



AEROBLADES™

Change your perspective.





Philosophy

A New Approach Requires A New Perspective.

How *What If?* Became *Why Not?*

When we set out to expand upon our LED exterior lighting solutions, we didn't just go to our engineering team. Instead, we approached renowned design firm Speirs + Major with one simple instruction: throw out all pre-conceptions about what a luminaire should be. Then they brought in the engineers (armed with a lot of blank paper) and proceeded to redefine exterior lighting solutions by changing their collective perceptions about taking LED lighting to an even higher level of performance.



Above Rendering of the idea
Opposite Final realization of the idea



**If Form Follows Function,
What Does Function Follow?**

The Aeroblades design team began with the notion that it is the intersection of form and function, rather than a linear progression, that creates the best solution. By embracing the advantages of new lighting technologies and questioning the status quo regarding luminaires, they were able to create new answers that deliver innovative solutions.



HID Shoebox Design



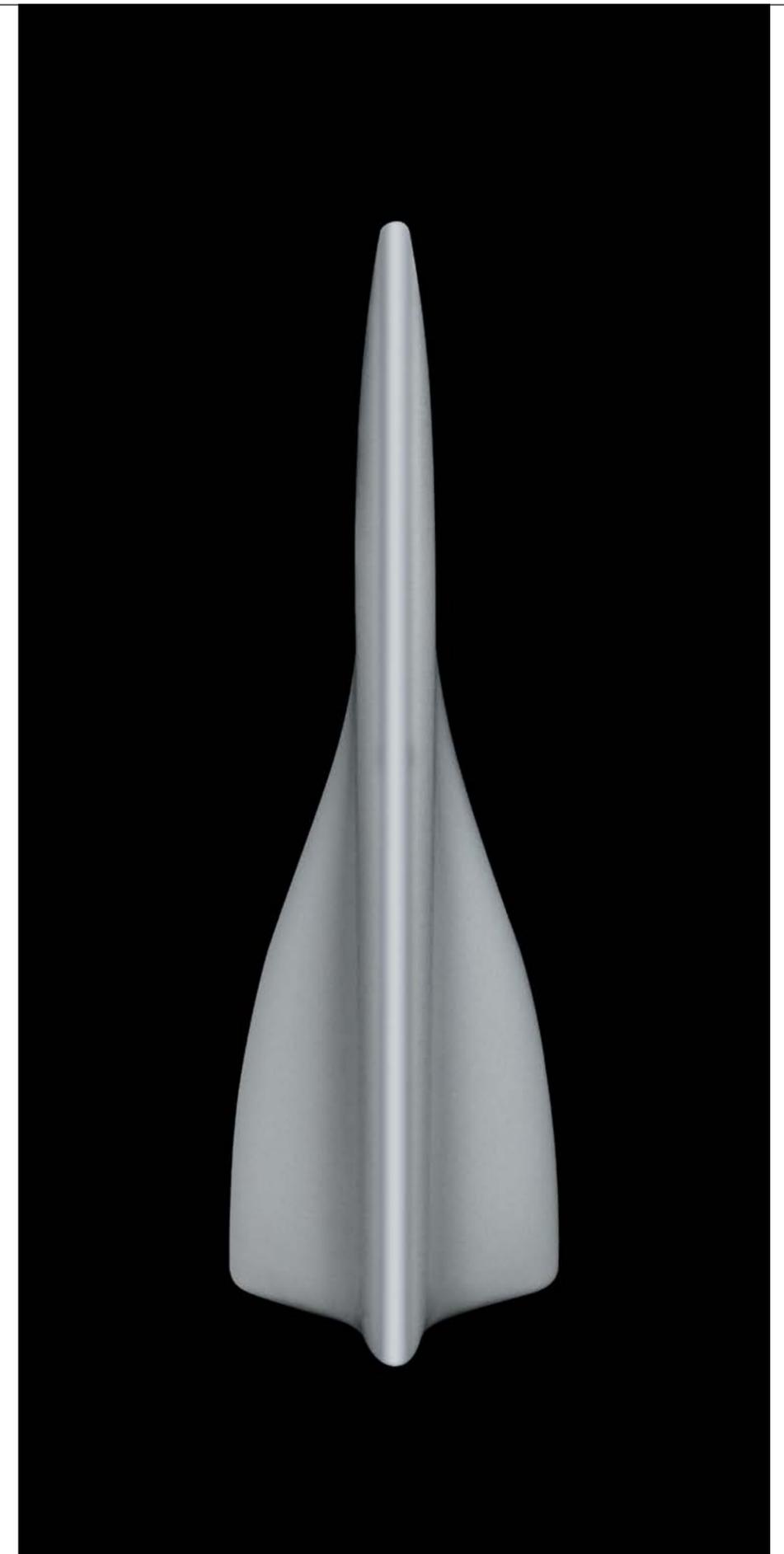
HID Architectural Design



LED Area Light Design

**Aesthetics can enhance daylight
appearance while improving
nighttime performance.**

It's easier to design outside of the box when you start without one. Getting rid of rigid design constraints enabled greater performance optimization. There did not have to be a tradeoff between efficiency and beauty; a product should be able to perform optimally and still look attractive when not in use. As a result, Cree Aeroblades luminaires are more than a visual statement, they are a visual exclamation point.

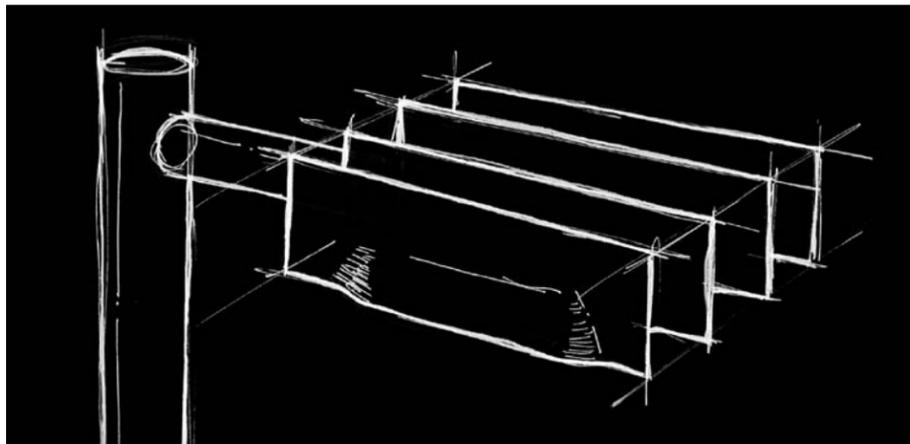


Change Your Perspective And Your Expectations Change Too.

It takes an unconventional approach to create new conventional wisdom.

Designers want Cree to continually advance the LED industry. After all, its BetaLED® Technology powered the first exterior lighting solutions that were designed with a Total Systems Approach. We considered state-of-the-art LED sources—driver technologies, optics, and form factor—for optimized performance and reliability. The development of Aeroblades luminaires raises the bar yet again. Now specifiers can add European-influenced design to high performance – something previously unavailable in a conventional luminaire.

More firsts from Cree – but what did you expect?

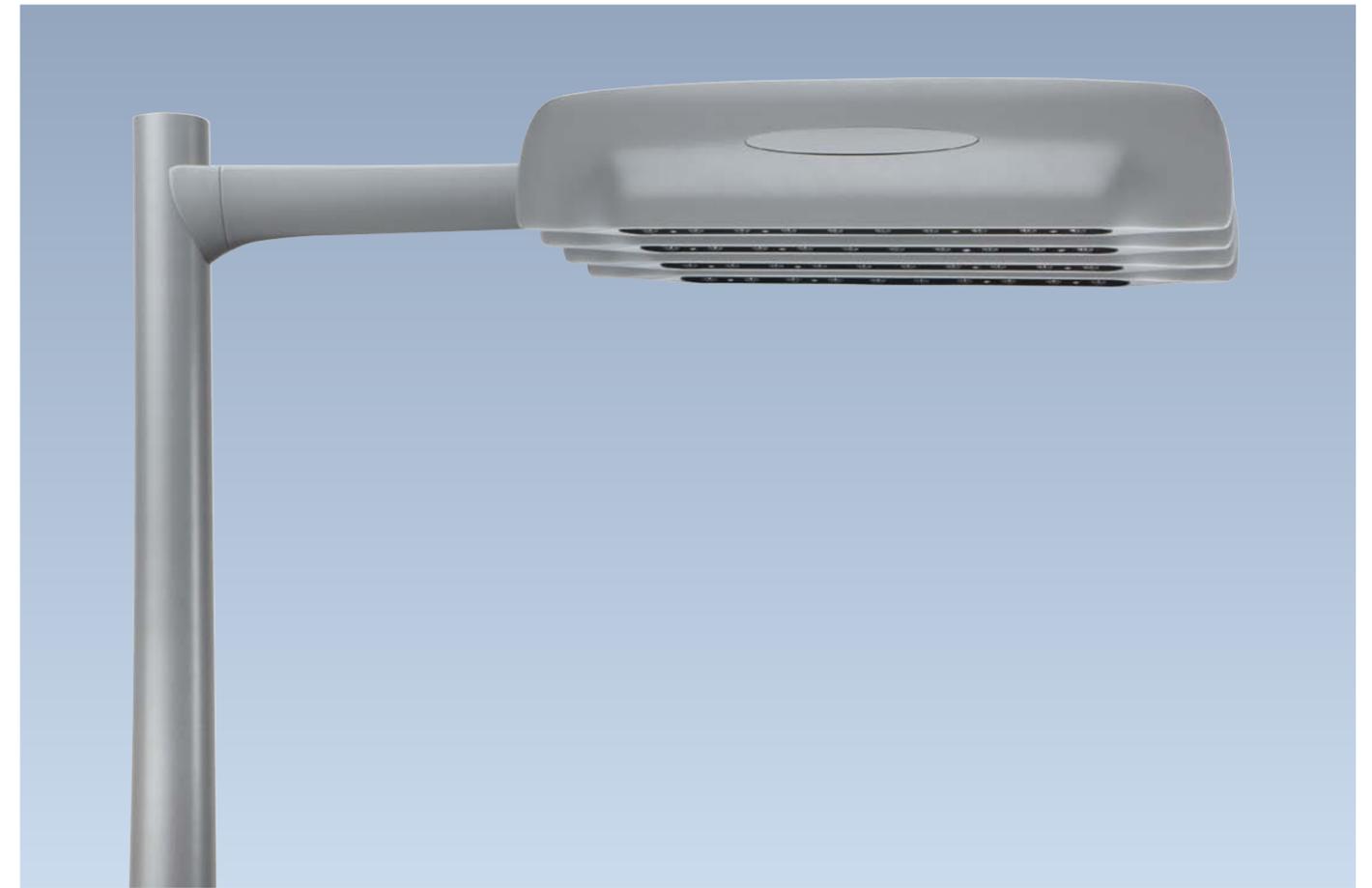


Introducing A Luminaire That Only an LED Could Produce.

Speirs + Major are renowned for their innovative design solutions at many high-profile sites. They use a comprehensive approach, weighing environmental, physical and visual parameters into a final design solution. By focusing on broad based performance optimization, they wanted to build a system that was true to the durability potential of high-power LED technology. And along the way, they uncovered a form factor that addresses numerous lighting challenges – ranging from public spaces and business parks to roadways and mass transit.

The slim, aerodynamic blade shape did more than improve visual aesthetics in the daylight. It produced a luminaire that is less obtrusive to the environmental surroundings and easier to service.

Another astounding innovation from Speirs + Major – but what did you expect?





Performance

Creating a New Perspective on LED Performance.

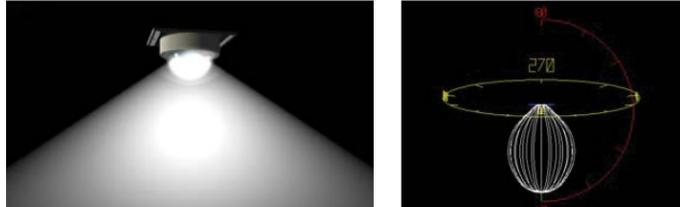
BetaLED NanoOptic® Technology – The End of Compromise



Lighting with traditional lighting products has been about compromises. Limited choices (along with limited performance) took the word "exact" out of play.

The patented BetaLED NanoOptic technology that goes into every Aeroblades luminaire changes the equation. With more than 20 distributions, maximum, target efficacy can easily be achieved. Specifiers can now provide the highly optimized target illumination performance and the flexibility necessary to deliver the specific requirements for each unique application.

Bare LED Package



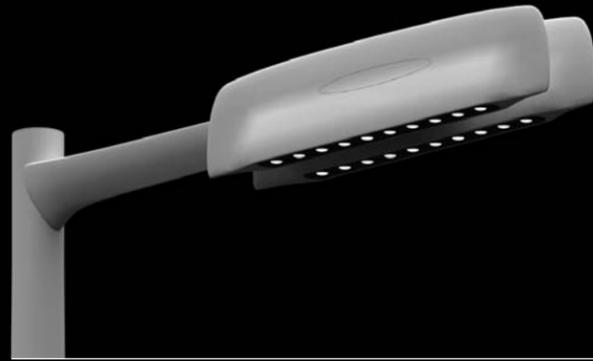
LED NanoOptic® Refractor Control



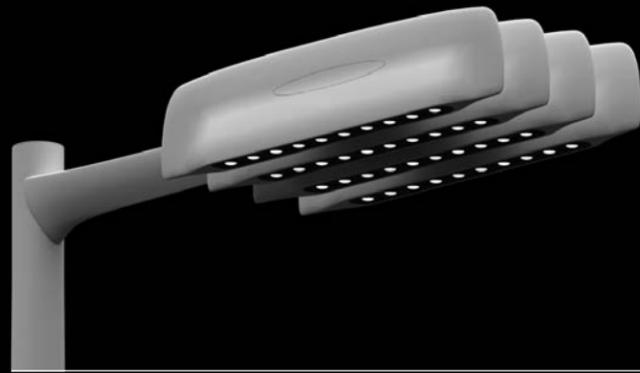
The BetaLED Total Systems Approach – More Than Refining, Truly Redefining

Our core philosophy was to view the luminaire as a complete system – the most advanced LED sources, driver technologies, optics and form factors – to create a solution that transcended those that had come before it. The result was BetaLED Technology. It became a series of highly reliable luminaires that reduce energy consumption and maximize target illumination performance, all while meeting optimal operating life and service objectives.

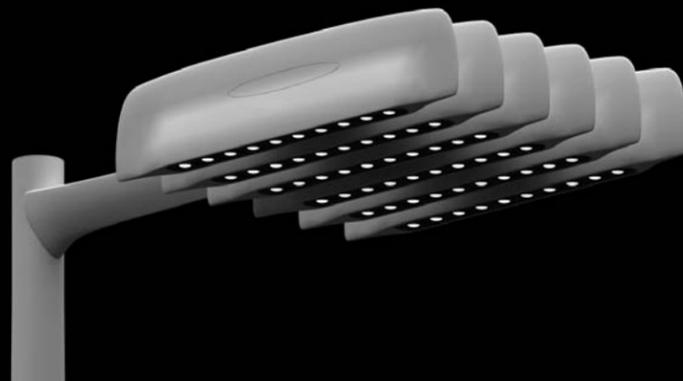
Aeroblades luminaires advance this total system philosophy in several ways. The interplay of form and function manifests itself most obviously in the unique modular design that allows the state-of-the-art Aeroblades light engine to bring unheard-of versatility and precision to your lighting solutions. Luminaires can be fine-tuned through the use of NanoOptics and the number of blades to meet specific illumination needs in much smaller increments than either traditional designs or competitive LED products. The smooth lines and unique aesthetics further ensure that Aeroblades luminaires serve as design enhancements to a project even during the day.



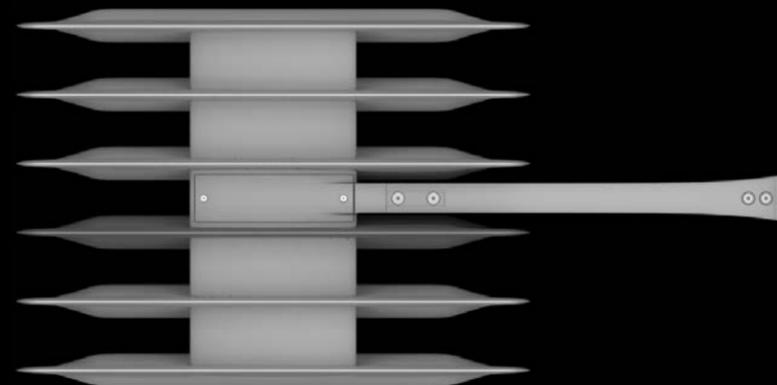
2 Blade
21.9 x 4.4in
555 x 112mm



4 Blade
21.9 x 10.2in
555 x 259mm



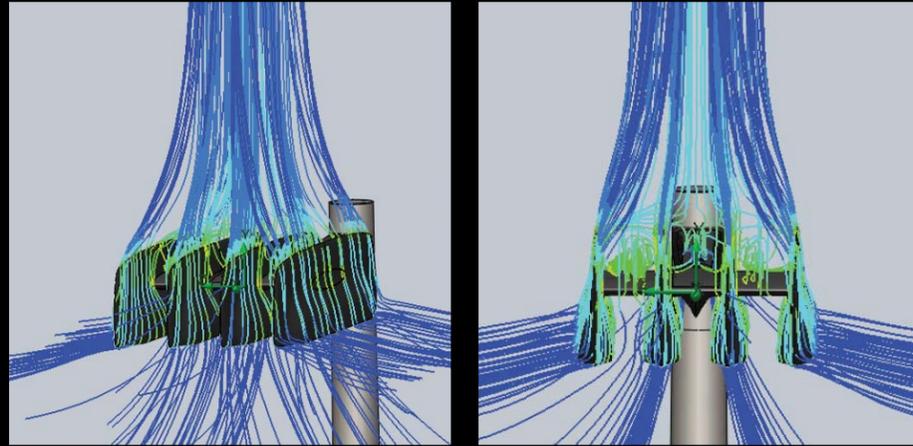
6 Blade
21.9 x 16in
555 x 406mm



The BetaLED Total Systems Approach – More Than Refining, Truly Redefining

The system philosophy is also seen in the way the drivers in Aeroblades luminaires are specifically designed to our high standards in order to offer the flexibility needed to optimize performance for any application. The ability to select from a variety of drive currents allows a balance between initial cost and long-term energy savings in the product selection processes. The drivers used in Cree products are extremely reliable, with a predicted failure rate of less than 0.5% at 100,000 hours of operation, even in the most extreme conditions.

Thermal management is another area optimized by the BetaLED Technology system philosophy. Passive thermal management resident in Aeroblades uses heat sinks to efficiently draw heat away from the LED chip package. This approach pays dividends through the life of a lighting application by ensuring highly optimized illumination performance on day one and reducing the impact of lumen depreciation every day the luminaire is in service. All while providing greater product reliability.



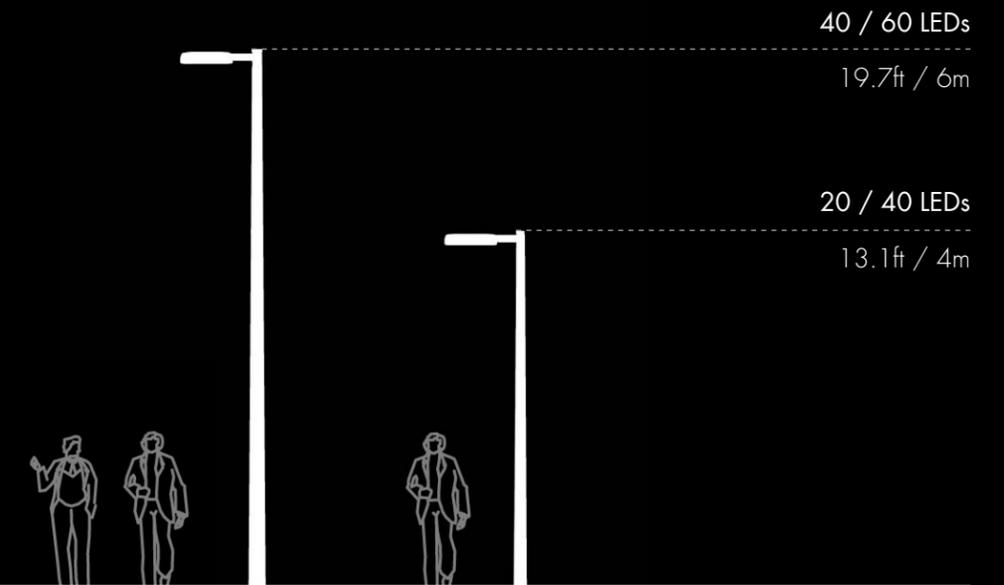
Thermal Management – The Key To Performance And Longevity

Aeroblades Architectural Exterior Applications

With its attention-grabbing aesthetics, ability to focus lighting precisely and extreme longevity, an Aeroblades luminaire is ideal for both roadway and pedestrian lighting applications.

On highways, Aeroblades products provide a contemporary accent to streets while enhancing safety. In neighborhoods, the LEDs provide bright, clean light for driving visibility while reducing spillover to homes and businesses. Properly-illuminated streets have also been shown to help reduce crime rates.

In parking lot applications, Aeroblades luminaires create an inviting, energetic environment that attracts customers while making the business a good neighbor to the surrounding community. And in pedestrian applications, Aeroblades luminaires provide beauty during the day as well as safety during the night.



Cree is committed to developing and manufacturing quality LED luminaires that meet industry lighting standards and guidelines set forth by organizations and agencies such as the International Dark-Sky Association, Underwriters Laboratories and the U.S. Environmental Protection Agency's (EPA) Energy Star program.

Contact us for more information about Aeroblades.



Premier Illuminance

The Illuminating Engineering Society of North America (IESNA) new Backlight, Uplight, Glare or BUG standard of measurement provides improved performance descriptions and measurement for LED luminaires. This TM-15 Luminaire Classification System (LCS) for Outdoor Luminaires classifies luminaire photometric performance related to light trespass, sky glow, and high angle brightness control.



All Solid State Lighting (SSL) should meet the requirements of accepted safety standards through the independent testing of a Nationally Recognized Testing Laboratory (NRTL).



As an Energy Star partner and Department of Energy SSL Quality Advocate, BetaLED is committed to upholding program standards through testing and reporting. We are committed to delivering products that perform to these high agency standards.



UL and cUL Wet Listed

All BetaLED products meet safety certifications through Underwriters Laboratories and are suitable for use in wet locations.



International Dark Sky Association Compliance

All Cree products are International Dark-Sky Association (IDA) approved and are measured for performance using IESNA standards and guidelines including the IES BUG rating system which supersedes the former cut-off classification system.



Environmentally Responsible

Cree offers a number of environmental advantages over traditional light sources. Our luminaires are lead-free, mercury-free and meet Restriction of Hazardous Substances (RoHS) regulations.

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