

**Bringing their Three Brands Together under One Umbrella with their New Name has Enabled Inrad Optics, Inc. to Gain Greater Brand Recognition and Grow their Customer Base**

**Technology  
Diversified Electronics**

**OTCBB: INRD  
Inrad Optics, Inc.**

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**Joseph J. Rutherford  
President and CEO**

**BIO:**

Joe is a 35+ year career executive experienced in leading optical component development and manufacturing businesses serving customers in both defense and commercial sectors of the photonics industry. From 1989 through 2006, he was VP/GM of Charlotte, NC-based Synoptics, a subsidiary successively of Litton and Northrop Grumman corporations and an industry leader in laser crystal products and related optical compo-

nents. Prior to that, he held executive level sales and marketing positions within Memtech Corporation, Material Progress Corporation, and Allied Corporation. Joe has a wealth of hands-on optics business experience, and a reputation for being a person who is passionate about customer satisfaction and success of "his" business enterprise.

**Company Profile:**

Inrad Optics, Inc. (formerly Photonic Products Group, Inc.) was incorporated in New Jersey in 1973. In January 2012, the Company's Board of Directors and shareholders approved the name change to Inrad Optics, Inc. 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".

**Interview conducted by:  
Lynn Fosse, Senior Editor  
CEOCFO Magazine**

**CEOCFO:** Why did the company change its name to Inrad Optics, and what is the current focus?

**Mr. Rutherford:** Inrad Optics was founded in 1973; about ten years ago the name of the company was changed from Inrad, Inc. to Photonic Products Group, Inc. The name was changed to better match the mission of expanding the company through acquisition. Photonics Products Group Incorporated, or PPGI, was going to be more or less a holding company with a family of other companies that would be acquired, a popular strategy in the telecom bubble years. That

strategy was followed for a period of time, and two acquisitions were made. One was an optics company called Laser Optics Incorporated, based in Connecticut. They produced custom optics for a variety of customers in the semiconductor and laser and for military markets. In 2004, PPGI acquired a company in Florida called MRC Precision Metal Optics; they produced metal optics in Beryllium, aluminum, AlBeMet and stainless steel.

Over the next several years the business was immersed in trying to bring the metal optics business to a healthy state, and manage the economic downturn that began in 2008. When I took the company over in 2009, the company was in a tough situation. The business plan had more or less been put on hold for about three or four years, and coming into 2009, we were facing a very serious economic downturn.

What I focused on first was to work on bringing the three brands, Inrad, LOI, and MRC, into at least a break-even, profitable position, which of course was very hard during 2009, because of the economic crisis. We reduced the company's size by about 25% and cut costs. I continued to focus on improving the individual companies through process improvement and strategic investments, including equipment. I also focused on broadening the markets that we were serving as well, because we had gotten ourselves into a situation where we had not expanded our customer base. We had focused too intensely on a few large customers, to the deficit of building new customer relationships.

We were taking good care of our current customers, however the number of customers served was continuing to shrink. Consequently, 2010 and 2011 were focused on improving the performance of each one of the brand names, as well as making strategic investments in equipment and people and improving our bottom line. We lost money in 2009, we lost money in 2010 and we made a minor profit in 2011.

In 2011, I also decided that the original plan for Photonic Products Group Incorporated was not working. We had virtually no name recognition and customers were confused as to who they were doing business with. We formulated a plan to go back to the original brand name of Inrad, which had serious brand equity in our industry. We added Optics, as we were in the optics business, and we changed the name to Inrad Optics.

**CEOCFO:** Would you tell us about the products that Inrad Optics is providing today?

**Mr. Rutherford:** What we are doing is providing capabilities. That is how we are marketing the company today. What we do is we produce built to print optics and crystals as well as devices. Examples of these products are very specific custom optics for customers in the semiconductor industry, especially for wafer inspection. For example, we manufacture very large, very high precision optics, and that type of work is really a niche for us. We have some unique capabilities with regard to finishing optics. We are not just a company that produces mainstream optics. We are a company that produces optical components that are very difficult to make, but are much needed in several markets. We also produce crystal materials, and manufacture value added devices with those crystals. The expertise that Inrad possessed in its first 20 years or so was unique. I further expanded our crystal growth capabilities in terms of both people as well as equipment, and developed growth processes for crystal materials that are now in high demand, such as BBO and KDP. I am focused on or-

ganic growth rather than looking externally to buy other capabilities or product lines. I am looking at expanding our business through organic investment.

**CEOCFO:** Would you give us an example of what Inrad Optics can do that is not available elsewhere?

**Mr. Rutherford:** We make extremely flat, super polished finished optics that are used by manufacturers of semi-conductor inspection tools. They buy an optical component from us that is used in a device that inspects silicon wafers. Those optics are of extremely high precision, not only in the surface finish, but also in flatness. In other words, the physical characteristics of the finished component make our value proposition unique. Our customers demand that level of precision, and we are among a very small

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**- Joseph J. Rutherford**

number of manufacturers who can provide it.

**CEOCFO:** As far as the development that you are doing, are you identifying a specific need or developing next generation products?

**Mr. Rutherford:** It is a combination. We are listening very intently to the customer bases to what they need. BBO is a prime example of that. It is used in a device called a Pockels Cell that is a component in lasers for industrial and medical applications, including a highly deployed ophthalmic laser system, which was a market we really were not participating in, even just a couple of years ago. BBO is a crystal material, it can be obtained from a number of sources, both in the US and Asia. What we focused on was producing BBO with the highest quality and then adding additional value by building it into devices. We

have reports from our customer in this area that our device performs better than the other devices they have tested. We saw a need, and we focused on improving the quality of the material, then improving the quality of the device. That is the differentiator. There are other companies who make BBO Pockels Cells, but we believe that our devices outperform the competition. What we have done is focus our expertise on making better material and better devices.

**CEOCFO:** Are your potential customers aware that Inrad Optics has that quality aspect?

**Mr. Rutherford:** We seek customers out, but they also seek us out to collaborate on developing a superior product. One of the things that we want to tell the world is summed up in our tagline “from crystals to components, solving optical problems with material expertise”. These are not just words; we live the tagline. We produce exceptional metal, glass and crystalline products and our expertise continues to evolve and improve.

**CEOCFO:** You mentioned healthcare, an industry that you have not looked at before; do you see broadening out of your industry focus?

**Mr. Rutherford:** Most definitely! I think that one of the things that we were somewhat dependent upon was the military industry. However, as we well know, they are going to be cuts in the military budgets, which will leave us vulnerable if we are not able to broaden our market base. We have put considerable attention on the medical market because there are great opportunities out there for a company can provide a unique capability and product. We are looking at the medical industry as an opportunity to grow our customer base through our capabilities and expertise.

**CEOCFO:** What is the strategy for the next year or so?

**Mr. Rutherford:** Inrad Optics will continue to grow the market base. We will move further away from dependence on the military market and more

on the commercial side of the market.

**CEO CFO:** What is the financial picture like for Inrad Optics today?

**Mr. Rutherford:** We are in a reasonably good position with regard to cash. We were profitable in 2011 after two years of unprofitable performance. We have paid down debt, so we are cleaning up our balance sheet. We are looking at new products. This past year we had an SBIR contract to develop a neutron detection material. This material might find itself inside detectors utilized at ports of entry to monitor shipments coming into this country to make sure there is no illicit nuclear material. That screening can apply to aircrafts, ships, trucks, trains, and autos, and is primarily the job of Homeland Security. A good portion of this work is done with radiation detectors built with Helium-3. It is a material that is basically a byproduct of atomic weapons production, and since we do not make atomic weapons in any number any longer there is a severe shortage of the material. There is also no comparable replacement for that material, so there is an intense search for other materials that can be used for neutron detection. We are aggressively pursuing the growth of a crystalline material that has a lot of promise; the material is called Stilbene, and it has very good characteristics with regard to being

able to detect neutrons. This is an exciting new materials frontier for Inrad Optics.

What else am I going to do in the future? Well I am going to look to focus our expertise into developing additional new materials that have the potential to contribute in some way.

**CEO CFO:** Why should investors pay attention to Inrad Optics?

**Mr. Rutherford:** Investors should look at Inrad today as a company that is evolving, and evolving quickly. Under our current leadership team, we are leveraging our collective expertise and looking to new markets. In five years' time, I believe the company could be two, three, or four times larger than it is today.

**CEO CFO:** What did you see initially about a company that was not doing well, that led you to believe it was a good opportunity for you and that Inrad was a viable company?

**Mr. Rutherford:** I have been in this industry since 1975. I was the president of a division of Northrop Grumman for nearly twenty years. That continues to be very successful. I retired from Northrop Grumman in 2006 and as I pondered, what I was going to do in the future this opportunity came along. I looked at the company and I recognized very quickly that the com-

pany was not maximizing on its legacy expertise. It was looking outside not looking inside. What I have spent the last three plus years doing is further cultivating the amazing set of capabilities we already possess.

**CEO CFO:** It appears to be working!

**Mr. Rutherford:** Fortunately so far, yes, it has worked. It is exciting for me. Going way back I was offered an opportunity to join the original Inrad by, Dr. Warren Ruderman, the founder of Inrad, in 1982 to run the company. At that time I was in California and I was doing some other things. I was involved in a new start-up and I told Warren this was not an opportunity I thought was attractive. However, as years went by I watched the company and I was always interested in their progress. I thought of Warren as a friend, and as one of the experts in material science. Inrad's shift to Photonics Products Group, and the associated strategy of growth through acquisition was considerably less compelling to me. I am more about brick and mortar. If you work on growing, what you have and you focus on making continuous, true assessments of the company's position, organic growth can be a powerful business strategy. Inrad Optics today is well positioned to grow; it just needed attention.

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