

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.

Headquartered in Coopersburg, PA, where all of its design engineering is done, Lutron was founded in 1961 as a manufacturer of dimmers for incandescent lights. Today the company makes controls for all kinds of light – incandescent, fluorescent, LED, even daylight (in the form of automatic window shades) – as well as drivers and various sensors (occupancy, thermal, daylight).

All of Lutron's LED drivers are designed to dim from 1 percent to 100 percent of light output and are "brand-agnostic" – that is, they're designed to work with any LED lighting product, regardless of the manufacturer. The company also makes the controls for those drivers, as well as the controls for drivers made by other

manufacturers. All of Lutron's controls are designed to work with multiple technologies – LEDs, incandescent, CFLs, and halogens.

The high-end residential market is one of the company's core focuses, and it started making products for LEDs in the late 1990s, when it came out with controls to work with color-changing LED accent lighting. In 2005-2006, as SSL started becoming a force in general-illumination lighting, Lutron began making LED drivers, in keeping with its focus on energy efficiency. The company has continued to grow during this period and has never laid off any employees.

About 25 percent of Lutron's SSL manufacturing is done in Puerto Rico (Humacau) and the mainland U.S. (Alburtis, PA) and involves hundreds of jobs, with the rest done in Mexico and Asia. Those jobs don't include all the others generated by the "ripple effect" on the company's U.S. suppliers, transporters, and other ancillary players.

Russ MacAdam, Lutron's director of commercial systems development, notes that the SSL market is changing rapidly, and that manufacturing in the U.S. helps the company respond quickly to those changes as well as to the needs of its North American customers. He says something "gets lost in translation" when you have to wait for products to arrive on a boat or try to communicate with people from a culture that has a different language and philosophy.

Russ explains that the products Lutron makes overseas are typically high-volume, low-tech products, so labor comprises a more significant portion of their total cost; plus the components come from overseas as well, so the supply line is shortened, further reducing costs. By contrast, he says, the company's U.S. manufacturing operations are set up for "mass customization," allowing it to quickly change from one product to another, so that when you consider the whole cost of the product, it's actually cheaper to make it here. Lutron doesn't keep a large inventory of products, Russ notes, but

instead builds them to order, which requires flexibility as well as a short lead time. This, he points out, enables the company to take care of customers and meet their needs much better than if the manufacturing were done overseas. It also allows Lutron to fill orders of relatively low volume when necessary – something that would be very disruptive in a high-volume overseas plant.

Manufacturing close to the Coopersburg design center, says Russ, enables Lutron to get products into development rapidly, and to customize an order to a customer's specifications. He emphasizes that without a strong U.S. manufacturing presence, the company would not be able to develop innovative products so rapidly.

Russ also cites a cultural benefit to manufacturing domestically, in the sense that the U.S. has a strong tradition of independent thinking that dovetails well with Lutron's customer-oriented approach. He points out that it's culturally acceptable here – if not outright encouraged – to think outside the box, and college students are taught to find the solutions to problems even if it means trying a completely new approach.

Lutron 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.