over financial reporting are effective as of October 1, 2005 (or if our independent auditors are unable to attest that our management s report is fairly stated or they are unable to express an opinion on our management s evaluation or on the effectiveness of our internal controls), our business may be harmed. Market perception of our financial condition and the trading price of our stock may be adversely affected and customer perception of our business may suffer.

***Risks related to our industry***

**Our market is unpredictable and characterized by rapid technological changes and evolving standards, 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 market is subject to rapid change, it is difficult to predict its potential size or future growth rate. Our success in generating revenues in this market 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, laser systems and precision optics; and

our ability to accurately predict and develop our products to meet industry standards.

For our fiscal years ended September 30, 2004, 2003 and 2002, our research and development costs were $62.7 million (13%), $51.0 million (13%) and $52.4 million (13%), 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. Our failure to address rapid technological changes in our markets could adversely affect our business and results of operations.

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

Our net sales depend in part 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 revenues from this market will 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.

**ITEM 9A. CONTROLS AND PROCEDURES**

**Controls Evaluation and Related CEO and CFO Certifications**

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. The controls evaluation was done under the supervision and with the participation of management, including our Chief Executive Officer (CEO) and Chief Financial Officer (CFO) and has allowed us to make conclusions, as set forth below, regarding the state of our disclosure controls and procedures.

Attached as exhibits to this Annual Report are certifications of the CEO and the CFO, which are required in accordance with Rule 13a-14 of the Exchange Act. This Controls and Procedures section includes the information concerning the controls evaluation referred to in the certifications, and it should be read in conjunction with the certifications for a more complete understanding of the topics presented.

**Disclosure Controls and Procedures**

Our disclosure controls and procedures are designed to provide reasonable assurance that information required to be disclosed in our reports filed under the Exchange Act, such as this Annual Report, is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission s rules and forms. Our disclosure controls and procedures are also designed to ensure that such information is accumulated and communicated to our management, including the CEO and CFO, to allow timely decisions regarding required disclosure. Our disclosure controls include components of our internal control over financial reporting, which consists of control processes designed to provide reasonable assurance regarding the reliability of our financial reporting and the preparation of financial statements in accordance with generally accepted accounting principles in the U.S. To the extent that components of our internal control over financial reporting are included within our disclosure controls, they are included in the scope of our quarterly controls evaluation.

**Limitations on the Effectiveness of Controls**

Management, including our CEO and CFO, does not expect that our disclosure controls and procedures or our internal control over financial reporting will prevent all error and all fraud. A control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system will be attained. Furthermore, 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 a cost-effective control system, no evaluation of controls can provide absolute assurance that all misstatements due to error or fraud, if any, may occur and not be detected on a timely basis. These inherent limitations include the possibility that judgments in decision-making can be faulty and that breakdowns can occur because of errors or mistakes. Our disclosure controls and procedures can also be circumvented by the individual acts of some persons, by collusion of two or more people or by management override of the controls. The design of any system of controls is based in part on certain assumptions about the likelihood of future events and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions. Furthermore, controls may become inadequate because of changes in conditions or deterioration in the degree of compliance with policies or procedures

**Scope of the Controls Evaluation**

The evaluation of our disclosure controls and procedures included a review of the controls objectives and design, the Company s implementation of the controls and the effect of the controls on the information generated for use in this Annual Report. During the evaluation of our controls and procedures, we looked to identify data errors, control problems or acts of fraud and confirm that appropriate corrective action (including process improvements) was being undertaken. This evaluation is performed on a quarterly basis so that the conclusions of management, including the CEO and CFO, concerning the effectiveness of the disclosure controls and procedures can be reported in our Quarterly Reports on Form 10-Q and to supplement our disclosures made in our Annual Report on Form 10-K. The overall goal of the evaluation activity is to monitor our disclosure controls and procedures, and to modify them as necessary. We intend to maintain our disclosure controls and procedures as a dynamic system that changes as conditions warrant.

We also considered whether our evaluation identified any significant deficiencies or material weaknesses in our internal control over financial reporting, and whether we identified any acts of fraud involving personnel with a significant role in our internal control over financial reporting. Emphasis was placed on this information as it was important both for the controls evaluation and because item 5 in the certifications of the CEO and CFO requires that they disclose that information to our Board of Director s Audit Committee and to our independent auditors. In the professional auditing literature, significant deficiencies are referred to as reportable conditions, which are deficiencies in the design or operation of controls that could adversely affect our ability to record, process, summarize and report financial data in the financial statements. Auditing literature defines material weakness as a

particularly serious reportable condition in which the internal control does not reduce to a relatively low level the risk that misstatements caused by error or fraud may occur in amounts that would be material in relation to the financial statements and the risk that such misstatements would not be detected within a timely period by employees in the normal course of performing their assigned functions.

**Conclusions**

Based upon the evaluation of the effectiveness of our disclosure controls and procedures, our CEO and CFO have concluded that as of the end of the period covered by this Annual Report, our disclosure controls and procedures were effective to provide reasonable assurance that material information required to be included in our Exchange Act reports, including this Annual Report, is made known to management, including the CEO and CFO, on a timely basis.

In coming to the conclusion that our disclosure controls and procedures were effective as of October 2, 2004, Management considered, among other things, the control deficiency related to the accounting for our deferred compensation plan, which resulted in the need to restate our previously issued financial statements as disclosed in Note 20 of Notes to Consolidated Financial Statements included in Item 8 of this Annual Report on Form 10-K/A. After reviewing and analyzing the Securities and Exchange Commission s Staff Accounting Bulletin (SAB) No. 99 Materiality, Accounting Principles Board Opinion No. 28 Interim Financial Reporting paragraph 29 and SAB Topic 5-F Accounting Changes Not Retroactively Applied Due to Immateriality and taking into consideration that (i) the restatement corrections did not have a material impact on the financial statements of prior interim or annual periods taken as a whole; (ii) the cumulative impact of the restatement corrections was not material to the financial statements of prior interim or annual periods; and (iii) we decided to restate our previously issued financial statements solely because the cumulative impact of the error, if recorded in the period discovered, would have been material to that period s reported net income, management concluded that the control deficiency that resulted in the restatement of the prior period financial statements was not in itself a material weakness.

**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 report on Form 10-K/A:

**Report of Independent Registered Public Accounting Firm-Deloitte and Touche LLP**

**Report of Independent Registered Public Accounting Firm-Ernst & Young AG Wirtschaftsprüfungsgesellschaft**

**Consolidated Balance Sheets (restated) September 30, 2004 and 2003**

**Consolidated Statements of Operations (restated) Years ended September 30, 2004, 2003 and 2002**

**Consolidated Statements of Stockholders Equity (restated) Years ended September 30, 2004, 2003 and 2002**

**Consolidated Statements of Cash Flows (restated) Years ended September 30, 2004, 2003 and 2002**

**Notes to Consolidated Financial Statements (restated)**

**Quarterly Financial Information (Unaudited and restated)**

**2. Consolidated Financial Statement Schedules**

Schedule II-Valuation and Qualifying Accounts

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**

**2.1***

**Agreement and Plan of Merger. (Previously filed as Exhibit 2.1 to Form 10-K for the fiscal year ended September 29, 1990)**

**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)**

**4.1*** **Amended and Restated Common Shares Rights Agreement dated November 2, 1989 between Coherent and the Bank of Boston. (Previously filed as Exhibit 4.1 to Form 8-K filed on November 3, 1989.)**

**10.1*** **Productivity Incentive Plan, as amended. (Previously filed as Exhibit 10.19 to Form 10-K for the fiscal year ended October 1, 1988)**

**10.2*** **Employee Stock Purchase Plan, as amended. (Previously filed as Exhibit 10.11 to Form 10-K for the fiscal year ended September 29, 2001)**

**10.3*** **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)**

**10.4*** **1995 Stock Plan and forms of agreement. (Previously filed as Exhibit 10.34 to Form 10-K for the fiscal year ended September 28, 1996)**

**10.5*** **Note Purchase Agreement by and between Coherent, Inc. and the purchasers of $70 million series notes dated May 18, 1999. (Previously filed as Exhibit 10.36 to Form 10-K for the fiscal year ended October 2, 1999)**

| | |
|---|---|
| **10.6*** | **1998 Director Option Plan. (Previously filed as Exhibit 10.37 to Form 10-K for the fiscal year ended September 30, 2000)** |
| **10.7*** | **Asset Purchase Agreement by and among ESC Medical Systems, Ltd., Energy Systems Holdings, Inc., and Coherent, Inc., dated as of February 25, 2001. (Previously filed as Exhibit 2.1 to Form 8-K filed on March 5, 2001)** |
| **10.8*** | **First amendment to Asset Purchase Agreement by and among ESC Medical Systems, Ltd., Energy Systems Holdings, Inc., and Coherent, Inc., dated as of April 30, 2001. (Previously filed as Exhibit 4 to Schedule 13 D/A filed on May 10, 2001)** |
| **10.9*** | **1990 Directors Stock Option Plan. (Previously filed as Exhibit 10.1 to Form S-8 filed on May 1, 1996)** |
| **10.10*** | **Master Lease and Security Agreement between SMBC Leasing and Finance, Inc. and Coherent, Inc. (Previously filed as Exhibit 10.12 to Form 10-Q for the quarter ended June 29, 2002)** |
| **10.11*** | **Coherent, Inc. Management Transition Agreement by and between Coherent, Inc. and Bernard J. Couillaud. (Previously filed as Exhibit 10.13 to Form 10-K for the year ended September 28, 2002)** |
| **10.12*** | **Coherent, Inc. Management Transition Agreement by and between Coherent, Inc. and Robert J. Quillinan. (Previously filed as Exhibit 10.14 to Form 10-K for the year ended September 28, 2002)** |
| **10.13*** | **2001 Stock Plan (Previously filed as Exhibit 10.14 to Form 10-K for the year ended September 27, 2003)** |
| **10.14*** | **Master termination agreement dated December 11, 2003 by and among Coherent; SMBC Leasing and Finance, Inc.; Sumitomo Mitsui Banking Corporation and Union Bank of California. (Previously filed as exhibit 10.1 to Form 10-Q for the quarter ended December 27, 2003)** |
| **10.15*** | **Letter of Ernst & Young AG Wirtschaftsprüfungsgesellschaft. (Previously filed as exhibit 16.1 to Form 8-K filed on May 10, 2004)** |
| **10.16*** | **Change of Control Severance Plan, as amended and restated effective February 17, 2005 (Previously filed as Exhibit 10.14 to Form 10-K/A Amendment No. 3 for the year ended October 2, 2004).** |
| **21.1** | **Subsidiaries** |
| **23.1** | **Consent of Independent Registered Public Accounting Firm-Deloitte & Touche LLP** |
| **23.2** | **Consent of Independent Registered Public Accounting Firm-Ernst & Young AG Wirtschaftsprüfungsgesellschaft** |
| **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.

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

45

**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 on May 17, 2005.

COHERENT, INC.

/s/ JOHN R. AMBROSEO
By: John R. Ambroseo
President and Chief Executive Officer

## REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

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

We have audited the accompanying consolidated balance sheets of Coherent, Inc. and subsidiaries as of September 30, 2004 and 2003, and the related consolidated statements of operations, stockholders equity, and cash flows for each of the three years in the period ended September 30, 2004. These consolidated financial statements are the responsibility of Coherent s management. Our responsibility is to express an opinion on these financial statements based on our audits. We did not audit the consolidated financial statements of Lambda Physik AG and subsidiaries (Lambda Physik) for the years ended September 30, 2003 and 2002, which statements reflect total assets constituting 22% in 2003 and total revenues constituting 20% and 23% in 2003 and 2002, respectively, of the related consolidated totals. Those statements were audited by other auditors whose report has been furnished to us, and our opinion, insofar as it relates to the amounts included for Lambda Physik for the years ended September 30, 2003 and 2002, is based solely on the report of such other auditors.

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 and the report of the other auditors provide a reasonable basis for our opinion.

In our opinion, based on our audits and the report of the other auditors, such consolidated financial statements present fairly, in all material respects, the financial position of Coherent, Inc. and subsidiaries as of September 30, 2004 and 2003, and the results of their operations and their cash flows for each of the three years in the period ended September 30, 2004 in conformity with accounting principles generally accepted in the United States of America.

As discussed in Note 20, the accompanying consolidated financial statements for 2004, 2003 and 2002 have been restated.

/s/ DELOITTE & TOUCHE LLP

San Jose, California
December 15, 2004 (May 16, 2005 as to the effects of the restatement discussed in Note 20)

**REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

To the Stockholders and the Supervisory Board of Lambda Physik AG:

We have audited the consolidated balance sheet of Lambda Physik AG (a subsidiary of Coherent, Inc.) as of September 30, 2003 (new basis) and the related consolidated statements of operations, cash flows and changes in stockholders equity for the new basis period from July 27, 2003 to September 30, 2003, and the old basis period from October 1, 2002 to July 26, 2003, and for the year ended September 30, 2002 (not presented separately herein). These financial statements are the responsibility of the Company s management. Our responsibility is to express an opinion on these 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 misstatements. 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, the financial statements referred to above (not presented separately herein) present fairly, in all material respects, the consolidated financial position of Lambda Physik AG at September 30, 2003 (new basis) and the consolidated results of its operations and its cash flows for the new basis period from July 27, 2003, to September 30, 2003, the old basis period from October 1, 2002, to July 26, 2003, and for the year ended September 30, 2002, in conformity with U.S. generally accepted accounting principles.

As described in Note 2 to the financial statements, the Company applied push down accounting on July 26, 2003, to reflect its parent company s basis in the Company s assets and liabilities. Period subsequent to July 26, 2003, are referred to as new basis while those periods prior to July 26, 2003, are referred to as old basis periods.

Ernst & Young AG
Wirtschaftsprüfungsgesellschaft

Hentschel Boelsems

November 5, 2003
Hanover, Germany

**COHERENT, INC. AND SUBSIDIARIES**

**CONSOLIDATED BALANCE SHEETS**

**(In thousands, except par value)**

| | September 30, 2004 (as restated, see Note 20) | September 30, 2003 (as restated, see Note 20) |
|---|---|---|
| **ASSETS** | | |
| Current assets: | | |
| Cash and cash equivalents | **$ 87,659** | $ 76,541 |
| Restricted cash, cash equivalents and short-term investments | **15,343** | 15,284 |
| Short-term investments | **83,075** | 58,407 |
| Accounts receivable net of allowances of $3,745 in 2004 and $4,151 in 2003 | **96,825** | 73,118 |
| Inventories | **104,698** | 100,147 |
| Prepaid expenses and other assets | **19,350** | 45,693 |
| Deferred tax assets | **43,222** | 29,792 |
| Total current assets | **450,172** | 398,982 |
| Property and equipment, net | **166,054** | 146,399 |
| Restricted cash, cash equivalents and short-term investments | **23,580** | 38,660 |
| Goodwill | **53,104** | 50,952 |
| Intangible assets, net | **35,454** | 40,327 |
| Other assets | **28,962** | 29,875 |
| | **$ 757,326** | $ 705,195 |
| **LIABILITIES AND STOCKHOLDERS EQUITY** | | |
| Current liabilities: | | |
| Current portion of long-term obligations | **$ 13,700** | $ |