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Solid-state lighting (SSL) is rapidly transforming the lighting industry, and the U.S. has been at the epicenter of SSL innovation. U.S.-based researchers and product developers have been instrumental in toppling cost and performance barriers, and in positioning SSL for rapid market growth. U.S. lighting manufacturers are well positioned to benefit from the SSL revolution, strengthening our country's position as a leader in the technology. From time to time, the Postings *focus on SSL companies that manufacture 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 in these profiles 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](#)*."*

Acuity Brands

Acuity Brands is a textbook example of how SSL is rapidly transforming the lighting industry. The largest North American lighting manufacturer in terms of market share, the Atlanta-based company has seen its focus shift from conventional technologies, which accounted for more than 95% of its product offerings just eight years ago, to LED, which now accounts for about two-thirds of its products and virtually all of its lighting R&D.

Director of corporate communications Neil Egan explains that the lighting-industry sea change brought about by the advent of SSL has led to major changes at Acuity. For one thing, the company has made a number of strategic acquisitions in order to become much more vertically integrated, to the point where it now makes many of the components for its luminaires, such as the LED drivers and light engines. This gives Acuity more control over its supply chain and helps increase speed to market.

Neil notes that back when conventional technologies predominated, a new lighting platform could easily last five to 10 years without significant changes being introduced. But today, with SSL technology enabling the constant emergence of new capabilities, a platform becomes significantly improved within the space of just six to 12 months. Many of those new capabilities, Neil points out, involve collecting information and networking with other systems, such as HVAC, as lighting has leapfrogged from being a "dumb fixture" that's merely turned on and off, to being an integrated part of a building-management system. This integration, he adds, is bringing about many new kinds of partnerships for companies like Acuity.

To help offset the first cost of SSL products, Acuity uses "lean manufacturing" processes. And because SSL technology is constantly evolving, with new capabilities continually emerging, Acuity designs what Neal calls "futurability" into its products, giving them the ability to be easily upgraded — whether by swapping out a light engine or by reprogramming the software.

In addition to beefing up its workforce at the manufacturing level, Acuity has undergone a significant change in the area of software development, as well as in the allied areas of electrical engineering and optics. This is because, as Neil explains, with SSL there's so much more to consider in those areas than with conventional lighting technologies.

He points out that while Acuity sells globally, nearly 90% of its sales are in the U.S. More than one-third (4,300) of the company's worldwide employees are based in the U.S., where there's a major manufacturing facility in Crawfordsville, IN, and seven regional manufacturing and distribution centers throughout the country. In addition to lighting, Acuity also makes controls and building-management systems, in both of which lighting plays a key role.

Neil acknowledges that the hardware is extremely important, because if you don't have that in place, there's nothing to connect. But he says SSL's growth expansion and capabilities lie in the ability to connect that infrastructure and derive value from the resulting data — whether about occupancy rate, or wayfinding in a building or parking lot, or customer shopping habits.

Acuity also sees growth potential in LED horticultural lighting and is working with Rensselaer Polytechnic Institute to develop some related products. And the company envisions considerable opportunities in human-centric lighting, which Neil notes has been largely facilitated by SSL because it can be controlled and tuned to a degree that was previously not possible. Lighting, he says, will eventually be customizable to an unprecedented degree — whether to the task, the individual, or the zone.

As the lighting market shifts to SSL technology, Acuity Brands 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.