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Some Observations from LIGHTFAIR

A big thanks to all of you who stopped by DOE's booth at LIGHTFAIR® International last week. DOE's solid-state lighting team was at the show in full force, speaking in sessions on the LIGHTFAIR conference agenda, giving short educational talks in our booth, and walking the floor when we had the time, to get a sense of what's new and what's coming next.

One thing was impossible to miss: the widespread emphasis on controllability, connectivity, and "intelligent" lighting. One of the hits of the show was an LED downlight that demonstrated new levels of control over light levels, beam shape, and beam direction, and the ability to spotlight multiple different areas simultaneously, all intuitively controlled via iPad. We saw displays of lighting for intelligent offices, intelligent warehouses, and intelligent parking garages. There were large numbers of SSL products that had the capability to add integrated sensors and controls, and it was evident that control companies are working with luminaire manufacturers to get their packages built in, or at least included as an option—that is, where the controls aren't being developed in-house. This is clearly a direction in which the industry is headed, but with so many different control solutions available, users are bound to be challenged by the myriad choices.

The overall quality of the SSL products on display continues to improve. One area in which this was especially evident was color, which received much more emphasis this year than in the past. Whereas not long ago there were concerns from manufacturers that raising the CRI of SSL products would make pricing prohibitive, we saw many high-efficacy lamps and luminaires at LIGHTFAIR that boasted CRIs >90, including some purportedly at quite competitive prices. There were also a lot more color-tunable LED products than ever before, as well as an increase in claims related to light exposure and human health and productivity.

Walking the LIGHTFAIR aisles this year, we saw lots of signs that manufacturers are listening carefully to users and making the necessary refinements in their products. For example, there were LED downlights that featured narrow beam angles and emitted 8,000-plus lumens, and that were suitable for high-ceiling applications. We also saw no shortage of LED retrofit products—including quite a few LED versions of clear classic filament lamps. One LED product we saw featured a second driver—which, it was explained, kicks in if the first driver fails,

thus doubling the expected driver life. There were fewer OLED products than there were last year, but those on display were brighter, larger, and more uniform than in past years. We also saw an interesting hybrid that consisted of an OLED pendant with LEDs for uplight.

While there were plenty of LED lighting products on display at LIGHTFAIR that had adopted conventional form factors, there was a noticeable increase in the number of products with innovative form factors that leverage LED design flexibility, such as suspended rings and other geometric designs, and illuminated-surface sconces. It was good to see that there's a growing awareness of the LED flicker problem, and that manufacturers appear to be getting a grasp on most of the other major performance issues. The exception—based on comments we heard from many designers and others—was concerns about streetlight glare.

LIGHTFAIR showcases lighting's cutting edge, which is solid-state and getting sharper every year. But as prevalent as LED products were at this year's show, there's still tremendous headroom for SSL technology development and improvement. In some ways, the industry has barely scratched the surface of future lighting, which we expect will be significantly more efficient and better controlled than even the latest offerings. That's why we're already looking forward to next year's show.

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