Inrad Optics, Inc.
Form 10-K
April 01, 2013

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D. C. 20549

FORM 10-K

(Mark One)

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

For the fiscal year ended: December 31, 2012

OR

.. **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: 0-11668

Inrad Optics, Inc.

(Exact name of registrant as specified in its charter)

New Jersey	**22-2003247**
State or other jurisdiction of incorporation or organization	(I. R. S. Employer Identification No.)
181 Legrand Avenue, Northvale, NJ	**07647**
(Address of principal executive offices)	(Zip Code)

Registrant's telephone number, including area code **201-767-1910**

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

Title of each class	Name of each exchange on which registered

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

Common stock, par value $.01 Per Share

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

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

Note – Checking the box above will not relieve any registrant required to file reports pursuant to Section 13 or 15(d) of the Exchange Act from their obligations under those Sections.

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 (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files).

Yes x No ¨

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§ 229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ¨

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated file, or a smaller reporting company. See definition of large accelerated filer, accelerated filer and smaller reporting company in Rule 12b2 of the Exchange Act. (Check one):

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

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

Yes¨Nox

State the aggregate market value of the voting and non-voting common equity held by non-affiliates computed by reference to the price at which the common equity was last sold, or the average bid and asked price of such common equity, as of the last business day of the registrant's most recently completed second fiscal quarter. $2,938,161 (For purposes of determining this amount, only directors, executive officers and shareholders with voting power of 10% or more of our stock have been deemed affiliates.)

Indicate the number of shares outstanding of each of the registrant's classes of common stock, as of the latest practicable date.

Common Shares outstanding as of March 29, 2013 – 11,882,124 shares

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's definitive Proxy Statement for the 2013 Annual Meeting of Shareholders, to be filed with the Commission not later than 120 days after the close of the registrant's fiscal year, have been incorporated by reference, in whole or in part, into Part III Items 10, 11, 12, 13 and 14 of this Annual Report on 10-K.

Inrad Optics, Inc.

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Part I

PART 1

Caution Regarding Forward Looking Statements

This Annual Report contains forward-looking statements as that term is defined in the federal securities laws. The Company wishes to insure that any forward-looking statements are accompanied by meaningful cautionary statements in order to comply with the terms of the safe harbor provided by the Private Securities Litigation Reform Act of 1995. The events described in the forward-looking statements contained in this Annual Report may not occur. Generally, these statements relate to business plans or strategies, projected or anticipated benefits or other consequences of the Company's plans or strategies, or projections involving anticipated revenues, earnings, or other aspects of the Company's operating results. The words "may", "will", "expect", "believe", "anticipate", "project", "plan", "intend", "estimate "continue", and their opposites and similar expressions are intended to identify forward-looking statements. The Company cautions you that these statements are not guarantees of future performance or events and are subject to a number of uncertainties, risks, and other influences, many of which are beyond the Company's control, that may influence the accuracy of the statements and the projections upon which the statements are based. Factors that may cause or contribute to such differences include, but are not limited to, those discussed in more detail in Item 1 (Business) and Item 1A (Risk Factors) of Part I and Item 7 (Management's Discussion and Analysis of Financial Condition and Results of Operations) of Part II of this Annual Report on Form 10-K. Any one or more of these uncertainties, risks, and other influences could materially affect the Company's results of operations and whether forward-looking statements made by the Company ultimately prove to be accurate. Readers are further cautioned that the Company's financial results can vary from quarter to quarter, and the financial results for any period may not necessarily be indicative of future results. The foregoing is not intended to be an exhaustive list of all factors that could cause actual results to differ materially from those expressed in forward-looking statements made by the Company. The Company's actual results, performance and achievements could differ materially from those expressed or implied in these forward-looking statements. The Company undertakes no obligation to publicly update or revise any forward looking statements, whether from new information, future events, or otherwise, except as otherwise required by law.

Item 1. Business

Inrad Optics, Inc. (the "Company", "Inrad"), was incorporated in New Jersey in 1973. The Company develops, manufactures and markets products and services for use in photonics industry sectors via three distinct but complimentary product areas - "Crystals and Devices", "Custom Optics" and "Metal Optics."

Prior to September 2003 the Company was named and did business as Inrad, Inc. In 2003, the Board of Directors and shareholders approved a name change to Photonic Products Group, Inc. (PPGI) and then to Inrad Optics, Inc. on January 18, 2012.

In November 2003, the Company purchased the assets and certain liabilities of Laser Optics, Inc. of Bethel, CT. Laser Optics, Inc. was a custom optics and optical coating services provider, in business since 1966. PPGI integrated the Bethel team and their operations into the Company's Northvale, NJ operations in mid-2004. This integration leveraged Inrad's original crystalline products with the custom optics and optical coating capabilities of Laser Optics to provide an enhanced set of product offerings.

In October 2004, the Company acquired MRC Precision Metal Optics, Inc. of Sarasota, Florida, a precision metal optics and diamond-turned aspheric optics manufacturer, specializing in single point diamond machining, optical polishing, nickel plating, aluminum, AlBeMet™ and Beryllium machining.

In 2011, the Company undertook a significant review of its brand position within the marketplace and concluded that the Company's name, "Photonics Products Group, Inc.", due to its composition of common words within our industry, had not achieved the anticipated level of brand equity since its inception in 2003. In order to solve this issue, the Company developed and is currently implementing a strategic marketing plan around the brand name of Inrad Optics. In January 2012, the Company's shareholders approved a name change to Inrad Optics, Inc. Changing the Company's name to Inrad Optics, Inc. leverages the positive historical and current brand equity of the Inrad name and more clearly communicates the Company's principal business activities to both our marketplace and the investment community.

The original "Inrad" name was recognized as one of the photonic industry's seminal crystalline products companies. The Company is now a vertically integrated organization specializing in crystal-based optical components and devices, custom optical components from both glass and metal, and precision optical and opto-mechanical assemblies. Manufacturing capabilities include solution and high temperature crystal growth, extensive optical fabrication capabilities, including precision diamond turning and the ability to handle large substrates, optical coatings and provide in-process metrology.

Inrad Optics' customers include leading corporations in the defense, aerospace, laser systems, process control and metrology sectors of the photonics industry, as well as the U.S. Government, National Laboratories and universities worldwide.

Administrative, engineering and manufacturing operations are in a 42,000 square foot building located in Northvale, New Jersey, about 15 miles northwest of New York City, and in a 25,000 square foot building located in Sarasota, FL. The headquarters of the Company are located in the Northvale facility.

The products produced by Inrad Optics, Inc. fall into two main categories: Optical Components and Laser System Devices and Instrumentation.

The Optical Components segment of the business is heavily focused on custom optics manufacturing. The Company specializes in high-end precision components. It develops, manufactures and delivers precision custom optics and thin film optical coating services through its Custom Optics and Metal Optics operations. Glass, metal, and crystal substrates are processed using modern manufacturing equipment, complex processes and techniques to manufacture components, deposit optical thin films, and assemble sub-components used in advanced photonic systems. The majority of custom optical components and optical coating services supplied are used in inspection, process control systems, defense and aerospace electro-optical systems, laser system applications, industrial scanners, and medical system applications.

The Laser System Devices and Instrumentation category includes the growth and fabrication of crystalline materials with electro-optic (EO) and non-linear optical properties for use in both standard and custom products. This category also includes manufactured crystal based devices and associated instrumentation. The majority of crystals, crystal components and laser devices manufactured are used in laser systems, defense EO systems, medical lasers and R&D applications by engineers within corporations, universities and national laboratories.

The following table summarizes the Company's net sales by product categories during the past three years. Laser System Devices and Instrumentation includes all non-linear and electro-optical crystal components.

	Years Ended December 31,					
	2012		2011		2010	
Category (In thousands)	Net Sales	%	Net Sales	%	Net Sales	%
Optical Components	$8,758	76.7	$11,812	89.6	$10,115	91.5
Laser System Devices and Instrumentation	2,646	23.3	1,365	10.4	939	8.5
Total	$11,404	100.0	$13,177	100.0	$11,054	100.0

Products Manufactured by the Company

Optical Components

a) Custom Optics and Optical Coating Services

Manufacturing of high-performance custom optics is a major product area for Inrad Optics, Inc. and is addressed in the marketplace by each of the product groups - Crystals and Devices, Custom Optics and Metal Optics.

The Custom Optics product line focuses on products manufactured to specific customer requirements. It specializes in the manufacture of optical components, optical coatings (ultra-violet wavelengths through infra-red wavelengths) and subassemblies for the military, aerospace, industrial and medical marketplace. Planar, prismatic and spherical components are fabricated from glass and synthetic crystals, including fused silica, quartz, germanium, zinc selenide, zinc sulfide, magnesium fluoride and silicon. Components consist of mirrors, lenses, prisms, wave plates, polarizing optics, monochrometers, x-ray mirrors, and cavity optics for lasers.

Most optical components and sub-assemblies require thin film coatings on their surfaces. Depending on the design, optical coatings can refract, reflect, or transmit specific wavelengths. The Custom Optics optical coating specialties include high laser damage resistance, polarizing, highly reflective, anti-reflective, infra-red, and coating to complex multi-wavelength requirements on a wide range of substrate materials. Coating deposition process technologies employed included electron beam, thermal, and ion assist.

The Metal Optics product line is manufactured in our facility in Sarasota, Florida which is a fully integrated precision metal optics and optical assembly operation which employs high precision CNC and diamond machining, polishing, plating of aluminum, AlBeMet™, beryllium and stainless steel. The Metal Optics product line offers opto-mechanical design and assembly services as part of its manufactured deliverables and can support prototyping through production of large and small metal mirrors, thermally stable optical mirrors, low RMS surface finish polished mirrors, diamond machined precision aspheric and planar mirrors, reflective porro prisms, and arc-second accuracy polygons and motor assemblies. Plating specialties include void-free gold and electroless nickel.

b) UV Filter Optical Components

This product line consists of crystals and crystal devices including filter materials of both patented and proprietary materials with unique transmission and absorption characteristics. These materials are used in critical applications in defense systems such as missile warning sensors. Such materials include nickel sulfate, and proprietary materials such as UVC-7 and LAC.

Laser System Devices and Instrumentation

This product line consists of crystal-based products for that are used in, or alongside, laser systems. Developing growth processes for high quality synthetic crystals is a core competency of the Crystals and Devices manufacturing team. These crystals are embedded in the value added devices and instrumentation products manufactured in our crystal growth production facility and include crystals for wavelength conversion, modulation and polarization, Pockels cells, and wavelength conversion instruments. In addition to the filter materials consumed by the UV Filter Optical components described above, current materials produced include Beta Barium Borate (BBO), Lithium Niobate, Zinc Germanium DiPhosphide, Potassium Dihydrogen Phosphate and Potassium Dideuterium Phosphate. Applications for these materials include defense, homeland security, surgical lasers, and industrial processing lasers. The Crystals and Devices team is also engaged in ongoing R & D efforts to develop new materials for evolving applications and offers contract growth of crystalline materials to customer specifications. Some of the major products produced for the photonics marketplace include:

a) Crystal Components

The Company grows and fabricates electro-optic and nonlinear crystal devices for altering the intensity, polarization or wavelength of a laser beam. Other crystal components, produced as part of the Crystals and Devices product line, are used in laser research and in commercial laser systems.

b) Pockels Cells

A line of Pockels cells and associated electronics is manufactured for sale in multiple market sectors. Pockels cells are devices that include one or more crystal components and are used in applications that require fast switching of the polarization direction of a beam of light. These uses include Q-switching of laser cavities to generate pulsed laser light, coupling light into and out from regenerative amplifiers, and light intensity modulation. These devices are sold to medical and industrial laser original equipment manufacturers, researcher institutes and laser system design engineers.

c) Harmonic Generation Systems

The Company designs and manufactures harmonic generation laser systems and accessories for the laser research R & D community. Harmonic generation systems enable the users of lasers to convert the fundamental frequency of the laser to another frequency required for specific applications. Harmonic generators are used in spectroscopy, semiconductor processing, medical lasers, optical data storage and scientific research.

Many commercial lasers have automatic tuning features, allowing them to produce a range of frequencies. The Company's "Autotracker" product, when used in conjunction with these lasers, automatically generates tunable ultraviolet light or infrared light for use in spectroscopic applications.

Sales by Market

The photonics industry serves a very broad, fragmented and expanding set of markets. As technologies are discovered, developed and commercialized, the applications for photonic systems and devices, and the components embedded within those devices, grow across traditional market boundaries. While a significant part of the Company's business remains firmly in the defense and aerospace markets, other markets served include the OEM medical and industrial laser market, and the OEM metrology and process control market, university research institutes and national labs worldwide. Scanning, detection and imaging technologies for homeland security and health care markets are beginning to provide opportunities for Inrad Optics, Inc., and these new sectors are expected to account for future growth and demand for Inrad Optics, Inc.'s products and capabilities.

In 2012, 2011 and 2010 the Company's product sales were made to customers in the following market areas:

	Years Ended December 31,					
Market (In thousands)	2012 Net Sales	%	2011 Net Sales	%	2010 Net Sales	%
Defense/Aerospace	$5,089	44.6	$6,734	51.1	$6,968	63.0
Process control & metrology	3,484	30.5	4,752	36.1	2,751	24.9
Laser systems	2,421	21.2	1,255	9.5	796	7.2
Universities & national laboratories	410	3.7	436	3.3	539	4.9
Total	$11,404	100.0	$13,177	100.0	$11,054	100.0

Defense and Aerospace

This area consists of sales to OEM defense electro-optical systems and subsystems manufacturers, manufacturers of non-military satellite-based electro-optical systems and subsystems, and direct sales to governments where the products have the same end-use.

End-use applications for Inrad Optics' products in the defense and aerospace sector include military laser systems, military electro-optical systems, satellite-based systems, and missile warning sensors and systems that protect aircraft. The dollar volume of shipments of product within this sector depends in large measure on the U.S. Defense Department budget and its priorities, that of foreign governments, the timing of their release of contracts to their prime equipment and systems contractors, and the timing of competitive awards from this customer community to the Company.

Defense/Aerospace sector sales represented approximately 44.6%, 51.1% and 63.0% of sales in 2012, 2011 and 2010. In spite of the decreases in percentage of total sales in 2012 and 2011, the Company believes that the defense and aerospace sector will continue to represent a significant market for the Company's products and offers an ongoing opportunity for growth given the Company's capabilities in specialty crystal, glass and metal precision optics.

Process Control and Metrology

This area consists of customers who are manufacturers of capital equipment used in manufacturing process implementation and control, optics-based metrology and quality assurance, and inventory and product control equipment. Examples of applications for such equipment include semiconductor (i.e., chip) fabrication and testing and inventory management and distribution control.

Sales in the Process Control and Metrology market sector, the Company's second largest market, decreased in 2012, both as a percentage of total sales and in relative sales dollars, compared to 2011. The decline in 2012 was comparable to sales in 2010. The decrease correlates with the decline in business activity experienced by the semiconductor market, as a whole. The Company believes that the optical and x-ray inspection segment of the semiconductor industry offers continued opportunities which match its capabilities in precision optics, crystal products, and monochrometers.

Laser Systems

This market consists principally of customers who are OEM manufacturers of industrial, medical, and R&D lasers which the Company serves as an OEM supplier of standard and custom optical components and laser accessories, as well as, representing related markets that are not currently large enough to list individually. The increase in Sales in 2012 and 2011 is mainly due to a new OEM customer that manufactures lasers used in medical applications.

Universities and National Laboratories

These sales consist of product sales to researchers at various educational and research institutions. Sales to customers within the University and National Laboratories market sector consist primarily of the Company's legacy systems, Pockels cells and related repairs. Sales for 2012 and 2011 were relatively unchanged and the total dollar amount from sales to this market remained relatively stable over the past three years and is dependent on research projects and the availability of funding for such projects. The sales in 2010 reflect an increase in the availability of stimulus funding for the National Labs.

Major Customers

Historically, the Company's sales have been concentrated within a small number of customers, although the top customers have varied from year to year. In 2012, the Company had sales to three major customers which accounted for 11.2%, 10.7% and 8.6% of sales, respectively. One customer is a domestic manufacturer of medical laser systems. The two other major customers are electro-optical systems divisions of major U.S. defense industry corporations who manufacture systems for the U.S. and foreign governments. In 2011, the top three customers represented 20.9%, 15.4% and 10.8% of sales, respectively. In 2010, the top three customers represented 15.3%, 10.3% and 10.1% of sales, respectively.

Sales to the Company's top five customers represented approximately 43.1%, 58.1% and 54.3% of sales, in 2012, 2011 and 2010, respectively. These customers are all OEM manufacturers either within the defense, process control and metrology sector or laser systems sector. The concentration of sales within a small number of customers presents the risk that the loss of any of these customers could have a significant negative impact on the Company.

Export Sales

The Company's export sales are primarily to customers in Europe, Asia and Japan and amounted to approximately 14.3%, 22.8%, and 14.9% of product sales in 2012, 2011 and 2010, respectively.

Long-Term Contracts

Certain of the Company's agreements with customers provide for periodic deliveries at fixed prices over a long period of time. In such cases, as in most other cases as well, the Company attempts to obtain firm price commitments, as well as, cash advances from its suppliers for the purchase of the materials necessary to fulfill the order.

Marketing and Business Development

The Company markets its products domestically, through the coordinated efforts of the sales, marketing and customer service teams.

The Company has moved towards a strategy of utilizing these combined sales and marketing resources for cross-selling all products, across all business lines. This strategy is well suited to the diverse and fragmented markets that utilize photonic technologies.

Independent sales agents are used in countries in major non-U.S. markets, including Canada, the United Kingdom, the European Union, Israel, and Japan.

Sales and marketing efforts to promote our product lines and our participation in trade shows, internet-based marketing, media and non-media advertising and promotion, and management of international sales representatives and distributor relationships are coordinated at the corporate level under the auspices of the Vice President, Sales and Marketing.

In 2011, the Company undertook a significant marketing effort in the form of a corporate name change and a new branding strategy around the “Inrad Optics” name which was supported by the development of a new website and other brand identity marketing efforts.

Backlog

The Company’s order backlog at December 31, 2012 was $5,898,000, essentially all of which is expected to be shipped in 2013. The Company’s order backlog as of December 31, 2011 and 2010 was $5,021,000 and $5,047,000, respectively.

We anticipate shipping a substantial majority of the present backlog during fiscal year 2013. However, our backlog at any given date is not necessarily indicative of actual sales for any future period.

Competition

Within each product category in which the Company's business units are active, there is competition.

Changes in the photonics industry have had an effect on suppliers of custom optics. As end users have introduced products requiring large volumes of optical components, suppliers have responded either by staying small and carving out niche product areas, or by ramping up manufacturing capacity and modernizing their manufacturing methods to meet higher volume production rates. Additionally the availability of an increasingly large variety of inventoried inexpensive catalog optics has led some OEM manufacturers to "design in" these low-cost solutions rather than utilizing custom designed and manufactured products.

Competition for the Company's crystal devices and instrumentation is limited and the Company's laser devices are considered to be high quality and generally offer a combination of features not available elsewhere. As a result of the Company's in-house crystal growth capability, this area of the business is highly vertically integrated, providing a competitive advantage over other suppliers.

Our metal optics product line has several key competitors who are larger and better equipped to compete on high volume work. There are also several large and small competitors who compete with our products on large form factor optics. The Company has made recent inroads within this competitive landscape, and is building brand awareness in the marketplace.

For crystal products, the market is highly competitive. Many of the Company's competitors who supply non-linear optical crystals are located overseas, and can offer significantly reduced pricing for some crystal materials. On many occasions, the quality of the crystal component drives the ultimate performance of the component or instrument into which it is installed. Quality and technical support are considered to be valuable attributes for a crystal supplier by some, but not all, OEM customers.

Although price is a principal factor in many product categories, competition is also based on product design, performance, customer confidence, quality, delivery, and customer service. Based on its performance to date, the Company believes that it can continue to compete successfully, although no assurances can be given in this regard.

Employees

As of the close of business on March 27, 2013, the Company had 77 full-time employees.

Patents and Licenses

The Company mainly relies on its manufacturing and technological expertise, know-how and trade secrets in addition to its patents, to maintain its competitive position in the industry. The Company takes precautionary and protective measures to safeguard its technical design and manufacturing processes. The Company executes nondisclosure agreements with its employees and, where appropriate, with its customers, suppliers and other associates.

Regulation

Foreign sales of certain of the Company's products to certain countries may require export licenses from the United States Department of Commerce. Such licenses are obtained when required. All requested export licenses of Inrad Optics products have been granted or deemed not-required.

ITAR regulations govern much of the Company's domestic defense sector business, and the Company is capable of handling its customers' technical information under these regulations. Inrad Optics, Inc. is registered with the Directorate of Defense Trade Controls, and utilizes a supplier base of similarly registered companies.

There are no other federal regulations or any unusual state regulations that directly affect the sale of the Company's products other than those environmental compliance regulations that generally affect companies engaged in manufacturing operations in New Jersey and Florida.

Availability of Reports

Our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and any amendments to such reports are available free of charge on our web site at www.inradoptics.com as soon as reasonably practicable after such reports are electronically filed with, or furnished to, the Securities and Exchange Commission ("SEC") (www.sec.gov). We will also provide electronic or paper copies of such reports free of charge, upon request made to our Corporate Secretary.

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.

a) The Company incurred a net loss for three of the past five years

The Company had a net loss of $(1,421,000), $(734,000) and $(2,800,000) in the years ended December 31, 2012, 2010 and 2009, respectively. If the Company were to sustain future major losses, there is no assurance that the

Company will be able to obtain the financing required to supply the working capital needs of its existing operations, or to continue to implement its growth strategy.

b) As general economic conditions deteriorate, the Company's financial results may suffer

Significant economic downturns or recessions in the United States, Europe or Asia could adversely affect the Company's business by causing a temporary or longer term decline in demand for the Company's goods and services and thus its revenues.

c) The Company has exposure to Government Markets

Sales to customers in the defense industry represent a significant part of our business. These customers in turn generally contract with government agencies. Most governmental programs are subject to funding approval through congressional appropriations which can be modified or terminated without warning upon the determination of a legislative or administrative body. Appropriations can also be affected by legislation that addresses larger budgetary issues of the U.S. Government such as the Budget Control Act of 2011 and its sequestration provisions which will, unless amended, significantly reduce appropriations below currently forecasted levels for most federal agencies, including the Department of Defense. It is difficult to assess how this will impact our defense industry customers and the business we do with them, in the future. The loss or failure to obtain certain contracts or a loss of a major government customer could have a material adverse effect on our business, results of operations or financial condition.

d) The Company's revenues are concentrated in its largest customer accounts

For the year ended December 31, 2012, five customer accounts represented approximately 43% of total revenues, and two customers individually accounted for more than 10% of revenues. These two customers each represented approximately 11% and 11% of sales, respectively. Since we are a supplier of custom manufactured components to OEM customers, and have a number of large customers in both the commercial and defense markets, the relative size and identity of our largest customers change somewhat from year to year. In the short term, the loss of any of these large customer accounts or a decline in demand in the markets which they represent could have a material adverse effect on our business, results of operations, and financial condition.

e) The Company depends on, but may not succeed in, developing and acquiring new products and processes

To meet the Company's strategic objectives, the Company needs to continue to develop new processes, improve existing processes, and manufacture and market new products. As a result, the Company may continue to make investments in process development and additions to its product portfolio. There can be no assurance that the Company will be able to develop and introduce new products or enhancements to its existing products and processes

in a way that achieves market acceptance or other pertinent targeted results. The Company also cannot be sure that it will have the human or financial resources to pursue or succeed in such activities.

f) The Company's stock price may fluctuate widely

The Company's stock is thinly traded. Many factors, including, but not limited to, future announcements concerning the Company, its competitors or customers, as well as quarterly variations in operating results, announcements of technological innovations, seasonal or other variations in anticipated or actual results of operations, changes in earnings estimates by analysts or reports regarding the Company's industries in the financial press or investment advisory publications, could cause the market price of the Company's stock to fluctuate substantially. In addition, the Company's stock price may fluctuate widely for reasons which may be unrelated to operating results. These fluctuations, as well as general economic, political and market conditions such as recessions, military conflicts, or market or related declines, may materially and adversely affect the market price of the Company's Common Stock. In addition, any information concerning the Company, including projections of future operating results, appearing in investment advisory publications or on-line bulletin boards or otherwise emanating from a source other than the Company could in the future contribute to volatility in the market price of the Company's Common Stock.

g) The Company's business success depends on its ability to recruit and retain key personnel

The Company depends on the expertise, experience, and continuing services of certain scientists, engineers, production and management personnel, and on the Company's ability to recruit additional personnel. There is competition for the services of these personnel, and there is no assurance that the Company will be able to retain or attract the personnel necessary for its success, despite the Company's efforts to do so. The loss of the services of the Company's key personnel could have a material adverse effect on its business, results of operations, or financial condition.

h) Many of the Company's customer's industries are cyclical

The Company's business is significantly dependent on the demand its customers experience for their products. Many of their end users are in industries that historically have experienced a cyclical demand for their products. The industries include, but are not limited to, the defense electro-optics industry and the manufacturers of process control capital equipment for the semiconductor tools industry. As a result, demand for the Company's products are subject to cyclical fluctuations, and this could have a material adverse effect on our business, results of operations, or financial condition.

i) The Company's manufacturing processes require products from limited sources of supply

The Company utilizes many relatively uncommon materials and compounds to manufacture its products. Examples include optical grade quartz, specialty optical glasses, scarce natural and manmade crystals, beryllium and its alloys, and high purity chemical compounds. The Company's suppliers could fail to deliver sufficient quantities of these necessary materials on a timely basis, or deliver contaminated or inferior quality materials, or to markedly increase their prices. Any such actions could have an adverse effect on the Company's business, despite the Company's efforts to secure long term commitments from its suppliers. Adverse results might include reducing the Company's ability to meet commitments to its customers, compromising the Company's relationship with its customers, adversely affecting the Company's ability to meet expanding demand for its products, or causing the Company's financial results to deteriorate.

j) The Company faces competition

The Company encounters substantial competition from other companies positioned to serve the same market sectors. Some competitors may have financial, technical, capacity, marketing or other resources more extensive than ours, or may be able to respond more quickly than the Company to new or emerging technologies and other competitive pressures. Some competitors have manufacturing operations in low-cost labor regions such as the Far East and Eastern Europe and can offer products at lower prices than the Company. The Company may not be successful in winning orders against the Company's present or future competitors, and competition may have a material adverse effect on our

business, results of operations or financial condition.