II-VI INC
Form 10-K
August 28, 2013

**United States**

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

**FORM 10-K**

x **Annual Report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 for the fiscal year ended June 30, 2013**

¨ Transition report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 for the transition period from _____ to _____.

**Commission File Number: 0-16195**

# II-VI INCORPORATED

(Exact name of registrant as specified in its charter)

| PENNSYLVANIA | 25-1214948 |
|---|---|
| (State or other jurisdiction of incorporation or organization) | (I.R.S. Employer Identification No.) |
| 375 Saxonburg Boulevard<br>Saxonburg, PA<br>(Address of principal executive offices) | 16056<br>(Zip code) |

Registrant s telephone number, including area code: **724-352-4455**

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

| **Title of Each Class** | **Name of Each Exchange on Which Registered** |
|---|---|
| Common Stock, no par value | Nasdaq Global Select Market |

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

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.

Yes X No ____

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Exchange Act.

Yes____ No X

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 X No ____

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for shorter period that the registrant was required to submit and post such files).

Yes X No____

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. x

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See definition of large accelerated filer, accelerated filer and smaller reporting company in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer x Accelerated filer ¨ Non-accelerated filer ¨ Smaller reporting company ¨

(Do not check if a smaller reporting company)

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).

Yes ¨ No x

Aggregate market value of outstanding Common Stock, no par value, held by non-affiliates of the Registrant at December 31, 2012, was approximately $957,128,000 based on the closing sale price reported on the Nasdaq Global Select Market. For purposes of this calculation only, directors and executive officers of the Registrant and their spouses are deemed to be affiliates of the Registrant.

Number of outstanding shares of Common Stock, no par value, at August 20, 2013, was 62,360,357.

**DOCUMENTS INCORPORATED BY REFERENCE**

Portions of the registrant s definitive proxy statement, which will be issued in connection with the 2013 Annual Meeting of Shareholders of II-VI Incorporated, are incorporated by reference into Part III of this Annual Report on Form 10-K.

**Forward-Looking Statements**

This Annual Report on Form 10-K (including certain information incorporated herein by reference) contains forward-looking statements made pursuant to Section 21E of the Securities Exchange Act of 1934, as amended (the Exchange Act ), and the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. These statements relate to the Company s performance on a going-forward basis. Forward-looking statements are also identified by words such as expects, anticipates, intends, plans, projects or similar expressions.

The forward-looking statements in this Annual Report on Form 10-K involve risks and uncertainties, which could cause actual results, performance or trends to differ materially from those expressed in the forward-looking statements herein or in previous disclosures. The Company believes that all forward-looking statements made by it have a reasonable basis, but there can be no assurance that these expectations, beliefs or projections as expressed in the forward-looking statements will actually occur or prove to be correct. Actual results could materially differ from such statements. In addition to general industry and economic conditions, factors that could cause actual results to differ materially from those discussed in the forward-looking statements include, but are not limited to: (i) the failure of any one or more of the assumptions stated in this Annual Report on Form 10-K to prove to be correct; (ii) the Risk Factors set forth in Item 1A of this Annual Report on Form 10-K; (iii) purchasing patterns from customers and end-users; (iv) timely release of new products, and acceptance of such new products by the market; (v) the introduction of new products by competitors and other competitive responses; and (vi) the Company s ability to devise and execute strategies to respond to market conditions, which could have a material adverse effect on our results of operations and cash flows. In addition, we operate in a highly competitive and rapidly changing environment; therefore, new risk factors can arise, and it is not possible for management to predict all such risk factors, nor to assess the impact of all such risk factors on our business or the extent to which any individual risk factor, or combination of risk factors, may cause results to differ materially from those contained in any forward-looking statement. Any forward-looking statements included in this Annual Report on Form 10-K are based solely on information currently available to the Company and speak only as of the date of this report and the Company disclaims any obligation to update information in this report, including any forward-looking statements, whether as a result of new information, future events or developments, or otherwise, except as may be required by the securities laws, and we caution you not to rely on them unduly.

Investors should also be aware that while the Company does communicate with securities analysts, from time to time, such communications are conducted in accordance with applicable securities laws and investors should not assume that the Company agrees with any statement or report issued by any analyst irrespective of the content of the statement or report.

**PART I**

**Item 1. BUSINESS**

**Introduction**

II-VI Incorporated ( II-VI, the Company, we, us, or our ) was incorporated in Pennsylvania in 1971. Our executive offices are located at 375 Saxonburg Boulevard, Saxonburg, Pennsylvania 16056. Our telephone number is 724-352-4455. Reference to II-VI, the Company, we, us, or our in this Annual Report on Form 10-K, unless the context requires otherwise, refers to II-VI Incorporated and its wholly-owned subsidiaries. The Company s name is pronounced Two Six Incorporated. The majority of our revenues are attributable to the sale of engineered materials and opto-electronic components for industrial, military and medical laser applications, optical communications products, compound semiconductor substrate-based products and elements for material processing and refinement. Reference to fiscal or fiscal year means our fiscal year ended June 30 for the year referenced.

The Company consists of four reportable segments: (i) Infrared Optics; (ii) Near-Infrared Optics; (iii) Military & Materials; and (iv) Advanced Products Group. See below for a more detailed description of each of these segments.

During the fiscal year ended June 30, 2013, the Company completed three acquisitions:

| | |
|---|---|
| November 1, 2012 | M Cubed Technologies, Inc. ( M Cubed ) |
| December 3, 2012 | The Thin-Film Filter business and Interleaver product line of Oclaro, Inc. ( Oclaro ) |
| December 21, 2012 | LightWorks Optics, Inc. ( LightWorks ) |

M Cubed joined the Advanced Products Group segment, the Thin-Film Filter business and Interleaver product line of Oclaro became a part of Photop Technologies, Inc. ( Photop ) in the Near-Infrared Optics segment, and LightWorks joined the Military & Materials segment.

See Note 2 to the Company s consolidated financial statements included in Item 8 of this Annual Report on Form 10-K for additional information regarding the Company s acquisitions, which information is incorporated herein by reference.

The Company acquired the remaining 25% equity of HIGHYAG Lasertechnologie GmbH ( HIGHYAG ) that it did not already own, thereby moving HIGHYAG from a majority-owned subsidiary to a wholly-owned subsidiary. The purchase price for the 25% equity of HIGHYAG was $7.6 million, and a dividend of $1.0 million was recorded as of June 30, 2013 in Other accrued liabilities in the accompanying Consolidated Balance Sheet included in Item 8 of this Annual Report on Form 10-K. Effective July 1, 2013, the Company will record 100% of the operating results of HIGHYAG in the Company s Infrared Optics segment.

In August 2013, the Company announced that its subsidiary, Pacific Rare Specialty Metals & Chemicals, Inc. ( PRM ), a business in the Military & Materials segment, will discontinue its tellurium product line and will downsize its selenium product line to focus on providing selenium metal to the Company s Infrared Optics segment, and will maintain production of its rare earth element. The Company believes this revised business model will better focus the PRM business on providing a reliable supply of selenium for the Company s own internal needs while significantly decreasing write-downs and profit volatility associated with minor metal index price flucuations.

Our Internet address is www.ii-vi.com. Information contained on our website is not part of, and should not be construed as being incorporated by reference into, this Annual Report on Form 10-K. We post the following reports on our website as soon as reasonably practical after they are electronically filed with or furnished to the Securities and Exchange Commission (the SEC ): our Annual Reports on Form 10-K, our Quarterly Reports on Form 10-Q, our Current Reports on Form 8-K, and any amendments to those reports or statements filed or

furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended ( the Exchange Act ). In addition, we post our proxy statements on Schedule 14A related to our annual shareholders meetings as well as reports filed by our directors, officers and ten-percent beneficial owners pursuant to Section 16 of the Exchange Act. In addition, all filings are available via the SEC s website (www.sec.gov). We also make our corporate governance documents available on our website, including the Company s Code of Business Conduct and Ethics, governance guidelines and the charters for various board committees. All such documents are located on the Investors page of our website and are available free of charge.

**Information Regarding Market Segments and Foreign Operations**

Financial data regarding our revenues, results of operations, industry segments and international sales for the three years ended June 30, 2013 are set forth in the Consolidated Statements of Earnings and in Note 12 to the Company s consolidated financial statements included in Item 8 of this Annual Report on Form 10-K and are incorporated herein by reference. We also discuss certain Risk Factors set forth in Item 1A of this Annual Report on Form 10-K related to our foreign operations which are incorporated herein by reference.

**General Description of Business**

We develop, refine, manufacture and market engineered materials and opto-electronic components and products for precision use in industrial, optical communications, military, semiconductor, medical and life science applications. We use advanced engineered material growth technologies coupled with proprietary high-precision fabrication, micro-assembly, thin-film coating and electronic integration to enable complex opto-electronic devices and modules. Our products are supplied to manufacturers and users in a wide variety of markets including industrial, optical communications, military, semiconductor and medical, and are deployed in applications that we believe reduce costs and improve performance or reliability in a variety of contexts, including laser cutting, welding and marking operations; optical communication products; military-related products; semiconductor products; medical procedures; and cooling and power generation solutions. A key Company strategy is to develop, refine and manufacture complex materials. We focus on providing critical components to the heart of our customers assembly lines for products such as high-power laser material processing systems, fiber optics and wireless communication systems, military fire control and missile guidance devices, medical diagnostic systems and industrial, commercial and consumer thermal management systems. We develop, manufacture, refine and market infrared and near-infrared laser optical elements, optical communications components and modules, military infrared optical components and assemblies, thermoelectric cooling and power generation systems, semiconductor products and single crystal silicon carbide (SiC) substrates.

Our U.S. production operations are located in Pennsylvania, Florida, California, New Jersey, Texas, Mississippi, Massachusetts, Connecticut and Delaware and our non-U.S. production operations are based in China, Singapore, Vietnam, the Philippines, Germany and Australia. In addition to sales offices at most of our manufacturing sites, we have sales and marketing subsidiaries in Japan, Germany, China, Switzerland, Belgium, the United Kingdom ( U.K. ) and Italy. Approximately 57% of our revenues for the fiscal year ended June 30, 2013 were generated from sales to customers outside of the U.S.

Our primary products are as follows:

Laser-related products for $CO_2$ lasers, forward-looking infrared systems and high-precision optical elements used to focus and direct infrared lasers onto target work surfaces. The majority of these laser products require advanced engineered materials that are internally produced.

Laser-related products for one-micron lasers for welding, drilling and cutting in automotive, semiconductor and other material processing applications. We produce tools for laser material processing, including modular laser processing heads for fiber lasers, yttrium aluminum garnet ( YAG ) lasers and other one-micron laser systems. We also manufacture beam delivery systems including fiber optic cables and modular beam systems.

Optical and photonics components and modules for use in optical communication networks and other diverse consumer and commercial applications. We leverage our expertise in crystal materials, silicon materials and optics to design and manufacture a diverse range of customized optics and optical components such as optical transport, amplifier, monitoring and wavelength management devices, optical routing and switching components, test instruments and equipment, projection display components and laser devices.

Laser-related products for solid-state lasers, high precision optical elements and assemblies used to focus and direct laser beams onto target work surfaces.

Ultra-violet ( UV ) filters used in systems to detect shoulder-launched missiles to help improve the survivability of low-flying aircraft if attacked. The majority of these laser products require advanced engineered materials and crystals that are internally produced.

Military infrared optical products and assemblies including optics for intelligence, surveillance and reconnaissance applications.

A rare earth element via refining and reclamation processes. This product is used for green energy applications.

Thermoelectric modules, thermoelectric systems, power generation modules and power generation systems based on engineered semiconductor materials that provide reliable and low cost temperature control or power generation capability.

Advanced ceramic materials and precision motion control products addressing the semiconductor, display, industrial and defense markets in the fields of metal matrix composites and reaction bonded ceramics.

SiC substrates which are wide bandgap semiconductor materials that enable fabrication of electronic devices for highly energy efficient, high frequency and high power applications.

See We Are Subject to Stringent Environmental Regulation included in Part I, Item 1A of this Annual Report on Form 10-K, which is incorporated herein by reference, for a discussion of the impact of environmental regulations on our businesses and operations.

**Our Markets**

Our market-focused businesses are organized by technology and products. Our businesses are comprised of the following primary markets:

Design, manufacture and marketing of engineered materials and opto-electronic components for infrared optics for industrial, military and medical applications by our II-VI Infrared Optics operations.

Design, manufacture and marketing of customized technology for laser material processing to deliver both low-power and high-power one-micron laser light for industrial applications by our HIGHYAG operations in our Infrared Optics segment.

Design, manufacture and marketing of a diverse range of customized optics, optical components and optical modules for consumer and commercial applications such as fiber optic communications, projection and display products, lasers, medical equipment and bio-medical instrumentation by our Photop operations in our Near-Infrared Optics segment.

Design, manufacture and marketing of UV to infrared optical components and high precision optical assemblies, including micro-fine conductive mesh patterns for intelligence, surveillance, reconnaissance and other military, medical and commercial laser and imaging applications by our Military operations in our Military & Materials segment.

Refinement, reclamation, manufacturing and marketing of a rare earth element green energy application by our PRM processing and refinement operations in our Military & Materials segment.

Design, manufacture and marketing of thermoelectric modules and assemblies for cooling, heating and power generation applications in the defense, telecommunications, medical, automotive, gesture recognition, consumer and industrial markets by our Marlow Industries, Inc. ( Marlow ) operations in our Advanced Products Group segment.

Design, manufacture and marketing of advanced ceramic materials and precision motion control products for the semiconductor, display, industrial and defense markets by our M Cubed business unit in our Advanced Products Group segment.

Design, manufacture and marketing of single crystal SiC substrates for use in the defense and space, telecommunications, and industrial markets by our Wide Bandgap Materials Group ( WBG ) subsidiary of our Advanced Products Group segment.

*Infrared Optics Market.* Significant increases in the installed worldwide base of laser machines for a variety of laser processing applications have driven $CO_2$ laser optics component consumption. It is estimated that there are over 65,000 $CO_2$ laser systems currently deployed in the world. $CO_2$ lasers offer benefits in a wide variety of cutting, welding, drilling, ablation, cladding, heat treating and marking applications for materials such as steel alloys, non-ferrous metals, plastics, wood, paper, fiberboard, ceramics and composites. Laser systems enable manufacturers to reduce parts cost and improve quality, as well as improve process precision, speed, throughput, flexibility, repeatability and automation. Automobile manufacturers, for example, deploy lasers both to cut body components and to weld those parts together in high-throughput production lines. Manufacturers of motorcycles, lawn mowers and garden tractors cut, trim, and weld metal parts with lasers to reduce post-processing steps and, therefore, lower overall manufacturing costs. Furniture manufacturers utilize lasers because of their easily reconfigurable, low-cost prototyping and production capabilities for customer-specified designs. In high-speed food and pharmaceutical packaging lines, laser marking is used to provide automated product, date and lot coding on containers. In addition to being installed by original equipment manufacturers ( OEMs ) of laser systems in new machine builds, our optical components are purchased as replacement parts by end users of laser machines to maintain proper system performance. We believe that the current addressable market serviced by our II-VI Infrared Optics operations is approximately $500 million.

*One-Micron Laser Market.* In many areas of material processing, laser technology has proven to be a better alternative to conventional production techniques. The precise cut and elegant seam are visible proof of a laser beam s machining efficiency. Industrial applications such as welding, drilling and cutting have driven the recent market growth of the one-micron laser systems, and are demanding increased performance, lower total cost of ownership, ease of use and portability of the one-micron laser systems. One-micron laser systems require efficient and reliable tools, including modular laser processing heads for fiber lasers, beam delivery systems including fiber optic cables and modular beam systems. We believe that the current addressable market serviced by our HIGHYAG operations is approximately $60 million.

*Near-Infrared Optics Market.* The near-infrared laser market is driven by applications in the optical communications, medical and life science and industrial markets. The optical communications market is being driven by demand for high-bandwidth communication capabilities by growing worldwide usage of the Internet, the growing number of broadband users, mobile device users and cloud computing users, and the greater reliance on high-bandwidth capabilities in our daily lives. For example, Internet activities, data storage, video and music

downloads, gaming, social networking and other on-line interactive applications are growing rapidly. High-bandwidth communication networks are being extended closer to the end user with fiber-to-the-home and other fiber optic networks. Mobile data traffic also is increasing as smart phones continue to proliferate with increasingly sophisticated audio, photo, video, email and Internet capabilities, as well as data connection and storage through cloud computing networks. The resulting traffic, in turn, is felt throughout the network, including the core that depends on optical technology. Medical and life science applications include aesthetic, vision correction, dental, ophthalmic and diagnostic lasers. Industrial market segments are addressed by solid state lasers and fiber lasers, which are used in higher power applications such as welding and cutting, and lower power applications such as marking and scribing. These industrial applications are demanding higher performance levels for less cost, creating competition for other technologies. The near-infrared market also addresses opportunities in the semiconductor processing, instrumentation, test and measurement and research segments. We believe that the current addressable markets serviced by our Near-Infrared Optics segment are approximately $1.6 billion.

*Military Optics Market*. We provide several key assemblies and optical components such as windows, domes, laser rods and optics and related subassemblies to the military, commercial and medical markets for UV infrared applications in night vision, targeting, navigation, missile warning, and Homeland Security intelligence, surveillance and reconnaissance (ISR) systems. Infrared window and window assemblies for navigational and targeting systems are deployed on fixed and rotary-wing aircraft, such as the F-35 Joint Strike Fighter, F-16 fighter jet, Apache Attack Helicopter, unmanned platforms such as the Predator and Reaper Unmanned Aerial Vehicle (UAV) and ground vehicles such as the Abrams M-1 Tank and Bradley Fighting Vehicle. Additionally, multiple fighter jets, including the F-16, are being equipped with large area sapphire windows, as a key component for the aircraft, providing advanced targeting and imaging systems. Our ability to develop and manufacture these large area sapphire windows has played a key role in our ability to provide an even larger suite of sapphire panels, which are a key component of the F-35 Joint Strike Fighter Electro Optical Targeting System. Infrared domes are used on missiles with infrared guidance systems ranging from small, man-portable designs to larger designs mounted on helicopters, fixed-wing aircraft and ground vehicles. High-precision domes are an integral component of a missile s targeting system, providing efficient tactical capability, while serving as a protective cover to its internal components. The Company also offers precision optical engineering and manufacturing, with particular efficiency in designing to customer end-item specifications, assisting with co-engineering designs, and designing for manufacturability. The high precision optical components and assemblies programs include Deep Impact Comet Flyby HRI & MRI, Lunar Reconnaissance Orbiter, Hellfire II Missile Optics, Missile launch detection sensor optical assembly, and High Altitude Observatory telescopes to name a few. In addition to imaging, many of these systems employ laser designation and range-finding capabilities supported by our YAG material growth and competency in short wave infrared and visible optics. Turreted systems and mounted targeting pods employ these capabilities in addition to hand-held soldier systems. Rotary and fixed-wing platforms also use missile warning systems to protect against shoulder fired man-portable missiles. Our competencies in material growth for UV crystals and our optical assembly capabilities provide significant support to these missile warning systems. A key attribute to several of these systems is the ability to filter electro-magnetic interference using micro-fine conductive mesh patterns. This technology is also applied to non-optical applications for absorbing and transmitting energy from the surfaces of aircraft and missiles. Our military optical and non-optical products are sold primarily to U.S. Government prime contractors and directly to various U.S. Government agencies. Certain products have applications in commercial and medical and life science markets as well. We believe that the current addressable market serviced by our Military Optics business is approximately $1.0 billion.

*Materials Processing and Refinement Market*. Rare earth elements are used in many electronic and alternative green energy applications. We believe that the current addressable market serviced by our PRM business for its rare earth element is approximately $40 million.

*Thermoelectric Market.* Thermoelectric Modules ( TEMs ) are solid-state semiconductor devices that act as small heat pumps to cool, heat and temperature stabilize a wide range of materials, components and systems.

Conversely, the principles underlying thermoelectrics allow TEMs to be used as a source of power when subjected to temperature differences. TEMs are more reliable than alternative cooling solutions that require moving parts, and provide more precise temperature control solutions than competing technologies. TEMs also have many other advantages which have spurred their adoption in a variety of industries and applications. For example, TEMs provide critical cooling and temperature stabilization solutions in a myriad of defense and space applications, including infrared cooled and un-cooled night vision technologies and thermal reference sources that are deployed in state-of-the-art weapons, as well as cooling high powered lasers used for range-finding target designation by military personnel. TEMs also allow for temperature stabilization of telecommunication lasers that generate and amplify optical signals for fiber optics systems. Thermoelectric-based solutions appear in a variety of medical applications including instrumentation and analytical applications such as DNA replication, blood analyzers and medical laser equipment. The industrial, commercial, and consumer markets provide a variety of niche applications ranging from desktop refrigerators and wine coolers to gesture recognition technology, semiconductor process and test equipment. In addition, power generation applications are expanding into fields such as waste heat recovery, heat scavenging and co-generation. We believe the current addressable markets serviced by our Marlow operations are approximately $300 million.

*Metal Matrix Composites and Reaction Bonded Ceramics Market.* Metal matrix composites ( MMC ) and reaction bonded ceramics products are found in applications requiring precision, lightweight, strength, hardness and matched coefficient of thermal expansion. Each market has its own unique requirements and applications that drive material selection. This is especially true in semiconductor tool applications that require advanced materials to meet the need for increased tolerance, enhanced thermal stability, faster wafer transfer speeds, increased yields and reduced stage settling times. The semiconductor markets employ SiC for wafer chucks, light-wave scanning stages and high temperature, corrosion resistant wafer support systems. Cooled SiC mirrors are used in the illumination systems of Extreme Ultraviolet ( EUV ) lithography tools. The industrial market uses a variety of ceramic materials for high temperature applications requiring chemical inertness such as Liquid Crystal Display ( LCD ) flat panel display capital equipment as well as refractory components and neutron absorbing plates used in the nuclear industry. The defense market uses MMCs for protective body armor as well as protection for ground, air and naval resources. We believe the current addressable markets serviced by our M Cubed operations are approximately $600 million.

*Silicon Carbide Substrate Market.* SiC is a wide bandgap semiconductor material that offers high-temperature, high-power and high-frequency capabilities as a substrate for applications at the high-performance end of the defense, telecommunication and industrial markets. SiC has certain intrinsic physical and electronic advantages over competing semiconductor materials such as Silicon and Gallium Arsenide. For example, the high thermal conductivity of SiC enables SiC-based devices to operate at high power levels and still dissipate the excess heat generated. Typically, our WBG customers deposit either SiC or Gallium Nitride (GaN) epitaxial layers on a SiC substrate and then fabricate electronic devices. SiC and GaN-based structures are being developed and deployed for the manufacture of a wide variety of microwave and power switching devices. High-power, high-frequency SiC-based microwave devices are used in next generation wireless switching telecommunication applications and in both commercial and military radar applications. SiC-based, high-power, high-speed devices improve the performance, efficiency and reliability of electrical power transmission and distribution systems ( smart grid ), as well as power conditioning and switching in power supplies and motor controls in a wide variety of applications including aircraft, hybrid vehicles, industrial, communications and green energy applications. We believe the current addressable market serviced by our WBG operations is approximately $100 million.

**Our Strategy**

Our strategy is to build businesses with world-class, engineered materials capabilities at their core. Our significant materials capabilities are as follows:

Infrared Optics: Zinc Selenide (ZnSe), Zinc Sulfide (ZnS), Zinc Sulfide Multi Spectral (ZnS-MS), and Chemical Vapor Deposition ( CVD ) Diamond

Near-Infrared Optics: Yttrium Aluminum Garnet (YAG), Yttrium Lithium Fluoride (YLF), Calcium Fluoride ($CaF_2$), Yttrium Vanadate ($YVO_4$), Potassium Titanyl Phosphate (KTP), Barium Borate Oxide (BBO), and Amorphous Silicon (a-Si)

Military Infrared Optics: Germanium (Ge)

Materials Processing and Refinement: Selenium (Se) for internal consumption and a Rare Earth Element

Thermoelectric Modules: Bismuth Telluride ($Bi_2Te_3$)

Metal Matrix Composites: Metal matrix composites (MMC), Reaction Bonded Ceramic (RB SiC and RB $B_4C$) and Aluminum Silicon Carbide (Al-SiC)

Silicon Carbide Substrates: Silicon Carbide (SiC)

We manufacture precision parts and components from these and other materials using our expertise in low damage surface and micro fabrication, thin-film coating and exacting metrology. A substantial portion of our business is based on sales orders with market leaders, which enable our forward planning and production efficiencies. We intend to continue capitalizing and executing on this proven model, participate effectively in the growth of the markets and continue our focus on operational excellence as we execute additional growth initiatives.

Our specific strategies are as follows:

*Vertical Integration*. By combining the capabilities of our various business segments and operating units, we have created opportunities for our businesses to address manufacturing opportunities across multiple disciplines and markets. Where appropriate, we develop and/or acquire technological capabilities in areas such as material refinement, crystal growth, fabrication, diamond-turning, thin-film coating, metrology and assembly.

*Investment in Manufacturing Operations*. We strategically invest in our manufacturing operations worldwide to increase production capacity and capabilities. The majority of our capital expenditures are used in our manufacturing operations.

*Enhance Our Reputation as a Quality and Customer Service Leader*. We are committed to understanding our customers needs and meeting their expectations. We have established ourselves as a consistent, high-quality supplier of components into our customers products. In many cases, we deliver on a just-in-time basis. We believe our quality and delivery performance enhances our relationships with our customers.

*Identify New Products and Markets.* We intend to identify new technologies, products and markets to meet evolving customer requirements for high performance engineered materials. Due to the special properties of the advanced materials we produce and/or refine, we believe there are numerous applications and markets for such materials.

*Utilize Asian Manufacturing Operations.* Our manufacturing operations in China, Singapore, Vietnam and the Philippines play an important role in the operational and financial performance of the Company. We will continue to strategically invest in these operations and utilize their lower-cost capabilities.

*Identify and Complete Strategic Acquisitions and Alliances*. We will carefully pursue strategic acquisitions and alliances with companies whose products or technologies may complement our current products, expand our market opportunities or create synergies with our current capabilities. We intend to identify acquisition opportunities that accelerate our access to emerging high-growth segments of the markets we serve and further leverage our competencies and economies of scale.

*Balanced Approach to Research and Development.* Our research and development program includes both internally and externally funded research and development expenditures, targeting an overall investment of between 5 and 7 percent of revenues. We are committed to accepting the right mix of internally and externally funded research that ties closely to our long-term strategic objectives.

**Our Products**

The main products for each of our markets are described as follows:

*Infrared Optics.* We supply a broad line of precision infrared opto-electronic components such as lenses, output couplers, windows, mirrors and scan-lenses for use in $CO_2$ lasers. Our precision opto-electronic components are used to attenuate the amount of laser energy, enhance the properties of the laser beam and focus and direct laser beams to a target work surface. The opto-electronic components include both reflective and transmissive optics and are made from materials such as zinc selenide, zinc sulfide, copper, silicon, gallium arsenide and germanium. Transmissive optics used with $CO_2$ lasers are predominately made from zinc selenide. We believe we are the largest manufacturer of zinc selenide in the world. We supply replacement optics to end users of $CO_2$ lasers. Over time, optics may become contaminated and must be replaced to maintain peak laser operations. This aftermarket portion of our business continues to grow as laser applications proliferate worldwide and the installed base of serviceable laser systems increases each year. We estimate that 85% to 90% of our infrared optics sales service this installed base of $CO_2$ laser systems. We serve the aftermarket via a combination of selling to OEMs and selling directly to system end users. We are also one of the leading producers of CVD diamond substrates for applications including multispectral laser optics, dielectric windows, heat sinks, and more. Diamond is the ultimate material for a wide variety of applications because of its outstanding physical properties, including extreme hardness and strength, high thermal conductivity, low thermal expansion, excellent dielectric properties, resistance to chemical attack, and optical transmission over a wide spectral range.

*One-Micron Laser Components.* Our broad expertise in laser technology, optics, sensor technology and laser applications enables us to supply a broad array of tools for laser materials processing, including modular laser processing heads for fiber lasers, YAG lasers and other one-micron laser systems. We also manufacture beam delivery systems including fiber optic cables and modular beam systems.

*Near-Infrared Optics.* We manufacture products across a broad spectral range, visible and near-infrared. We offer a wide variety of standard and custom laser gain materials, optics, optical components and optical module assemblies for optical communications, medical, life science, industrial, scientific and research and development laser systems. Laser gain materials are produced to stringent industry specifications and precisely fabricated to customer demands. Key materials and precision optical components for YAG, fiber lasers and other solid-state laser systems are an important part of our near-infrared optics product offerings. We manufacture wave-plates, polarizers, lenses, prisms and mirrors for visible and near-infrared applications, which are used to control or alter visible or near-infrared energy and its polarization. In addition, we manufacture specialty coated glass wafers used as optical filters in the life science market, and coated windows used as debris shields in the industrial and medical laser aftermarkets. We offer fiber optics, micro optics and photonic crystal parts for optical communications, optical and photonic crystal parts for instrumentation and laser applications, optical components and modules for optical communication networks, as well as diode pumped solid-state laser devices for optical instruments, display and biotechnology.

*Military Optics*. We offer optics and optical subassemblies for UV to infrared systems including thermal imaging, night vision, laser designation, missile warning, targeting and navigation systems. Our product offering is comprised of missile domes, electro-optical windows and subassemblies, imaging lenses, UV filter assemblies, laser cavity optics and prisms and other optical components. Our precision optical products utilize optical materials such as sapphire, germanium, zinc sulfide, zinc selenide, silicon and spinel. In addition, our products also include crystalline materials such as calcium fluoride, barium fluoride, yttrium aluminum garnet (YAG) and fused silica. Our products are currently utilized on the F-35 Joint Strike Fighter, F-16 fighter jet, Apache Attack Helicopter, unmanned platforms such as the Predator and Reaper UAV and ground vehicles such as the Abrams M-1 Tank and Bradley Fighting Vehicle as typical examples.

*Material Processing and Refinement.* Our product offering includes a rare earth element in specific purity levels and forms.

*Thermoelectric Modules and Assemblies.* We supply a broad array of TEMs and related assemblies to various market segments. In the defense market, TEMs are used in guidance systems, smart weapons and night vision systems, as well as soldier cooling. TEMs are also used in products providing temperature stabilization for telecommunication lasers that generate and amplify optical signals for fiber optic communication systems. TEMs are also used in gesture recognition technology. We also produce and sell a variety of solutions from thermoelectric components to complete sub-assemblies used in the medical equipment market and other industrial, commercial and personal comfort applications. Thermoelectric modules, used as power generators, are also applied in a range of end-use applications. We offer single-stage TEMs, micro TEMs, multi-stage TEMs, planar multi-stage TEMs, extended life thermo-cyclers, thermoelectric thermal reference sources, power generators and thermoelectric assemblies.

*Metal Matrix Composites and Reaction Bonded Ceramics.* We supply a diverse array of products to several market segments. In the semiconductor market, reaction bonded SiC is used to produce wafer chucks, electrostatic chucks and wafer / mask stages to high mechanical precision and assembled with integral heating strips to control temperature for use in next generation EUV Immersion Lithography. In the defense market we supply next generation personnel armor, monolithic helicopter seat tiles and vehicle and aviation armor tiles. In the industrial market we supply wear resistant components, refractory assemblies for glass production and neutron absorbing plates.

*Silicon Carbide*. Our product offerings are 6H-SiC (semi-insulating) and 4H-SiC (semi-conducting) poly-types and are available in sizes up to 150 mm diameter. SiC substrates are used in wireless infrastructure, radio frequency ( RF ) electronics, power conversion, power switching and thermal management applications.

**Research, Development and Engineering**

Our research and development program includes internally and externally funded research and development expenditures targeting an overall annual investment of between 5 and 7 percent of product revenues. From time to time, the ratio of externally funded contract activity to internally funded contract activity varies due to the unevenness of government funded research programs and changes in the focus of our internally funded research programs. We are committed to having the right mix of internally and externally funded research that ties closely to our long-term strategic objectives. The Company continues to believe that externally funded research and development will decrease in the near term due to governmental budget constraints.

We devote significant resources to research, development and engineering programs directed at the continuous improvement of our existing products and processes and to the timely development of new technologies, materials and products. We believe that our research, development and engineering activities are essential to our ability to establish and maintain a leadership position in each of the markets that we serve. As of June 30, 2013, we employed 767 people in research, development and engineering functions, 325 of whom are engineers or

scientists. In addition, certain manufacturing personnel support or participate in our research and development efforts on an ongoing basis. We believe the interaction between the development and manufacturing functions enhances the direction of our projects, reduces costs and accelerates technology transfers.

During the fiscal year ended June 30, 2013, we focused our research and development investments in the following areas:

*Silicon Carbide Substrate Technology*: SiC substrate technology development efforts continued to move forward, with emphasis in the areas of defect density reduction, substrate fabrication, surface polishing and diameter expansion. In fiscal year 2013, we continued work on a program funded by the Air Force Research Laboratory ( AFRL ) for development and manufacturing optimization of 100mm and 150mm 4H (semi-conducting) SiC substrates for high power switching applications and 6H (semi-insulating) SiC substrates for RF applications. We became one of the first SiC producers in the world to introduce 150mm substrates to the power device markets and the first to introduce 150mm semi-insulating substrates for RF applications. Our research and development efforts in all of these areas have been both internally and externally funded.

*CVD Diamond Technology*: The Company continued to develop CVD synthetic diamond materials for various optical applications, including EUV lithography. During fiscal year 2012, we began to commercially market our CVD synthetic diamond materials. Our research and development efforts in this area have been internally funded.

*Photonics Design:* We have ongoing efforts to design, refine and improve our photonic crystal materials, precision optical and micro-optical parts, passive and active optical components and modules, components for fiber lasers and laser devices for instrumentation and display. Our research and development efforts in this area have been internally funded.

*Micro-Optics Manufacturing*: Systems are driving towards smaller, more compact platforms and packages which are also reducing the size of the optical components that support these systems. In fiscal year 2013, the Company invested in equipment to manufacture substrates from 2mm-15mm using high-volume, computer-controlled manufacturing processes. We continued to support contract efforts funded by the Army Aviation and Missile Research, Development and Engineering Center (AMRDEC) to develop a deterministic process for manufacturing optics, which have only been successfully completed through laborious hand-polishing processes to date. Our research and development efforts in this area have been both internally and externally funded.

*Thermoelectric Materials and Devices:* We continued to develop the industry-leading $Bi_2Te_3$ Micro-Alloyed Materials ( MAM ) for thermoelectric cooling applications. Enabled by the thermal performance and fine grain microstructure of MAM, our research and development has focused on achieving levels of miniaturization and watt density beyond the reach of TEMs based on single crystal and polycrystalline materials produced by standard crystal growth techniques. In addition, we are developing capabilities in thermoelectric power generation materials that, combined with our intellectual property position, will allow us to bring to market new thermoelectric compounds. Our research and development efforts in this area have been both internally and externally funded.

*Metal Matrix Composites and Reaction Bonded Ceramics:* We continued to invest in new product development efforts to support OEMs in connection with new product development relating to 300mm and 450mm diameter for the lithography systems for the semiconductor industry. Our research and development efforts in this area have been internally funded.

The development of our products and manufacturing processes is largely based on proprietary technical know-how and expertise. We rely on a combination of contract provisions, trade secret laws, invention disclosures and

patents to protect our proprietary rights. We have entered into selective intellectual property licensing agreements. When faced with potential infringement of our proprietary information, we have in the past and will continue to assert and vigorously protect our intellectual property rights.

Internally funded research and development expenditures were $22.7 million, $21.4 million and $16.1 million for the fiscal years ended June 30, 2013, 2012 and 2011, respectively. For these same periods, externally funded research and development expenditures were $4.5 million, $7.0 million and $7.8 million, respectively.

**Marketing and Sales**

We market our products through a direct sales force and through representatives and distributors around the world. Our market strategy is focused on understanding our customers requirements and building market awareness and acceptance of our products. New products are continually being produced and sold to our established customers in all markets.

Each of our subsidiaries is responsible for its own worldwide marketing and sales functions, although certain subsidiaries sell more than one product line. However, there is significant cooperation and coordination between our subsidiaries to utilize the most efficient and appropriate marketing channel when addressing the diverse applications within markets. Our subsidiaries market their products as follows:

The Infrared Optics segment markets its products through a direct sales force in the U.S. and through our wholly-owned subsidiaries in Japan, Germany, China, Singapore, Belgium, Switzerland, the U.K. and Italy as well as through distributors throughout the rest of the world.

The one-micron laser marketing and sales activities are handled through a direct sales force in the U.S., Japan, Germany, Italy and Belgium as well as through distributors throughout the rest of the world.

The Near-Infrared Optics segment markets its products through its direct sales force in the U.S., China, Europe, Japan and Australia, and through distributors throughout the rest of the world.

The military infrared optics marketing and sales initiative is handled through a direct sales force in the U.S.

The TEMs marketing and sales initiative is handled through a direct sales force in the U.S., through our wholly-owned subsidiary in Germany, through direct sales forces located in II-VI offices in Japan, China and Singapore, as well as through distributors throughout the rest of the world.

The MMCs and reaction bonded ceramics marketing and sales initiative is handled through a direct sales force in the U.S.

The WBG s SiC marketing and sales initiative is handled through a direct sales force in the U.S. and through our wholly-owned international subsidiaries.

Our sales forces develop effective communications with our OEM and end-user customers worldwide. Products are actively marketed through targeted mailings, telemarketing, select advertising, and may be based on attendance at trade shows and customer partnerships. Our sales force includes a highly-trained team of application engineers to assist customers in designing, testing and qualifying our parts as key components of their systems. As of June 30, 2013, we employed 267 individuals in sales, marketing and support.

We do business with a number of customers in the defense industry, who in turn generally contract with a governmental entity, typically a U.S. governmental agency. Most governmental programs are subject to funding approval and can be modified or terminated without warning by a legislative or administrative body. The discussion provided in the section on Risk Factors set forth in Item 1A of this Annual Report on Form 10-K related to our exposure to government markets is incorporated herein by reference.

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**Manufacturing Technology and Processes**

As noted in the Our Strategy section, many of the products we produce depend on our ability to manufacture and refine technically challenging materials and components. The table below shows a representative number of these key materials.

| Product Line | Materials Produced/Refined |
|---|---|
| Infrared Optics | ZnSe, ZnS, ZnS-MS, CVD Synthetic Diamond |
| Near-Infrared Optics Photop Technologies, Inc. | $YVO_4$, YAG, YLF, $CaF_2$,KTP, BBO and a-Si |
| Military Optics | Ge, ZnSe, ZnS |
| Materials Processing and Refinement | Se and a Rare Earth Element |
| Thermoelectric Modules and Assemblies | $Bi_2Te_3$ |
| Metal Matrix Composites and Reaction Bonded Ceramics | Al/SiC MMC, RB SiC, RB $B_4C$ |
| Silicon Carbide Substrates | SiC |

The ability to produce, process and refine these difficult materials and to control their quality and yields is an expertise of the Company. Processing these materials into finished products is also difficult to accomplish; yet the quality and reproducibility of these products are critical to the performance of our customers instruments and systems. In the markets we serve, there are a limited number of suppliers of many of the components we manufacture and there are very few industry-standard products.

Our network of worldwide manufacturing sites allows us to manufacture our products in regions that provide cost-effective advantages and enable proximity to our customers. We employ numerous advanced manufacturing technologies and systems at our manufacturing facilities. These include automated Computer Numeric Control optical fabrication, high throughput thin-film coaters, micro-precision metrology and custom-engineered automated furnace controls for the crystal growth processes. Manufacturing products for use across the electro-magnetic spectrum requires the capability to repeatedly produce products with high yields to atomic tolerances. We embody a technology and quality mindset that gives our customers the confidence to utilize our products on a just-in-time basis straight into the heart of their production lines.

**Export and Import Compliance**

We are required to comply with various export/import control and economic sanction laws, including:

The International Traffic in Arms Regulations ( ITAR ) administered by the U.S. Department of State, Directorate of Defense Trade Controls, which, among other things, imposes license requirements on the export from the U.S. of defense articles and defense services which are items specifically designed or adapted for a military application and/or listed on the U.S. Munitions List;

The Export Administration Regulations ( EAR ) administered by the U.S. Department of Commerce, Bureau of Industry and Security, which, among other things, imposes licensing requirements on the export or re-export of certain dual-use goods, technology and software which are items that potentially have both commercial and military applications;

The regulations administered by the U.S. Department of Treasury, Office of Foreign Assets Control, which implement economic sanctions imposed against designated countries, governments and persons based on U.S. foreign policy and national security considerations; and

The import regulatory activities of the U.S. Customs and Border Protection.

Foreign governments have also implemented similar export and import control regulations, which may affect our operations or transactions subject to their jurisdiction. The discussion provided in the section on Risk Factors set forth in Item 1A of this Annual Report Form on Form 10-K related to our import and export compliance is incorporated herein by reference.

**Sources of Supply**

The major raw materials we use include zinc, selenium, zinc selenide, zinc sulfide, hydrogen selenide, hydrogen sulfide, tellurium, yttrium oxide, aluminum oxide, iridium, platinum, bismuth, silicon, thorium fluoride, antimony, carbon, gallium arsenide, copper, germanium, molybdenum, quartz, optical glass, diamond, and other materials. Excluding our own production, there are more than two external suppliers for all of the above materials except for zinc selenide, zinc sulfide, hydrogen selenide and thorium fluoride, for which there is only one proven source of supply outside of the Company s capabilities. For many materials, we have entered into purchase arrangements whereby suppliers provide discounts for annual volume purchases in excess of specified amounts.

The continued high-quality of and access to these materials is critical to the stability and predictability of our manufacturing yields. We conduct testing of materials at the onset of the production process. Additional research and capital investment may be needed to better define future starting material specifications. We have not experienced significant production delays due to shortages of materials. However, we do occasionally experience problems associated with vendor-supplied materials not meeting contract specifications for quality or purity. As set forth in Item 1A of this Annual Report on Form 10-K, significant failure of our suppliers to deliver sufficient quantities of necessary high-quality materials on a timely basis could have a materially adverse effect on our results of our operations.

**Customers**

Our existing customer base for infrared optics, including our laser component products, consists of over 6,500 customers worldwide. The main groups of customers for these products are as follows:

OEM and system integrators of industrial, medical and military laser systems. Representative customers include Trumpf, Inc., Bystronic, Inc. and Rofin-Sinar Technologies.

Laser end users who require replacement optics for their existing laser systems. Representative customers include Caterpillar, Inc. and Honda of America Mfg., Inc.

Military and aerospace customers who require products for use in advanced targeting, navigation and surveillance. Representative customers include Lockheed Martin Corporation and Northrop Grumman Corporation.

For our one-micron laser products, our customers are automotive manufacturers, laser manufacturers and system integrators. Representative customers include Volkswagen Corporation and Laserline Gmbh.

For our near-infrared optics, components and modules products our customers are worldwide network system and sub-system providers of telecommunications, data communications and cable TV, as well as global manufacturers of commercial and consumer products such as instrumentation, fiber laser, display and projection devices. Representative customers include Huawei Technologies, Co., Ltd., Corning Incorporated, JDS Uniphase Corporation, and Google, Inc.

For our military optics products, our customers are manufacturers of equipment and devices for aerospace, defense, medical and commercial markets. Representative customers include Lockheed Martin Corporation, Raytheon Company, bio-medical system providers and various U.S. Government agencies.

For our thermoelectric products, our customers manufacture and develop equipment and devices for defense, space, telecommunications, medical, industrial, automotive, gesture recognition and commercial markets. Representative customers include Bio-Rad Laboratories, Inc., Raytheon Company and Flextronics International.

The main group of customers for our MMCs and reaction bonded ceramics products are as follows:

Manufacturers and developers of integrated circuit capital equipment for the semiconductor industry. Representative customers include ASML Holdings NV, Carl Zeiss Group and KLA Tencor.

Manufacturers and developers of refractory structures and neutron absorption components for industrial markets. Representative customers include Corning Incorporated and Alstom.

For our SiC products, our customers are manufacturers and developers of equipment and devices for high-power RF electronics and high-power and high-voltage switching and power conversion systems for both the U.S. Department of Defense and commercial applications.

**Competition**

We believe that we are a significant producer of products and services in our addressed markets. In the area of infrared laser optics and materials, we believe we are an industry leader. We believe that we are an industry leader in laser material processing tools for high-power one-micron laser systems. We are a significant supplier of laser and optical crystals and near-infrared laser optics to the worldwide markets for scientific, research, medical and industrial applications. We are a leading photonics designer and integrated supplier of fiber optics, micro optics, precision optics, optical components and modules, and photonics crystal materials for optical communications applications. We are a leading supplier of UV to infrared optics, optical assemblies and YAG laser rods used in complex military assemblies for targeting, navigation and thermal imaging systems to major military prime contractors. We believe we are a leading supplier of selenium metal products for infrared optics applications and an emerging rare earth refiner. We believe we are a global leader in the design and manufacturer of TEMs and thermal control assemblies. We believe we are a global leader in the development of advanced materials and ceramics manufacturing processes in the fields of MMCs and reaction bonded ceramics. We believe we are a global leader in the manufacturing of single crystal semi-insulating SiC substrates for use in the defense and telecommunication markets, and a preferred alternative to the current leading supplier of SiC for industrial markets.

We compete on the basis of product technical specifications, quality, delivery time, technical support and pricing. Management believes that we compete favorably with respect to these factors and that our vertical integration, manufacturing facilities and equipment, experienced technical and manufacturing employees and worldwide marketing and distribution channels provide us with competitive advantages.

We have a number of present and potential competitors that are larger and have greater financial, selling, marketing and/or technical resources. Competitors producing infrared laser optics include Sumitomo Electric Industries, Ltd. and Newport Corporation. Competing producers of automated equipment and laser material processing tools to deliver high power one-micron laser systems include Optoskand AB and Precitec, Inc. Competing producers of optical component and optics products include O-Net Communications, OPLINK Communication and Axsun. Competing producers of infrared optics for military applications include DRS Technologies, Inc., Goodrich Corporation and in-house fabrication and thin film coating capabilities of major military customers. Competing producers of TEMs include Komatsu, Ltd., Laird Technologies and Ferrotec Corporation. Competing producers of MMCs and reaction bonded ceramics products include Berliner Glass, and Coorstek. Competing producers of single crystal SiC substrates include Cree, Inc., Dow Corning Corporation, Nippon Steel and SiCrystal AG.

In addition to competitors who manufacture products similar to those we produce, there are other technologies and products available that may compete with our technologies and products.

**Bookings and Backlog**

We define our bookings as customer orders received that are expected to be converted to revenues over the next twelve months. For long-term customer orders, the Company records only those orders which are expected to be converted into revenues within twelve months from the end of the reporting period due to the inherent uncertainty of an order that far in the future. For the year ended June 30, 2013, our bookings were approximately $527 million compared to bookings of approximately $535 million for the year ended June 30, 2012.

We define our backlog as bookings that have not been converted to revenues by the end of the reporting period. Bookings are adjusted if changes in customer demands or production schedules move a delivery beyond twelve months. As of June 30, 2013, our backlog was approximately $184 million compared to approximately $179 million at June 30, 2012.

**Employees**

As of June 30, 2013, we employed 6,185 persons worldwide. Of these employees, 767 were engaged in research, development and engineering, 4,591 in direct production (of which 824 are employees of Photop in China who work under contract manufacturing arrangements for customers of the Company) and the remaining balance of the Company s employees work in sales and marketing, administration, finance and support services. Our production staff includes highly skilled optical craftsmen. We have a long-standing practice of encouraging active employee participation in areas of operations management. We believe our relations with our employees are good. We reward our employees with incentive compensation based on achievement of performance goals. There are 174 employees located in the United States and the Philippines that are covered under collective bargaining agreements.

**Trade Secrets, Patents and Trademarks**

We rely on our trade secrets, proprietary know-how, invention disclosures and patents to help us develop and maintain our competitive position. We aggressively pursue process and product patents in certain areas of our businesses. We have confidentiality and noncompetition agreements with certain personnel. We require that all U.S. employees sign a confidentiality and noncompetition agreement upon their commencement of employment with us.

The processes and specialized equipment utilized in crystal growth, infrared materials fabrication and infrared optical coatings as developed by us are complex and difficult to duplicate. However, there can be no assurance that others will not develop or patent similar technology or that all aspects of our proprietary technology will be protected. Others have obtained patents covering a variety of infrared optical configurations and processes, and others could obtain patents covering technology similar to our technology. We may be required to obtain licenses under such patents, and there can be no assurance that we would be able to obtain such licenses, if required, on commercially reasonable terms, or that claims regarding rights to technology will not be asserted which may adversely affect our results of operations. In addition, our research and development contracts with agencies of the U.S. Government present a risk that project-specific technology could be disclosed to competitors as contract reporting requirements are fulfilled.

The following is a representative listing of our currently held registered tradenames and trademarks:

II-VI Incorporated(TM) tradename

Infraready Optics(TM) tradename

MP-5(TM) tradename

Marlow Industries, Inc.(TM) tradename and trademark

Photop Technologies, Inc.(TM) tradename

VLOC Incorporated(TM) trademark

Aegis Lightwave, Inc.(TM) trademark

M Cubed Technologies, Inc.(TM) tradename

LightWorks Optical Systems(TM) tradename

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**Item 1A. RISK FACTORS**

The Company cautions investors that its performance and, therefore, any forward-looking statement, is subject to risks and uncertainties. Various important factors including, but not limited to, the following may cause the Company s future results to differ materially from those projected in any forward-looking statement. You should carefully consider these factors, as well as the other information contained in this Annual Report on Form 10-K when evaluating an investment in our securities.

**General Global Economic Conditions May Adversely Affect Our Business, Operating Results and Financial Condition**

Current and future conditions in the global economy have an inherent degree of uncertainty. As a result, it is difficult to estimate the level of growth or contraction for the global economy as a whole. It is even more difficult to estimate growth or contraction in various parts, sectors and regions of the economy, including industrial, military, optical communications, telecommunications, semiconductor, photovoltaic and medical markets in which we participate. Because all components of our forecasting are dependent upon estimates of growth or contraction in the markets we serve and demand for our products, the prevailing global economic uncertainties render estimates of future income and expenditures very difficult to make. In addition, changes in general economic conditions may affect industries in which our customers operate. These changes could include decreases in the rate of consumption or use of our customers products due to economic downturn, and such conditions could have a material adverse effect on demand for our customers products and, in turn, on demand for our products. Adverse changes may occur in the future as a result of declining or flat global or regional economic conditions, fluctuations in currency and commodity prices, wavering confidence, capital expenditure reductions, unemployment, decline in stock markets, contraction of credit availability or other factors affecting economic conditions generally. For example, factors that may affect our operating results include disruptions to the credit and financial markets in the U.S., Europe and elsewhere; adverse effects of the ongoing sovereign debt crisis in Europe; contractions or limited growth in consumer spending or consumer credit; and adverse economic conditions that may be specific to the Internet, e-commerce and payments industries. These changes may negatively affect sales of products, increase exposure to losses from bad debt and commodity prices, and increase the cost and availability of financing and increase costs associated with manufacturing and distributing products. Any economic downturn could have a material adverse effect on our business, results of operations or financial condition.

**Our Future Success Depends on International Sales and Management of Global Operations**

Sales to customers in countries other than the U.S. accounted for approximately 57%, 60% and 59% of revenues during the years ended June 30, 2013, 2012 and 2011, respectively. We anticipate that international sales will continue to account for a significant portion of our revenues for the foreseeable future. In addition, we manufacture products in China, Singapore, Vietnam, the Philippines, Germany and Australia and maintain direct sales offices in Japan, Germany, Switzerland, the U.K., Belgium, China, Singapore and Italy. Sales and operations outside of the U.S. are subject to certain inherent risks, including fluctuations in the value of the U.S. dollar relative to foreign currencies, the current global economic uncertainties, tariffs, quotas, taxes and other market barriers, political and economic instability, restrictions on the export or import of technology, potentially limited intellectual property protection, difficulties in staffing and managing international operations and potentially adverse tax consequences. There can be no assurance that any of these factors will not have a material adverse effect on our business, results of operations or financial condition. In particular, currency exchange fluctuations in countries where we do business in the local currency could have a material adverse effect on our business, results of operations or financial condition by rendering us less price-competitive than foreign manufacturers.

**Commodity Prices May Adversely Affect Our Results of Operations and Financial Condition**

We are exposed to a variety of market risks, including the effects of changes in commodity prices. Our businesses purchase, produce and sell high purity selenium and other raw materials based upon quoted market prices from minor metal exchanges. As a result, the negative impact from changes in commodity prices, such as the recent decline in global selenium prices which may not be recovered in our product sales, could have a material adverse effect on our business, results of operations or financial condition. In the event that the global index price of selenium experiences a further decline from its current level, the Company would be required to record an additional write-down of its selenium inventory in future periods.

**Continued U.S. Budget Deficits and Ongoing Sequestration Could Result in Significant Defense Spending Cuts**

Specific to the military business within our Infrared Optics, Military & Materials and Advanced Products Group segments, sales to customers in the defense industry totaled approximately 20% of revenues in the fiscal year ended June 30, 2013. These customers in turn generally contract with a governmental entity, typically a U.S. governmental agency. Continued record U.S. Federal budget deficits and ongoing cuts resulting from sequestration could result in reductions in defense spending, which could result in delays and/or cancellations of major programs. Most governmental programs are subject to funding approval and can be modified or terminated with no warning upon the determination of a legislative or administrative body. The loss of or failure to obtain certain contracts or the loss of a major government customer could have a material adverse effect on our business, results of operations or financial condition.

**A Significant Portion of Our Business is Dependent on Other Cyclical Industries**

Our business is significantly dependent on the demand for products produced by end-users of industrial lasers and optical communication products. Many of these end-users are in industries that have historically experienced a highly cyclical demand for their products. As a result, demand for our products is subject to cyclical fluctuations. This cyclical demand could have a material adverse effect on our business, results of operations or financial condition.

**There Are Limitations on the Protection of Our Intellectual Property**

We rely on a combination of trade secrets, patents, copyright and trademark laws combined with employee noncompetition and nondisclosure agreements to protect our intellectual property rights. There can be no assurance that the steps taken by us will be adequate to prevent misappropriation of our technology or intellectual property. Furthermore, there can be no assurance that third-parties will not assert infringement claims against us in the future. Asserting our intellectual property rights or defending against third-party claims could involve substantial expense, thus materially and adversely affecting our business, results of operations or financial condition. In the event a third-party were successful in a claim that one of our processes infringed its proprietary rights, we could be required to pay substantial damages or royalties, or expend substantial amounts in order to obtain a license or modify processes so that they no longer infringe such proprietary rights, any of which could have a material adverse effect on our business, results of operations or financial condition.

**We Depend on Highly Complex Manufacturing Processes Which Require Products from Limited Sources of Supply**

We utilize high-quality, optical grade zinc selenide (ZnSe) in the production of many of our infrared optical products. We are the leading producer of ZnSe for our internal use and for external sale. The production of ZnSe is a complex process requiring a highly controlled environment. A number of factors, including defective or contaminated materials, could adversely affect our ability to achieve acceptable manufacturing yields of high quality ZnSe. ZnSe is available from only one significant outside source whose quantities and quality of ZnSe

may be limited. Lack of adequate availability of high quality ZnSe would have a material adverse effect upon us. There can be no assurance that we will not experience manufacturing yield inefficiencies which could have a material adverse effect on our business, results of operations or financial condition.

We produce Hydrogen Selenide gas which is used in our production of ZnSe. There are risks inherent in the production and handling of such material. Our lack of proper handling of Hydrogen Selenide could require us to curtail our production of Hydrogen Selenide. Hydrogen Selenide is available from only one outside source whose quantities and quality may be limited. The cost of purchasing such material is greater than the cost of internal production. As a result, the purchase of a substantial portion of such material from the outside source would increase our ZnSe production costs. Therefore, an inability to internally produce Hydrogen Selenide could have a material adverse effect on our business, results of operations or financial condition.

In addition, we produce and utilize other high purity and relatively uncommon materials and compounds to manufacture our products including, but not limited to, Zinc Sulfide (ZnS), Yttrium Aluminum Garnet (YAG), Yttrium Lithium Flouride (YLF), Calcium Flouride ($CaF_{2)}$, Germanium (Ge), Selenium (Se), Telluride (Te), Bismuth Telluride ($Bi_2Te_3$) and Silicon Carbide (SiC). A significant failure of our internal production processes or our suppliers to deliver sufficient quantities of these necessary materials on a timely basis could have a material adverse effect on our business, results of operations or financial condition.

**New Regulations Related to Conflict Minerals Could Adversely Impact our Business.**

The Dodd-Frank Wall Street Reform and Consumer Protection Act contain provisions to improve transparency and accountability concerning the supply of certain minerals, known as conflict minerals, originating from the Democratic Republic of Congo (DRC) and adjoining countries. Pursuant to these rules, in August 2012 the SEC adopted certain annual disclosure and reporting requirements for those companies that use conflict minerals in their products, regardless of whether such minerals were mined from the DRC and adjoining countries, beginning in May 2014. We could incur significant costs associated with complying with these disclosure requirements, including costs related to our due diligence efforts to determine the sources of any conflict minerals used in our products. These rules could adversely affect the sourcing, supply and pricing of materials we use in our products, if it turns out that there are only a limited number of suppliers offering conflict free conflict minerals. We cannot be sure that we will be able to obtain conflict free products from such suppliers in sufficient quantities or at competitive prices. Also, we may face reputational challenges if we determine that certain of our products contain conflict minerals which are not conflict free, or if we are unable to sufficiently verify the origins of all of the conflict minerals used in our products through the due diligence procedures we implement.

**We May Expand Product Lines and Markets by Acquiring Other Businesses**

Our business strategy includes expanding our product lines and markets through internal product development and acquisitions. Any acquisition could result in potentially dilutive issuances of our equity securities, the incurrence of debt, contingent liabilities and amortization expense related to intangible assets acquired, any of which could have a material adverse effect on our business, results of operations or financial condition. In addition, acquired businesses may experience operating losses as of, and subsequent to, the acquisition date. Any acquisition will involve numerous risks, including difficulties in the assimilation of the acquired company s operations and products, uncertainties associated with operating in new markets and working with new customers and the potential loss of the acquired company s key personnel.

The following information relates to acquisitions made during the periods presented in this Annual Report on Form 10-K.

| Acquired Party | Year Acquired | Business Segments | Percentage Ownership as of June 30, 2013 |
|---|---|---|---|
| M Cubed Technologies, Inc. | Fiscal 2013 | Advanced Products Group | 100% |
| The Thin Film Filter business and Interleaver Product Line of Oclaro, Inc. | Fiscal 2013 | Near-Infrared Optics | 100% |
| LightWorks Optics, Inc. | Fiscal 2013 | Military & Materials | 100% |
| Aegis Lightwave, Inc. | Fiscal 2012 | Near-Infrared Optics | 100% |
| Max Levy Autograph, Inc. | Fiscal 2011 | Military & Materials | 100% |

**Some Systems Are Complex in Design and May Contain Defects that Are Not Detected Until Deployed Which Could Increase Our Costs and Reduce Our Revenues**

Some systems that utilize our products are inherently complex in design and require ongoing maintenance. As a result of the technical complexity of our products, changes in our or our suppliers manufacturing processes or the use of defective or contaminated 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 acceptable yields or product reliability, our business, results of operation, financial condition or customer relationships could be materially adversely affected.

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. Should problems occur, it may be difficult to identify the source of the problem. If we are unable to 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; or legal action by our customers. The occurrence of any one or more of the foregoing factors could have a material adverse effect on our business, results of operations or financial condition.

**We May Encounter Substantial Competition**

We may encounter substantial competition from other companies in the same market, including established companies with significant resources. Some of our competitors may have financial, technical, marketing or other capabilities more extensive than ours and may be able to respond more quickly than we can to new or emerging technologies and other competitive pressures. We may not be able to compete successfully against our present or future competitors, and such competition could have a material adverse effect on our business, results of operations or financial condition.

**The Market Price of Our Common Stock and the Stock Market in General Can Be Highly Volatile**

Factors that could cause fluctuation in our stock price include, among other things: general economic and market conditions; actual or anticipated variations in operating results; changes in financial estimates by securities analysts; our inability to meet or exceed securities analysts estimates or expectations; conditions or trends in the industries in which our products are purchased; announcements by us or our competitors of significant acquisitions, strategic partnerships, divestitures, joint ventures or other strategic initiatives; capital commitments; additions or departures of key personnel; and sales of our Common Stock.

Many of these factors are beyond our control. These factors could cause the market price of our Common Stock to decline, regardless of our actual operating performance.

**Because we do not Currently Intend to Pay Dividends, Shareholders Will Benefit From an Investment in our Common Stock Only if it Appreciates in Value**

We have never declared or paid any dividends on our common stock. We currently anticipate that we will retain any future earnings to support operations and to finance the development of our business and do not expect to pay cash dividends in the foreseeable future. As a result, the success of an investment in our common stock will depend entirely upon any future appreciation in its value. There is no guarantee that our common stock will appreciate in value or even maintain the price at which a shareholder originally purchased its shares.

**Our Success Depends on Our Ability to Retain Key Personnel**

We are highly dependent upon the experience and continuing services of certain scientists, engineers, production and management personnel. Competition for the services of these personnel is intense, and there can be no assurance that we will be able to retain or attract the personnel necessary for our success. The loss of the services of our key personnel could have a material adverse effect on our business, results of operations or financial condition.

**Our Success Depends on New Products and Processes**

In order to meet our strategic objectives, we must continue to develop, manufacture and market new products, develop new processes and improve existing processes. As a result, we expect to continue to make significant investments in research and development and to continue to consider from time to time the strategic acquisition of businesses, products or technologies complementary to our business. Our success in developing, introducing and selling new and enhanced products depends upon a variety of factors including product selection, timely and efficient completion of product design and development, timely and efficient implementation of manufacturing and assembly processes, effective sales and marketing and product performance in the field. There can be no assurance that we will be able to develop and introduce new products or enhancements to our existing products and processes in a manner which satisfies customer needs or achieves market acceptance. The failure to do so could have a material adverse effect on our ability to grow our business.

**Keeping Pace with Key Industry Developments is Essential**

We are engaged in industries which will be affected by future developments. The introduction of products or processes utilizing new developments could render existing products or processes obsolete or unmarketable. Our continued success will depend upon our ability to develop and introduce, in a timely and cost-effective basis, new products, processes and applications that keep pace with developments and address increasingly sophisticated customer requirements. There can be no assurance that we will be successful in identifying, developing and marketing new products, applications and processes and that we will not experience difficulties that could delay or prevent the successful development, introduction and marketing of product or process enhancements or new products, applications or processes, or that our products, applications or processes will adequately meet the requirements of the marketplace and achieve market acceptance. Our business, results of operations and financial condition could be materially and adversely affected if we were to incur delays in developing new products, applications or processes or if we do not gain market acceptance for the same.

**Changes in Tax Rates, Tax Liabilities or Tax Accounting Rules Could Affect Future Results**

As a global company, we are subject to taxation in the U.S. and various other countries and jurisdictions. As such, we must exercise a level of judgment in determining our worldwide tax liabilities. Our future tax rates could be affected by changes in the composition of earnings in countries with differing tax rates or changes in tax laws. Changes in tax laws or tax rulings may have a significantly adverse impact on our effective tax rate. For

example, proposals for fundamental U.S. international tax reform, if enacted, could have a significant adverse impact on our effective tax rate. In addition, we are subject to regular examination of our income tax returns by the Internal Revenue Service and other tax authorities. We regularly assess the likelihood of favorable or unfavorable outcomes resulting from these examinations to determine the adequacy of our provision for income taxes. Although we believe our tax estimates are reasonable, there can be no assurance that any final determination will not be materially different than the treatment reflected in our historical income tax provision and accruals, which could materially and adversely affect our business, results of operation or financial condition.

**Declines in the Operating Performance of One of Our Business Segments Could Result in an Impairment of the Segment s Goodwill and Indefinite-Lived Intangible Assets**

As of June 30, 2013, we had goodwill and indefinite-lived intangible assets of approximately $123.4 million and $16.4 million, respectively, on our Consolidated Balance Sheets. We test our goodwill and indefinite-lived intangible assets for impairment on an annual basis or when an indication of possible impairment exists, to determine whether the carrying value of our assets is still supported by the fair value of the underlying business. To the extent that it is not, we are required to record an impairment charge to reduce the asset to fair value. A decline in the operating performance of any of our business segments could result in an impairment charge which could have a material adverse effect on our results of operations or financial condition.

**Provisions in Our Articles of Incorporation and By-Laws May Limit the Price that Investors May be Willing to Pay in the Future for Shares of Our Common Stock**

Our articles of incorporation and by-laws contain provisions which could make us a less attractive target for a hostile takeover or make more difficult or discourage a merger proposal, a tender offer or a proxy contest. Such provisions include: classification of the board of directors into three classes; a requirement that shareholder nominated board nominees be nominated in advance of a meeting to elect such directors and that specific information be provided in connection with such nomination; the ability of the board of directors to issue additional shares of Common Stock or preferred stock without shareholder approval; and certain provisions requiring supermajority approval (at least two-thirds of the votes cast by all shareholders entitled to vote thereon, voting together as a single class). In addition, the Pennsylvania Business Corporation Law contains provisions which may have the effect of delaying or preventing a change in control of the Company. All of these provisions may limit the price that investors may be willing to pay for shares of our Common Stock.

**We Are Subject to Stringent Environmental Regulation**

We use or generate certain hazardous substances in our research and manufacturing facilities. We believe that our handling of such substances is in material compliance with applicable local, state and federal environmental, safety and health regulations at each operating location. We invest substantially in proper protective equipment, process controls and specialized training to minimize risks to employees, surrounding communities and the environment resulting from the presence and handling of such hazardous substances. We regularly conduct employee physical examinations and workplace monitoring regarding such substances. When exposure problems or potential exposure problems have been uncovered, corrective actions have been implemented and re-occurrence has been minimal or non-existent. We do not carry environmental impairment insurance.

We have in place an emergency response plan with respect to our generation and use of the hazardous substance Hydrogen Selenide. Special attention has been given to all procedures pertaining to this gaseous material to minimize the chances of its accidental release into the atmosphere.

With respect to the manufacturing, use, storage and disposal of the low-level radioactive material Thorium Fluoride, our facilities and procedures have been inspected and licensed by the Nuclear Regulatory Commission. Thorium-bearing by-products are collected and shipped as solid waste to a government-approved low-level radioactive waste disposal site in Clive, Utah.

The generation, use, collection, storage and disposal of all other hazardous by-products, such as suspended solids containing heavy metals or airborne particulates, are believed by us to be in material compliance with regulations. We believe that we have obtained all of the permits and licenses required for operation of our business.

Although we do not know of any material environmental, safety or health problems in our properties or processes, there can be no assurance that problems will not develop in the future which could have a material adverse effect on our business, results of operations or financial condition.

**We Are Subject to Governmental Regulation**

We are subject to extensive regulation by U.S. and non-U.S. governmental entities and other entities at the federal, state and local levels, including, but not limited to, the following:

- We are required to comply with various import laws and export control and economic sanctions laws, which may affect our transactions with certain customers, business partners and other persons, including in certain cases dealings with or between our employees and subsidiaries. In certain circumstances, export control and economic sanctions regulations may prohibit the export of certain products, services and technologies, and in other circumstances we may be required to obtain an export license before exporting the controlled item. Compliance with the various import laws that apply to our businesses may restrict our access to, and may increase the cost of obtaining, certain products and could interrupt our supply of imported inventory.

- Exported technology necessary to develop and manufacture certain of the Company s products are subject to U.S. export control laws and similar laws of other jurisdictions, and the Company may be subject to adverse regulatory consequences, including government oversight of facilities and export transactions, monetary penalties and other sanctions for violations of these laws. In many cases, exports of technology necessary to develop and manufacture the Company s products are subject to U.S. export control laws. In certain instances, these regulations may prohibit the Company from developing or manufacturing certain of its products for specific end applications outside the U.S.

- Our agreements relating to the sale of products to government entities may be subject to termination, reduction or modification in the event of changes in government requirements, reductions in federal spending and other factors. We are also subject to investigation and audit for compliance with the requirements of government contracts, including requirements related to procurement integrity, export control, employment practices, the accuracy of records and the recording of costs. A failure to comply with these requirements might result in suspension of these contracts and suspension or debarment from government contracting or subcontracting.

In addition, failure to comply with any of these laws and regulations could result in civil and criminal, monetary and non-monetary penalties, disruptions to our business, limitations on our ability to import and export products and services and damage to our reputation.

**Natural Disasters or Other Global or Regional Catastrophic Events Could Disrupt Our Operations and Adversely Affect Results**

Despite our concerted effort to minimize risk to our production capabilities and corporate information systems and to reduce the effect of unforeseen interruptions to us through business continuity planning, we still may be exposed to interruptions due to catastrophe, natural disaster, pandemic, terrorism or acts of war which are beyond our control. Disruptions to our facilities or systems, or to those of our key suppliers, could also interrupt operational processes and adversely impact our ability to manufacture our products and provide services and support to our customers. As a result, our business, results of operations or financial condition could be materially adversely affected.

**We Rely on Stable Information and Communication Technologies; Outages or Control Breakdowns Could Disrupt our Operations and Impact Our Financial Results**

We have in place a number of controls, processes and practices designed to protect against intentional or unintentional misappropriation or corruption of our networks, systems and information or disruption of our operations due to a cyber-incident. Despite such efforts, we could be subject to service outages or breaches of security systems which may result in disruption, unauthorized access, misappropriation, or corruption of the information we are trying to protect. Security breaches of our network or data including physical or electronic break-ins, vendor service outages, computer viruses, attacks by hackers or similar breaches, can create system disruptions, shutdowns, or unauthorized disclosure of confidential information. If we are unable to prevent such security or privacy breaches, our operations could be disrupted or we may suffer loss of reputation, financial loss, property damage, or regulatory penalties because of lost or misappropriated information.

**Recently Issued Financial Accounting Standards**

In March 2013, the Financial Accounting Standards Board ( FASB ) issued an accounting standards update related to a parent s accounting for the cumulative translation adjustment upon de-recognition of certain subsidiaries or groups of assets within a foreign entity or of an investment in a foreign entity. The update clarifies the applicable guidance under current U.S. generally accepted accounting principles for the release of the cumulative translation adjustment upon a reporting entity s de-recognition of a subsidiary or group of assets within a foreign entity or part or all of its investment in a foreign entity. The update requires a reporting entity, which either sells a part or all of its investment in a foreign entity or ceases to have a controlling financial interest in a subsidiary or group of assets within a foreign entity, to release any related cumulative translation adjustment into net income. This update is effective prospectively for fiscal years beginning after December 15, 2013 and will be effective for the Company beginning in the first quarter of fiscal year 2015. The adoption of this standard is not expected to have a significant impact on the Company s consolidated financial statements.

In February 2013, the FASB issued an accounting standards update related to disclosure requirements of reclassifications out of accumulated other comprehensive income. The adoption of the guidance requires the Company to provide information about the amounts reclassified out of accumulated other comprehensive income by component. In addition, the Company is required to present, either on the face of the statement where net income is presented or in the notes, significant amounts reclassified from each component of accumulated other comprehensive income and the income statement line items affected by the reclassification. This update will be effective for the Company beginning in the first quarter of fiscal year 2014 and is not expected to have a significant impact on the Company s consolidated financial statements. In July 2012, the FASB issued an accounting standards update related to impairment testing of indefinite-lived intangible assets. The update simplified the guidance of testing for potential impairment of indefinite-lived intangible assets other than goodwill. The amendment provides entities the option to first assess qualitative factors to determine whether it is necessary to perform the quantitative impairment test. An entity electing to perform a qualitative assessment is no longer required to calculate the fair value of an indefinite-lived intangible asset unless the organization determines, based on a qualitative assessment, that it is more likely than not (that is, a likelihood of more than 50 percent) that the asset is impaired. The amendments in this update are effective for annual and interim impairment tests performed for fiscal years beginning after September 15, 2012. Early adoption was permitted. The adoption of this standard did not have a significant impact on the Company s consolidated financial statements and indefinite-lived intangible asset impairment testing.

In September 2011, the FASB issued an accounting standards update related to goodwill impairment testing. The objective of the accounting standards update was to simplify how entities test goodwill for impairment by permitting an assessment of qualitative factors to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying amount as a basis for determining whether it is necessary to perform the two-step goodwill impairment test. This update also allowed entities an unconditional option to bypass this qualitative assessment and proceed directly to performing the first step of the goodwill impairment test. An entity

may resume performing the qualitative assessment in any subsequent period. This accounting standard update was effective for annual and interim goodwill impairment tests performed for fiscal years beginning on or after December 15, 2011, with early adoption permitted. The adoption of this standard did not have a significant impact on the Company s consolidated financial statements and goodwill impairment testing.

In June 2011, the FASB issued changes to the presentation of comprehensive income that require entities to present the total of comprehensive income, the components of net income, and the components of other comprehensive income either in a single continuous statement of comprehensive income or in two separate but consecutive statements. The option to present components of other comprehensive income as part of the statement of changes in stockholders equity is no longer permitted. This guidance, with retrospective application, was adopted by the Company in the first quarter of fiscal year 2013. Other than the change in presentation, these changes have had no impact on the consolidated financial statements and the calculation and presentation of earnings per share.

**Item 1B. UNRESOLVED STAFF COMMENTS**

None.

**Item 2. PROPERTIES**

Information regarding our principal U.S. properties at June 30, 2013 is set forth below:

| Location | Primary Use(s) | Primary Business Segment(s) | Square Footage | Ownership |
|---|---|---|---|---|
| Saxonburg, PA | Manufacturing, Corporate Headquarters and Research and Development | Infrared Optics and Advanced Products Group | 252,000 | Owned and Leased |
| Newark, DE | Manufacturing and Research and Development | Advanced Products Group | 90,000 | Leased |
| Temecula, CA | Manufacturing and Research and Development | Military & Materials | 87,000 | Leased |
| Dallas, TX | Manufacturing and Research and Development | Advanced Products Group | 68,000 | Owned and Leased |
| New Port Richey and Port Richey, FL | Manufacturing and Research and Development | Military & Materials and Near-Infrared Optics | 67,000 | Owned |
| Monroe, CT | Manufacturing and Research and Development | Advanced Products Group | 48,000 | Leased |
| Tustin, CA | Manufacturing and Research and Development | Military & Materials | 37,000 | Leased |
| Santa Rosa, CA | Manufacturing and Research and Development | Near-Infrared Optics | 33,000 | Leased |
| Philadelphia, PA | Manufacturing and Research and Development | Military & Materials | 30,000 | Leased |
| Pine Brook, NJ | Manufacturing and Research and Development | Advanced Products Group | 26,000 | Leased |

| | | | | |
|---|---|---|---|---|
| Newtown, CT | Manufacturing and<br><br>Research and Development | Advanced Products Group | 19,000 | Leased |

| Location | Primary Use(s) | Primary Business Segment(s) | Square Footage | Ownership |
|---|---|---|---|---|
| Woburn, MA | Manufacturing and Research and Development | Near-Infrared Optics | 17,000 | Leased |
| Vista, CA | Manufacturing and Research and Development | Military & Materials | 10,000 | Leased |
| Starkville, MS | Manufacturing | Advanced Products Group | 10,000 | Leased |
| Flemington, NJ | Manufacturing and Research and Development | Near-Infrared Optics | 5,000 | Leased |
| Sunnyvale, CA | Distribution | Near-Infrared Optics | 2,300 | Leased |

Information regarding our principal foreign properties at June 30, 2013 is set forth below:

| Location | Primary Use(s) | Primary Business Segment(s) | Square Footage | Ownership |
|---|---|---|---|---|
| China | Manufacturing | Infrared Optics, Near-Infrared Optics and Advanced Products Group | 1,030,000 | Leased |
| Philippines | Manufacturing | Military & Materials | 249,000 | Leased |
| Vietnam | Manufacturing | Near-Infrared Optics and Advanced Products Group | 99,000 | Leased |
| Germany | Manufacturing and Distribution | Infrared Optics, Near-Infrared Optics and Advanced Products Group | 48,000 | Leased |
| Singapore | Manufacturing | Infrared Optics | 35,000 | Leased |
| Australia | Manufacturing and Research and Development | Near-Infrared Optics | 18,000 | Leased |
| Japan | Distribution | Infrared Optics, Near-Infrared Optics and Advanced Products Group | 4,000 | Leased |
| Switzerland | Distribution | Infrared Optics | 3,000 | Leased |
| Belgium | Distribution | Infrared Optics | 3,000 | Leased |
| Italy | Distribution | Infrared Optics and Near-Infrared Optics | 2,000 | Leased |
| United Kingdom | Distribution | Infrared Optics and Near-Infrared Optics | 1,500 | Leased |

The square footage listed for each of the above properties represents facility square footage except in the case of the Philippines location which includes land.

**Item 3. LEGAL PROCEEDINGS**

The Company and its subsidiaries are involved in various claims and lawsuits incidental to its business. The resolution of each of these matters is subject to various uncertainties, and it is possible that these matters may be

resolved unfavorably to the Company. Management believes, after consulting with legal counsel, that the ultimate liabilities, if any, resulting from such legal proceedings will not materially affect the Company s financial position, liquidity or results of operation.

**Item 4. MINE SAFETY DISCLOSURES**

Not applicable.

**EXECUTIVE OFFICERS OF THE REGISTRANT**

The executive officers of the Company and their respective ages and positions are set forth below. Each executive officer listed has been appointed by the Board of Directors to serve until removed or until such person s successor is appointed and qualified.

| Name | Age | Position |
|---|---|---|
| Francis J. Kramer | 64 | President, Chief Executive Officer and Director |
| Vincent D. Mattera, Jr. | 57 | Executive Vice President and Director |
| Craig A. Creaturo | 43 | Chief Financial Officer and Treasurer |
| James Martinelli | 55 | Vice President Military & Materials Businesses |

**Francis J. Kramer** has been employed by the Company since 1983, has been its President since 1985, and has been its Chief Executive Officer since July 2007. Mr. Kramer has served as a Director of the Company since 1989. Previously, Mr. Kramer served as Chief Operating Officer from 1985 through June 2007. Mr. Kramer joined the Company as Vice President and General Manager of Manufacturing and was named Executive Vice President and General Manager of Manufacturing in 1984. Prior to his employment by the Company, Mr. Kramer was the Director of Operations for the Utility Communications Systems Group of Rockwell International Corp. Mr. Kramer graduated from the University of Pittsburgh with a B.S. degree in Industrial Engineering and from Purdue University with a M.S. degree in Industrial Administration.

**Vincent D. Mattera, Jr.** has been employed by the Company since 2004 and has been Executive Vice President since January 2010. Dr. Mattera has served as a Director of the Company since 2012. Previously, Dr. Mattera was Vice President of the Advanced Products Group from 2004 to 2010. Dr. Mattera served as Vice President, Undersea Optical Transport, Agere Systems (formerly Lucent Technologies, Microelectronics and Communications Technologies Group) from 2001 to 2004. Previously, Dr. Mattera served as Optoelectronic Device Manufacturing and Process Development Vice President with Lucent Technologies, Microelectronics and Communications Technologies Group from 2000 until 2001. He was Director of Optoelectronic Device Manufacturing and Development at Lucent Technologies, Microelectronics Group from 1997 to 2000. From 1995 to 1997 he served as Director, Indium Phosphide Semiconductor Laser Chip Design and Process Development with Lucent Technologies, Microelectronics Group. From 1984 to 1995 he held management positions with AT&T Bell Laboratories. Dr. Mattera holds B.S. and Ph.D. degrees in Chemistry from the University of Rhode Island and Brown University, respectively.

**Craig A. Creaturo** has been employed by the Company since 1998 and has been its Chief Financial Officer since 2004 and Treasurer since 2000. Previously, Mr. Creaturo served as Chief Accounting Officer, Director of Finance, Accounting and Information Systems and Corporate Controller. Prior to his employment by the Company, Mr. Creaturo was employed by the Pittsburgh, Pennsylvania office of Arthur Andersen LLP from 1992 to 1998 and served in the audit and attestation division with a final position as Audit Manager. Mr. Creaturo graduated from Grove City College with a B.S. degree in Accounting. Mr. Creaturo is a Certified Public Accountant in the Commonwealth of Pennsylvania and is a member of the American Institute of Certified Public Accountants and the Pennsylvania Institute of Certified Public Accountants.

**James Martinelli** has been employed by the Company since 1986 and has been Vice President Military & Materials Businesses since February 2003. Previously, Mr. Martinelli served as General Manager of Laser Power Corporation from 2000 to 2003. Mr. Martinelli joined the Company as Accounting Manager in 1986, was named Corporate Controller in 1990 and named Chief Financial Officer and Treasurer in 1994. Prior to his employment with the Company, Mr. Martinelli served as Accounting Manager at Tippins Incorporated and Pennsylvania Engineering Corporation from 1980 to 1985. Mr. Martinelli graduated from Indiana University of Pennsylvania with a B.S. degree in Accounting.

**PART II**

**Item 5. MARKET FOR REGISTRANT S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES**

The Company s Common Stock is traded on the NASDAQ Global Select Market ( NASDAQ ) under the symbol IIVI. The following table sets forth the range of high and low closing sale prices per share of the Company s Common Stock for the fiscal periods indicated, as reported by NASDAQ.

| | High | Low |
|---|---|---|
| **Fiscal 2013** | | |
| First Quarter | $ 19.63 | $ 15.86 |
| Second Quarter | $ 19.87 | $ 15.85 |
| Third Quarter | $ 19.67 | $ 16.58 |
| Fourth Quarter | $ 17.54 | $ 14.81 |

| | High | Low |
|---|---|---|
| **Fiscal 2012** | | |
| First Quarter | $ 27.89 | $ 17.10 |
| Second Quarter | $ 21.14 | $ 16.43 |
| Third Quarter | $ 24.47 | $ 18.28 |
| Fourth Quarter | $ 24.11 | $ 16.13 |

On August 20, 2013, the last reported sale price for the Company s Common Stock was $19.78 per share. As of such date, there were approximately 845 holders of record of our Common Stock. The Company historically has not paid cash dividends and does not anticipate paying cash dividends in the foreseeable future.

**ISSUER PURCHASES OF EQUITY SECURITIES**

In May 2012, the Board of Directors authorized the Company to purchase up to $25.0 million of its Common Stock. The repurchase program called for shares to be purchased in the open market or in private transactions from time to time. Shares purchased by the Company are retained as treasury stock and available for general corporate purposes. During the fiscal years ended June 30, 2013 and 2012, the Company purchased 1,141,022 shares and 301,716 shares of its Common Stock for $20.0 million and $5.0 million, respectively, under the repurchase program. There were no outstanding repurchase programs at June 30, 2013. The following table provides information with respect to purchases of the Company s equity securities during the quarter ended June 30, 2013.

| Period | Total Number of Shares Purchased | Average Price Paid Per Share | Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs[a] | Dollar Value of Shares That May Yet be Purchased Under the Plan or Program |
|---|---|---|---|---|
| April 1, 2013 to April 30, 2013 | 75[a] | $ 15.51 | | $ |
| May 1, 2013 to May 31, 2013 | | $ | | $ |
| June 1, 2013 to June 30, 2013 | | $ | | $ |
| Total | 75 | $ 15.51 | | |

[a] Represents 75 shares of our common stock transferred to the Company from employees in satisfaction of minimum tax withholding obligations associated with the vesting of restricted share awards.

The information incorporated by reference in Item 12 of this Annual Report on Form 10-K from our 2013 Proxy Statement under the heading Equity Compensation Plan Information is hereby incorporated by reference into this Item 5.

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**PERFORMANCE GRAPH**

The following graph compares cumulative total shareholder return on the Company s Common Stock with the cumulative total shareholder return of the Nasdaq Composite Index and with a peer group of companies constructed by the Company for the period from June 30, 2008, through June 30, 2013. The Company s current fiscal year peer group includes Cabot Microelectronics Corporation, Franklin Electric Co., Inc., MKS Instruments, Inc., Rofin-Sinar Technologies, Inc. and Silicon Laboratories. The Company s prior fiscal year peer group reflected below consisted of Cree Inc., Rofin-Sinar Technologies, Inc. and Rogers Corp. The prior year peer group does not include Ceradyne, Inc. and Cymer Inc. as these companies were acquired during fiscal year 2013 and ceased to be publicly traded.

**COMPARISON OF 5 YEAR CUMULATIVE TOTAL RETURN***

**Among II-VI Incorporated, the NASDAQ Composite Index,**

**New Peer Group, and Old Peer Group**

* $100 invested on 6/30/08 in stock or index, including reinvestment of dividends.
Fiscal year ending June 30.

**Item 6. SELECTED FINANCIAL DATA**
**Five-Year Financial Summary**

The following selected financial data for the five fiscal years presented are derived from II-VI s audited consolidated financial statements as adjusted to reflect the Company s eV PRODUCTS business as a discontinued operation for fiscal year 2009. The data should be read in conjunction with the consolidated financial statements and the related notes thereto included elsewhere in this Annual Report on Form 10-K.

| **Year Ended June 30,** | **2013** | **2012** | **2011** | **2010** | **2009** |
|---|---|---|---|---|---|
| *(000 except per share data)* | | | | | |
| **Statement of Earnings** | | | | | |
| Net revenues from continuing operations | $ 558,396 | $ 534,630 | $ 502,801 | $ 345,091 | $ 292,222 |
| Earnings from continuing operations | 51,931 | 61,275 | 83,018 | 38,735 | 38,911 |
| Loss from discontinued operation | | | | | (2,077) |
| Net earnings attributable to noncontrolling interest | 1,118 | 969 | 336 | 158 | 53 |
| Net earnings attributable to II-VI Incorporated | 50,813 | 60,306 | 82,682 | 38,577 | 36,781 |
| Basic earnings (loss) per share: | | | | | |
| Continuing operations | 0.81 | 0.96 | 1.33 | 0.64 | 0.66 |
| Discontinued operation | | | | | (0.04) |
| Consolidated | 0.81 | 0.96 | 1.33 | 0.64 | 0.62 |
| Diluted earnings (loss) per share: | | | | | |
| Continuing operations | 0.80 | 0.94 | 1.30 | 0.63 | 0.65 |
| Discontinued operation | | | | | (0.04) |
| Consolidated | 0.80 | 0.94 | 1.30 | 0.63 | 0.61 |
| Diluted weighted average shares outstanding | 63,884 | 64,385 | 63,612 | 61,504 | 60,164 |

*Share and per share data for the 2009 and 2010 periods presented were adjusted to reflect the two-for-one stock split in fiscal year 2011.*

| **Year Ended June 30,** | **2013** | **2012** | **2011** | **2010** | **2009** |
|---|---|---|---|---|---|
| *($000)* | | | | | |
| **Balance Sheet** | | | | | |
| Working capital | $ 366,710 | $ 326,645 | $ 304,573 | $ 215,085 | $ 198,244 |
| Total assets, including assets held for sale | 863,802 | 706,486 | 647,202 | 508,981 | 368,416 |
| Long-term debt | 114,036 | 12,769 | 15,000 | 3,384 | 3,665 |
| Total debt | 114,036 | 12,769 | 18,729 | 3,384 | 3,665 |
| Retained earnings | 482,878 | 434,940 | 377,264 | 295,380 | 256,941 |
| Shareholders equity | 636,108 | 586,226 | 521,273 | 410,050 | 322,211 |

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

**Forward-Looking Statements**

Certain statements contained in this Management s Discussion and Analysis of Financial Condition and Results of Operations are forward-looking statements. Forward-looking statements are also identified by words such as expects, anticipates, believes, intends, plans, projects or similar expressions. Actual results could differ materially from those anticipated in these forward-looking statements for many reasons, including risk factors described in the Risk Factors set forth in Item 1A of this Annual Report on Form 10-K, which are incorporated herein by reference.

**Overview**

The Company generates revenues, earnings and cash flows from developing, manufacturing and marketing engineered materials and opto-electronic components for precision use in industrial, military, optical communications, semiconductor, medical and consumer applications. We also generate revenue, earnings and cash flows from government funded research and development contracts relating to the development and manufacture of new technologies, materials and products.

Our customer base includes OEMs, laser end users, system integrators of high-power lasers, manufacturers of equipment and devices for the industrial, military, optical communications, semiconductor and medical markets, U.S. Government prime contractors, various U.S. Government agencies and thermoelectric integrators.

**Critical Accounting Estimates**

The preparation of financial statements and related disclosures in conformity with accounting principles generally accepted in the United States of America ( U.S. GAAP ) and the Company s discussion and analysis of its financial condition and results of operations requires the Company s management to make judgments, assumptions and estimates that affect the amounts reported in its consolidated financial statements and accompanying notes. Note 1 of the Notes to our Consolidated Financial Statements contained in Item 8 of this Annual Report on Form 10-K describes the significant accounting policies and accounting methods used in the preparation of the Company s consolidated financial statements. Management bases its estimates on historical experience and on various other assumptions that it believes to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities. Actual results may differ from these estimates.

Management believes the Company s critical accounting estimates are those related to revenue recognition, allowance for doubtful accounts, warranty reserves, inventory valuation, business combinations, valuation of long-lived assets including acquired intangibles and goodwill, accrual of bonus and profit sharing estimates, accrual of income tax liability estimates and accounting for share-based compensation. Management believes these estimates to be critical because they are both important to the portrayal of the Company s financial condition and results of operations, and they require management to make judgments and estimates about matters that are inherently uncertain.

Management has discussed the development and selection of these critical accounting estimates with the Audit Committee of the Board of Directors and the Audit Committee has reviewed the foregoing disclosure. In addition, there are other items within our financial statements that require estimation, but are not deemed critical as defined above. Changes in estimates used in these and other items could have a material impact on the financial statements.

The Company recognizes revenues in accordance with U.S. GAAP. Revenues for product shipments are realizable when we have persuasive evidence of a sales arrangement, the product has been shipped or delivered,

the sale price is fixed or determinable and collectability is reasonably assured. Title and risk of loss passes from the Company to its customer at the time of shipment in most cases with the exception of certain customers. For these customers title does not pass and revenue is not recognized until the customer has received the product at its physical location.

The Company s revenue recognition policy is consistently applied across the Company s segments, product lines and geographical locations. Further, we do not have post shipment obligations such as training or installation, customer acceptance provisions, credits and discounts, rebates and price protection or other similar privileges. Our distributors and agents are not granted price protection. Our distributors and agents, who comprise less than 10% of consolidated revenue, have no additional product return rights beyond the right to return defective products that are covered by our warranty policy. We believe our revenue recognition practices are consistent with Staff Accounting Bulletin ( SAB ) 104 and that we have adequately considered the requirements of Accounting Standards Codification ( ASC ) 605 Revenue Recognition. Revenues generated from transactions other than product shipments are contract-related and have historically accounted for less than 5% of the Company s consolidated revenues.

The Company establishes an allowance for doubtful accounts based on historical experience and believes the collection of revenues, net of these reserves, is reasonably assured. The allowance for doubtful accounts is an estimate for potential non-collection of accounts receivable based on historical experience. The Company has not experienced a non-collection of accounts receivable materially affecting its financial position or results of operations as of and for the fiscal years ended June 30, 2013, 2012 and 2011. If the financial condition of the Company s customers were to deteriorate, causing an impairment of their ability to make payments, additional provisions for bad debts could be required in future periods. The Company records a warranty reserve as a charge against earnings based on a historical percentage of revenues utilizing actual returns over a period that approximates historical warranty experience. If actual returns in the future are not consistent with the historical data used to calculate these estimates, additional warranty reserves could be required. Our allowance for doubtful accounts and warranty reserve balances at June 30, 2013 was approximately $1.5 million and $1.7 million, respectively. Our reserve estimates have historically been proven to be materially correct based upon actual charges incurred.

The Company records an inventory reserve as a charge against earnings for all products on hand for more than twelve to eighteen months, depending on the products that have not been sold to customers or cannot be further manufactured for sale to alternative customers. An additional reserve is recorded for product on hand that is in excess of product sold to customers over the same periods noted above. If actual market conditions are less favorable than projected, additional inventory reserves may be required.

The Company accounts for business acquisitions by establishing the acquisition-date fair value as the measurement for all assets acquired and liabilities assumed. Certain provisions of U.S. GAAP prescribe, among other things, the determination of acquisition-date fair value of consideration paid in a business combination (including contingent consideration) and the exclusion of transaction and acquisition-related restructuring costs from acquisition accounting.

The Company tests goodwill and indefinite-lived intangible assets on an annual basis for impairment or when events or changes in circumstances indicate that goodwill or indefinite-lived intangible assets might be impaired. Other intangible assets are amortized over their estimated useful lives. The determination of the estimated useful lives of other intangible assets and whether goodwill or indefinite-lived intangibles are impaired requires us to make judgments based upon long-term projections of future performance. Estimates of fair value are based on our projection of revenues, operating costs and cash flows of each reporting unit considering historical and anticipated results and general economic and market conditions. The fair values of the reporting units are determined using a discounted cash flow analysis based on historical and projected financial information as well as market analysis. The carrying value of goodwill at June 30, 2013, 2012 and 2011 was $123.4 million, $80.7 million and $64.3 million, respectively. The annual goodwill impairment analysis considers the financial projections of the reporting unit based on the most recently completed budgeting and long-term strategic

planning processes and also considers the current financial performance compared to the prior projections of the reporting unit. Changes in our financial performance, judgments and projections could result in an impairment of goodwill or indefinite-lived intangible assets.

As a result of the purchase price allocations from our prior acquisitions, and due to our decentralized structure, our goodwill is included in multiple reporting units. Due to the cyclical nature of our business, and the other factors described in the section on Risk Factors set forth in Item 1A of this Annual Report on Form 10-K, the profitability of our individual reporting units may periodically suffer from downturns in customer demand, operational challenges and other factors. These factors may have a relatively more pronounced impact on the individual reporting units as compared to the Company as a whole, and might adversely affect the fair value of the individual reporting units. If material adverse conditions occur that impact one or more of our reporting units, our determination of future fair value may not support the carrying amount of one or more of our reporting units, and the related goodwill would need to be impaired.

The Company records certain bonus and profit sharing estimates as a charge against earnings. These estimates are adjusted to actual based on final results of operations achieved during the fiscal year. Certain partial bonus amounts are paid quarterly based on interim Company performance, and the remainder is paid after fiscal year end. Other bonuses are paid annually.

The Company prepares and files tax returns based on its interpretation of tax laws and regulations and records estimates based on these judgments and interpretations. In the normal course of business, the Company s tax returns are subject to examination by various taxing authorities, which may result in future tax, interest and penalty assessments by these authorities. Inherent uncertainties exist in estimates of many tax positions due to changes in tax law resulting from legislation, regulation and/or as concluded through the various jurisdictions tax court systems. The Company recognizes the tax benefit from an uncertain tax position only if it is more likely than not that the tax position will be sustained on examination by the taxing authorities, based on the technical merits of the position. The tax benefits recognized in the financial statements from such a position are measured based on the largest benefit that has a greater than 50 percent likelihood of being realized upon ultimate resolution. The amount of unrecognized tax benefits is adjusted for changes in facts and circumstances. For example, adjustments could result from significant amendments to existing tax law and the issuance of regulations or interpretations by the taxing authorities, new information obtained during a tax examination, or resolution of an examination. The Company believes that its estimates for uncertain tax positions are appropriate and sufficient to pay assessments that may result from examinations of its tax returns. The Company recognizes both accrued interest and penalties related to unrecognized tax benefits in income tax expense.

The Company has recorded valuation allowances against certain of its deferred tax assets, primarily those that have been generated from net operating losses in certain foreign taxing jurisdictions. In evaluating whether the Company would more likely than not recover these deferred tax assets, it has not assumed any future taxable income or tax planning strategies in the jurisdictions associated with these carry-forwards where history does not support such an assumption. Implementation of tax planning strategies to recover these deferred tax assets or future income generation in these jurisdictions could lead to the reversal of these valuation allowances and a reduction of income tax expense.

In accordance with U.S. GAAP, the Company recognizes share-based compensation expense over the requisite service period of the individual grantees, which generally equals the vesting period. The Company utilized the Black-Scholes valuation model for estimating the fair value of stock option expense using assumptions such as the risk-free interest rate, expected stock price volatility, expected stock option life and expected dividend yield. The risk-free interest rate is derived from the average U.S. Treasury Note rate during the period, which approximates the rate in effect at the time of grant related to the expected life of the options. Expected volatility is based on the historical volatility of the Company s Common Stock over the period commensurate with the expected life of the options. The expected life calculation is based on the observed time to post-vesting exercise and/or forfeitures of options by our employees. The dividend yield is zero, based on the fact the Company has never paid cash dividends and has no current intention to pay cash dividends in the future.

Effective July 1, 2012, the Company changed its segment reporting structure to include VLOC Incorporated ( VLOC ) in the Company s Military & Materials segment. VLOC was previously reported in the Company s Near-Infrared Optics segment. All segment information presented in this Annual Report on Form 10-K has been retrospectively adjusted to include VLOC in the Military & Materials segment.

**Fiscal Year 2013 Compared to Fiscal Year 2012**

The following table sets forth bookings and select items from our Consolidated Statements of Earnings for the years ended June 30, 2013 and 2012.

| | Year Ended June 30, 2013 | | Year Ended June 30, 2012 | |
|---|---|---|---|---|
| Bookings | $ 527.2 | | $ 534.9 | |
| | | % of Revenues | | % of Revenues |
| Total Revenues | $ 558.4 | 100.0% | $ 534.6 | 100.0% |
| Cost of goods sold | 360.8 | 64.6 | 341.9 | 64.0 |
| Gross margin | 197.6 | 35.4 | 192.7 | 36.0 |
| Operating Expenses: | | | | |
| Internal research and development | 22.7 | 4.1 | 21.4 | 4.0 |
| Selling, general and administrative | 110.2 | 19.7 | 99.4 | 18.6 |
| Interest and other, net | (6.0) | (1.1) | (7.0) | (1.3) |
| Earnings before income tax | 70.7 | 12.7 | 78.9 | 14.8 |
| Income taxes | 18.8 | 3.4 | 17.6 | 3.3 |
| Net earnings | 51.9 | 9.3 | 61.3 | 11.5 |
| Net earnings attributable to noncontrolling interest | 1.1 | 0.2 | 1.0 | 0.2 |
| Net earnings attributable to II-VI Incorporated | $ 50.8 | 9.1 | $ 60.3 | 11.3 |
| Diluted earnings per-share | $ 0.80 | | $ 0.94 | |

**Executive Summary**

Net earnings attributable to II-VI for the year ended June 30, 2013 of $50.8 million ($0.80 per-share diluted) were negatively impacted by several factors during the 2013 fiscal year. Most notably, the Company s results were reflective of a $4.4 million charge for inventory write-offs and equipment impairment associated with the recently announced discontinuation of the tellurium chemicals product line and downsizing of the selenium metal product line at PRM. In addition, PRM recorded a lower of cost or market inventory write-down of $2.7 million during fiscal year 2013, mostly as a result of unfavorable market index pricing related to selenium. Despite these items, the Company believes that PRM is now better positioned for future profitability, as it will focus its efforts on its rare earth element product line as well as being an internal selenium supplier to the II-VI Infrared Optics segment. Net earnings were also impacted by $1.1 million of transaction costs and $0.7 million of incremental interest expense associated with the acquisitions and related financing of M Cubed, LightWorks, and the Thin Film Filter business and Interleaver product line. The Company also experienced higher levels of amortization and depreciation costs associated with the fair value purchase accounting of intangible assets as well as property, plant and equipment from these acquisitions. Although these charges negatively impacted earnings in fiscal year 2013, the Company believes that these acquisitions provide synergies, lasting growth prospects and the potential for broadening current product offerings, all of which are expected to contribute to future positive operating results. Net earnings were favorably impacted by a $3.7 million settlement with a former contract manufacturer of Photop Aegis, Inc. ( Photop Aegis ) that was related to the October 2011 flooding that occurred in Thailand.

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The benefit of this settlement helped offset certain earnings shortfalls driven by operational inefficiencies in fiscal year 2013 associated with restoring Photop Aegis to full capacity. In addition, the Company s year to date effective income tax rate was higher than the same period last fiscal year due to lower income levels in the Company s lower taxing jurisdictions such as the Philippines and Vietnam.

***Consolidated***

**Bookings**. Bookings are defined as customer orders received that are expected to be converted to revenues over the next twelve months. For long-term customer orders, the Company does not include in bookings the portion of the customer order that is beyond twelve months, due to the inherent uncertainty of an order extending that far out in the future. Bookings for the year ended June 30, 2013 decreased 1% to $527.2 million, compared to $534.9 million for the same period last fiscal year. Excluding bookings of $47.8 million related to the three fiscal year 2013 acquisitions, bookings decreased 10% when compared to the same period last fiscal year, mostly as a result of reduced orders at PRM, Photop and WBG. Bookings decreased at PRM as a result of weakening demand and pricing of its tellurium and selenium materials while bookings at Photop and Photop Aegis decreased due to a temporary cyclical demand shift caused by a technology transition from 40G to 100G in the optical communications market in China. In addition, WBG was negatively impacted by delayed spending from an annual government contract order as well as the bankruptcy of a large customer.

**Revenues**. Revenues for the year ended June 30, 2013 increased 4% to $558.4 million, compared to $534.6 million for the same period last fiscal year. Excluding revenues of $52.3 million related to the three fiscal year 2013 acquisitions, revenues decreased 5% when compared to the same period last fiscal year, mostly as a result of reduced shipment volumes and unfavorable pricing at PRM for selenium and tellurium products. In addition, Marlow experienced a decline in revenue as a result of the end of life cycle of its gesture recognition product line.

**Gross margin.** Gross margin as a percentage of revenues for the year ended June 30, 2013 was 35.4%, compared to 36.0% for the same period last fiscal year. Gross margin in fiscal year 2013 was negatively impacted by $4.4 million of inventory write-offs and equipment impairment associated with the discontinuation and downsizing of PRM s tellurium and selenium chemicals product lines, respectively, as well as an additional charge of $2.7 million of selenium lower of cost or market write-downs. In addition, gross margin in fiscal 2013 was impacted negatively due to a change in product mix at Marlow as well as lower gross margin at recently acquired M Cubed, which carries a lower gross margin profile in comparison to other business units of the Company. Gross margin in fiscal year 2012 was negatively impacted by $8.7 million of tellurium and selenium lower of cost or market write-downs at PRM.

**Internal research and development**. Company-funded internal research and development expenses for the year ended June 30, 2013 were $22.7 million, or 4.1% of revenues, compared to $21.4 million, or 4.0% of revenues, for the same period last fiscal year. Fiscal year 2013 internal research and development expenditures were consistent with prior year internal research and development expenditures as a percentage of revenues, as the Company s business units continued to invest in next generation products and technology to fuel future revenue and earnings growth.

**Selling, general and administrative**. Selling, general and administrative expenses for the year ended June 30, 2013 were $110.2 million, or 19.7% of revenues, compared to $99.4 million, or 18.6% of revenues, for the same period last fiscal year. Selling, general and administrative expense as a percentage of revenues increased during the current fiscal year compared to the same period last fiscal year, mostly as a result of transaction expenses of $1.1 million related to the three acquisitions that were completed during fiscal year 2013. In addition, the Company s recent acquisitions contributed to the higher level of selling, general and administration expense while higher share-based compensation expense also contributed to the unfavorable change in selling, general and administrative expenses as a percentage of revenues.

**Interest and other, net**. Interest and other, net for the year ended June 30, 2013 and 2012 was income of $6.0 million and $7.0 million, respectively. Included in interest and other, net for the year ended June 30, 2013 was $4.8 million of other income related to the contractual settlement related to the Thailand flooding, gains on the deferred compensation plan of $0.6 million, equity investment earnings of $1.0 million and interest income on excess cash reserves that more than offset interest expense. These favorable items were somewhat offset by foreign currency losses due to the weakening U.S. dollar. Included in interest and other, net for the year ended June 30, 2012 was a $1.0 million gain related to the Company s sale of its equity investment in Langfang Haobo Diamond Co. Ltd., a $1.4 million gain related to the sale of precious metals inventory, favorable foreign currency gains resulting from the weakening Euro, earnings from equity investments and interest income on excess cash reserves.

**Income taxes.** The Company s year-to-date effective income tax rate at June 30, 2013 and 2012 was 26.5% and 22.3%, respectively. The variations between the Company s effective tax rates and the U.S. statutory rate of 35.0% were primarily due to the consolidation of the Company s foreign operations, which are subject to income taxes at lower statutory rates. A change in the mix of pretax income from these various tax jurisdictions could have a material impact on the Company s effective tax rate. During fiscal year 2013, the Company s year-to-date effective income tax rate was higher than the same period last fiscal year due to lower income levels in the Company s lower taxing jurisdictions such as the Philippines and Vietnam.

***Segment Reporting***

Bookings, revenues and segment earnings for the Company s reportable segments are discussed below. Segment earnings differ from income from operations in that segment earnings exclude certain operational expenses included in other expense (income) net as reported. Management believes segment earnings to be a useful measure as it reflects the results of segment performance over which management has direct control and is used by management in its evaluation of segment performance. See Note 12. Segment and Geographic Reporting, included in this Annual Report on Form 10-K for further information on the Company s reportable segments and for the reconciliation of segment earnings to net earnings, which is incorporated herein by reference.

***Infrared Optics (millions)***

| | Year Ended June 30, | | % Increase |
|---|---|---|---|
| | 2013 | 2012 | (Decrease) |
| **Bookings** | $ 200.7 | $ 206.1 | (3)% |
| **Revenues** | $ 203.3 | $ 201.6 | 1% |
| **Segment earnings** | $ 49.5 | $ 51.1 | (3)% |

The Company s Infrared Optics segment includes the combined operations of Infrared Optics and HIGHYAG.

Bookings for the year ended June 30, 2013 for Infrared Optics decreased 3% to $200.7 million, compared to $206.1 million for the same period last fiscal year. The decrease in bookings for the year ended June 30, 2013 compared to the same period last fiscal year was primarily driven by decreased demand from OEMs for new high-power $CO_2$ laser systems in Japan in the early part of the current fiscal year combined with reduced demand for optics used in the U.S. military market due to the economic uncertainties in these market sectors.

Revenues for the year ended June 30, 2013 for Infrared Optics were consistent with the prior year. Revenue shortfalls from Japanese OEMs and U.S. military customers were offset by increased shipments for CVD diamond window optics used in high-power laser applications and EUV lithography systems in Europe, as well as increased shipments at HIGHYAG for its one-micron welding and cutting heads used in automotive manufacturing.

Segment earnings for the year ended June 30, 2013 for Infrared Optics were $49.5 million, compared to $51.1 million for the same period last fiscal year. The decrease in segment earnings for the year ended June 30, 2013 compared to the same period last fiscal year was the result of reduced gross margins caused by higher raw material input prices and a higher level of allocated corporate expenses related to share-based compensation and transaction costs incurred by the Company in connection with its fiscal year 2013 completed acquisitions.

***Near-Infrared Optics (millions)***

| | Year Ended June 30, | | % Increase (Decrease) |
|---|---|---|---|
| | 2013 | 2012 | |
| **Bookings** | $ 145.7 | $ 155.1 | (6)% |
| **Revenues** | $ 154.9 | $ 140.0 | 11% |
| **Segment earnings** | $ 19.6 | $ 14.1 | 40% |

The Company s Near-Infrared Optics segment includes the combined operations of Photop, Photop Aegis and Photop AOFR Pty. Limited ( AOFR ).

Bookings for the year ended June 30, 2013 for Near-Infrared Optics decreased 6% to $145.7 million, compared to $155.1 million for the same period last fiscal year. The decrease in bookings for the current year compared to the same period last fiscal year was mostly due to cyclical softening demand for optical components used in the telecommunications market in China, due to delayed spending by OEMs as a result of the transitioning technology shift from 40G to 100G platforms for high-speed networking service. In addition, certain customer contracts specific to Photop s green laser business reached their end of life in fiscal year 2013. These decreases more than offset incremental bookings associated with the December 2013 acquisition of the business and product line from Oclaro.

Revenues for the year ended June 30, 2013 for Near-Infrared Optics increased 11% to $154.9 million, compared to $140.0 million for the same period last fiscal year. The increase in revenues for the current year compared to the same period last fiscal year was primarily driven by incremental thin film filter and interleaver product shipments associated with the December 2013 acquisition of the business and product line from Oclaro.

Segment earnings for the year ended June 30, 2013 for Near-Infrared Optics increased 40% to $19.6 million, compared to $14.1 million for the same period last fiscal year. The increase in segment earnings for the year ended June 30, 2013 compared to the same period last fiscal year was driven by higher sales volumes at Photop, production and operational efficiencies realized in recovering from the October 2011 Thailand flood, and the addition of the thin film filter business and interleaver product line.

***Military & Materials (millions)***

| | Year Ended June 30, | | % (Decrease) |
|---|---|---|---|
| | 2013 | 2012 | |
| **Bookings** | $ 94.1 | $ 106.3 | (11)% |
| **Revenues** | $ 104.4 | $ 118.5 | (12)% |
| **Segment earnings (loss)** | $ (6.1) | $ (1.7) | (270)% |

The Company s Military & Materials segment includes the combined operations of Exotic Electro-Optics ( EEO ), LightWorks, VLOC, Max Levy Autograph, Inc. ( MLA ) and PRM.

Bookings for the year ended June 30, 2013 for Military & Materials decreased 11% to $94.1 million, compared to $106.3 million for the same period last fiscal year. The decrease in bookings for the current year compared to the same period last fiscal year was primarily driven by lower order volumes of selenium and tellurium at PRM

as well as unfavorable index pricing of these materials. In addition, reduced outlook for production of sapphire windows for the Joint Strike Fighter program caused a decrease in orders at EEO, which were more than offset by additional bookings from the 2013 acquisition of LightWorks business.

Revenues for the year ended June 30, 2013 for Military & Materials decreased 12% to $104.4 million, compared to $118.5 million for the same period last fiscal year. The decrease in revenues for the current year compared to the same period last fiscal year was primarily due to lower product demand and pricing for both tellurium and selenium at PRM, which more than offset the additional revenue resulting from the LightWorks acquisition.

Segment earnings (loss) for the year ended June 30, 2013 for Military & Materials was a segment loss of $6.1 m