

SSL Postings

U.S. DEPARTMENT OF ENERGY

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Although we don't often hear about growth in U.S. manufacturing, the solid-state lighting industry has been steadily growing and establishing a manufacturing presence here at home, strengthening our country's position as a leader in the technology. Solid-state lighting was not only born of U.S. ingenuity and R&D, but is also riding the crest of a worldwide trend toward greater energy efficiency. This presents a golden opportunity for U.S. companies to play an increased role in SSL manufacturing. From time to time, the Postings focus on SSL companies that manufacture here in the U.S. This is not intended to endorse or promote any of the companies, but rather to motivate and inspire other U.S. companies to follow suit. The philosophy and activities you'll read about here are consistent with the recommendations set forth in the U.S. Department of Energy (DOE) white paper ["Prospects for U.S.-Based Manufacturing in the SSL Industry."](#)

Finelite

Finelite got its start in 1991 as a manufacturer of fluorescent luminaires focused on the commercial market. According to CEO Jerry Mix, the company's approach has always been to reduce energy usage while keeping the lighting quality high. This is accomplished by providing layers of light — first on the task itself, then on the walls, and then ambient lighting — rather than by relying only on high-output ceiling-mounted sources. This approach moves sources closer to their intended application surfaces and minimizes wasted lumens, thereby reducing lighting energy use. LED lighting, Jerry notes, fits in well with that approach.

The first Finelite LED offerings, back in 2006, were task lights. These were quickly followed by LED undercabinet lights. The company developed its first LED overhead lights, which were recessed fixtures (2x2 and 2x4), in 2008 in parallel with fluorescent equivalents — which turned out to be the last fluorescent products Finelite developed. Jerry explains that by that point, the company knew that LEDs would eventually become the dominant lighting technology. The tipping point came in 2011, when LED sources surpassed 100 lm/W, at which time the market really began to take notice. That's because 100 lm/W is roughly the efficacy limit of a good fluorescent system, but LED lighting products — even back then — could have much longer lifetimes than their fluorescent counterparts, thus conferring a significant bottom-line advantage.

Jerry says that's when Finelite — also encouraged by a McKinsey report that forecasted rapid and significant growth for LED lighting — began to change over from a predominantly fluorescent business to one that was predominantly LED. Today, he notes, LED lighting products account for 95% of the company's business, with the rest accounted for by fluorescent products which, Jerry adds, are in "harvest mode" and thus are no longer a focus of the company's R&D. In addition to the commercial market, Finelite also manufactures luminaires for healthcare and education.

Jerry relates that for its LED products, Finelite has continued with the same model it's used for its fluorescent products; namely, instead of having different SKUs, it builds each product to the specifications of the contractor, architect, or lighting designer and ships it within 10 days of the order's release. He notes that LED products have enabled the company to build to specification more easily. For example, the standard lengths of fluorescent lamps generally limit fluorescent lighting to increments of two, four, and eight feet, or else socket shadows and overlap result; whereas LED lighting can be manufactured in any length desired, down to one-sixteenth of an inch. Thus, Finelite is able to provide customers with a continuous linear fixture of LED lighting — not only in any length desired, but also in any desired color temperature, and with any control options.

All of Finelite's products are manufactured at the company's headquarters in Union City, CA, which is on San Francisco's East Bay, south of Oakland and north of Silicon Valley. More than 400 people work there — a threefold increase since 2012. Plus, notes Jerry, there's a significant ripple effect on the supplier side, because with the exception of the LEDs and drivers, all of the product parts are manufactured domestically.

The growth of SSL has coincided with the company's own evolution in other ways as well. Jerry explains that because LED fixtures are more complicated to manufacture than fluorescents, they require higher skill levels, which is why Finelite started an in-house training program more than three years ago, to teach employees the skill sets they need. So far, he observes, 80 employees have gone through the program, which the company has dubbed "Finelite University."

Finelite's customers are primarily U.S.-based, because lighting is a local market, and fixtures are costly to ship overseas — not to mention the time that would take. Jerry sees the industry as gravitating toward high-quality lighting that's enabled by SSL, which is not only adding new value and new dimensions to lighting, but is also changing the way we think about lighting spaces. Jerry is convinced that eventually — when the use of human-centric lighting, connected lighting, and controls becomes more widespread — retrofitting conventional lighting systems to LED will give way to installing purpose-built LED systems, in order to get the full range of benefits SSL has to offer.

As the lighting market shifts to SSL technology, Finelite is one of many companies that are helping to reinforce U.S. manufacturing and R&D leadership. This will not only help bring significant energy savings through more-efficient lighting products, but will benefit our economy by adding jobs at multiple levels of the supply chain.

As always, if you have questions or comments, you can reach us at postings@akoyaonline.com.