

Talking about Edmund Optics

A report by Johannes Kuppe, editor of Photonik

Becoming a world-class manufacturer was not on Norman Edmund's mind when he founded his optics company in 1942 (figure 1). Nor was manufacturing of optical components any part of the company's activities for the next 30 years. But events, opportunities, and an abiding commitment to providing its customers with a broad selection of high quality optics have since shaped Edmund Optics into a premier manufacturer of optical components.

The Edmund Optics Catalog is renowned for the variety and quality of its offerings, listing more than 24,000 standard optical and opto-mechanical components, lens assemblies, and optical instruments. Two million copies of various catalog versions are printed every year. However, the company is more than a catalog-based distributor. As Edmund Optics (EO) President and CEO Robert Edmund (figure 2) points out, more than 30% of EO's business is the in-house design and fabrication of custom optics and

its own that produce more than five million optical components annually. In order to support the full breadth of its standard product catalog, though, EO does depend on an extensive network of suppliers and partnerships around the world. "No company can produce everything," says Edmund, "and we depend heavily on a good supplier network." EO picks its suppliers and partners carefully, forming relationships for the long term. "More than half our suppliers are sole source," says Edmund, "and we resist the trend of simply following the lowest cost for manufacturing." Instead, the company strives to correctly balance its in-house capabilities with outside sources, seeking quality rather than just lowest cost, and establishing relationships that will provide supply availability and local service for its global customer base.

To achieve this balance, EO had to respond to many unsettling events. The company's first entry into its own manufacturing operation, for instance, occurred in the mid-70s when one of its key suppliers in Pennsylvania

(USA), had its operation destroyed by flooding of the Susquehanna River and decided not to rebuild. EO, then Edmund Scientific, turned to supply partner John Plummer of Plummer Precision Optics for assistance in setting up Edmund's own factory in Barrington, New Jersey, to produce the high-precision spherical and parabolic mirrors and optical

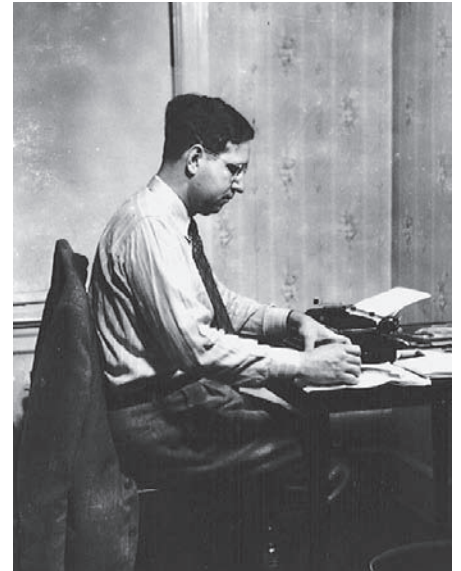


Figure 1: Historic photo of Norman Edmund, circa 1942

flats its industrial customers needed. In the mid-80s the company decided to withdraw from the educational and hobbyist market that drove its earliest years and instead focus on the industrial optics market. By early 2000, EO had sold off the Edmund Scientific brand to concentrate on the needs of industry and demand for precision optical components. EO began building momentum for its own manufacturing efforts, starting out in defense optics and precision coatings and hiring its first optical engineer.

EO's manufacturing capabilities underwent significant acceleration around 2000 when Plummer Precision Optics began foundering and was in danger of going out of business. EO purchased Plummer in order to secure its supply chain, obtaining factories in Pennsylvania and Singapore. In 2006 the owner of a major EO supplier in Japan died and his family took over, prompting another EO purchase in order to maintain continued supply. Not all of EO's manufacturing assets came through such purchases, however. "We could have simply acquired and run the plants," says Edmund, "but we always raised the capabilities by investing hea-



Figure 2: Jeremy Chang (left) and Robert Edmund

nearly two thirds of all products in the catalog are designed or manufactured by the company. Edmund Optics employs more than 130 optical engineers in America, Europe and Asia, creating both customer-specific designs as well as continually expanding EO's catalog of standard products. The company also has five manufacturing facilities of

COMPANY PROFILE



Figure 3: TECHSPEC® High-Precision Calibration Aspheres

vily in technology and human resources. Once we had the suppliers, we tried to expand on the existing lines." With the Plummer acquisition, for instance, EO saw an opportunity to begin fabricating aspheric lenses (figure 3) and built a precision glass molding capability at the Pennsylvania location. The Singapore plant likewise grew from a staff of 80 to 230 with the expansion of prism, spherical and coating operations. The company has also established manufacturing operations on its own. According to Jeremy Chang, Vice President, Asia Operations, the company started production in China in 1994, upgrading its capabilities for imaging lens assembly (figure 4) and inspection in 2002. It also added an in-house design team, building to a staff of 85 in design, production, and quality control.

Edmund Optics now has sales offices, procurement offices, and manufacturing facilities in the United States, France, Italy, Germany, the United Kingdom, China, Japan, Singapore, South Korea, Taiwan, as well as representatives in Brazil, Egypt, India, Israel, Mexico, Poland and Switzerland. An Arizona-based design and research center together with other design teams worldwide both expand the company's pro-

duct lines and provide customers with custom design and application integration services, with special emphasis in semiconductor manufacturing, biotechnology, and high-precision, cost-effective optics for automotive applications. Further, the company is still growing, following "a stable approach to everything we do," says Edmund. He adds that EO "will stay

diversified and expand opportunistically through acquisition and organic growth" in addition to working with key partners in Europe and elsewhere. Edmund expects the company to continue its investment in developing standard IR optics, high-precision coatings, and aspheres, expanding its presence in the US, Japan, and China. From its beginnings as a supplier of surplus optics EO has grown to be a global player in industrial optics with five manufacturing facilities employing more than 700 people handling everything from design to prototyping to high volume production. The catalog may be the company's public face for many in the optics industry – but Edmund Optics is far more than a distributor.

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Figure 4: TECHSPEC® imaging optics designed and manufactured by Edmund Optics

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