SSL Postings

Although you do not often hear about growth in domestic manufacturing here in the United States, the solid-state lighting industry is steadily growing and establishing a manufacturing presence here at home. Solid-state lighting was not only born of U.S. ingenuity and R&D, but is riding the crest of a worldwide trend toward greater energy efficiency. This offers a golden opportunity for U.S. manufacturing to take a significant role in SSL. From time to time, these Postings *will focus on SSL companies manufacturing here in the U.S., a series we call "SSL in America." This is not intended to endorse or promote any of the companies, but rather to describe advances in energy-efficient solid-state lighting. The activities you'll read about here are consistent with the U.S. Department of Energy (DOE) white paper "Keeping Manufacturing in the United States," which grew out of DOE's 2010 SSL Manufacturing R&D Workshop.*

Endicott Research Group, Inc. (ERG), is a 33-year-old manufacturer based in Endicott, NY. The company started out making DC converters for use in neon displays and then moved into the manufacturing of inverters for cold-cathode fluorescent lamp liquid crystal display (LCD) backlights. In 2005, ERG began making drivers for LED backlights used in televisions and other LCDs, and three years ago it started making LED drivers for use in general-illumination applications.

That expansion, says executive vice president Graham Upton, made good business sense, because the SSL general-illumination market is much bigger than the market for LED displays. Although general-

illumination LED drivers currently account for only a tiny fraction of the company's overall business, Graham says that figure is growing, and he foresees it reaching 5 percent by the end of 2012 and 50 percent within six years.

ERG does nearly all of its manufacturing at its Endicott facility, which employs about 100 people. The lone exception involves the winding of the transformers used in backlight converters, which Graham explains is a highly labor-intensive task that's carried out at a small, 20-person facility located just across the U.S. border, in Mexico. The advantage of concentrating the manufacturing in the U.S., he says, has to do with the intended use of ERG's products. Few if any are used in standard, off-the-shelf products carried by big-box retailers. Rather, most – including the SSL drivers – are custom designs intended for specialized commercial applications in industrial, medical, military, and other settings where requirements tend to be outside the norm.

That makes lead time and customer service especially important, and Graham notes that doing everything – from designing to prototyping to manufacturing – here in the U.S. works to ERG's advantage in a number of related ways. For example, he says, it reduces lead time to a matter of weeks – compared with significantly longer if, say, an LED driver were manufactured overseas. It also makes it easier and quicker to get customer feedback, and results in better control over quality. What's more, the quantities needed for custom orders tend to be considerably less than the large-scale production runs generally required by overseas factories – which, in addition, may schedule those runs at widely spaced intervals.

On top of all that, Graham observes, it helps to have everyone, from engineers to plant workers to sales staff, in the same facility – to say nothing of the marketing advantage of being able to invite customers to come there and take a see-it-for-yourself tour. All of these factors, he feels, combine to help brighten the prospects for solid-state lighting manufacturing in the U.S.

ERG's biggest challenge, Graham acknowledges, is making costs competitive in the face of competitors who do the bulk of their manufacturing in large quantities overseas, where labor rates are lower and incentives can push costs down even further. But the company's plans to stay focused on custom designs rather than off-the-shelf products should continue to help tip the balance in that regard.

Endicott Research Group is among a number of companies that are working to create and strengthen a solid-state lighting manufacturing base here in the U.S. 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@lightingfacts.com.