

Cree LED Unveils OptiLamp LEDs With Active Intelligence in Every Pixel

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A major advance integrated LED technology enhances display performance, efficiency and design simplicity

DURHAM, N.C.--(BUSINESS WIRE)-- **Cree LED®**, a **Penguin Solutions** brand (Nasdaq: **PENG**), today announced OptiLamp™ LEDs, a new display technology that integrates driver and control intelligence directly into every LED pixel. Built on patented Cree LED technology, the OptiLamp portfolio advances LED display design by delivering superior image quality with reduced power consumption and a streamlined system architecture.

OptiLamp LEDs from Cree LED redefine what's possible in LED-based displays, combining patented onboard intelligence with high-performance LED technology to deliver superior image quality, greater efficiency and streamlined manufacturing.

Unlike conventional LED displays that rely on external driver ICs and multiplexing, OptiLamp LEDs actively manage output

and health at the pixel level, inside the LED package. This embedded intelligence enables thinner, lighter, and more reliable displays while reducing manufacturing complexity, material costs, and long-term maintenance.

“OptiLamp technology redefines how LED displays are designed and operated, setting a new standard for large- and small-scale display performance, clarity and power efficiency,” said Joe Clark, president, Cree LED. “With intelligence built into every pixel, the technology not only simplifies deployment at the system level, it also enables customers to deliver end products with brighter visuals, crisper images and higher efficiency – continuing to expand the capabilities of display technology.”

OptiLamp technology delivers enhanced brightness, true 1/1 scan operation and precise pixel-level control, eliminating scan lines, image tearing and synchronization artifacts. With 24-bit control per channel, these LEDs produce ultra-smooth color gradations, deep contrast and exceptional visual fidelity for both live viewing and on-

camera applications.

Power efficiency is also significantly improved, delivering meaningful energy savings at normal brightness levels, supporting sustainability goals while reducing operating costs and improving return on investment. In addition, OptiLamp LEDs feature built-in monitoring and calibration data, enabling proactive maintenance, faster field repairs and consistent performance throughout the display's lifetime.

With this new OptiLamp technology, Cree LED sets a new standard for LED display performance, efficiency and system simplicity – unlocking next-generation designs and expanded application possibilities across the display industry.

A live OptiLamp demonstration with Cree LED's brand partner, LED Studio, will be featured at Integrated Systems Europe (ISE) 2026, February 3-6, in Barcelona, Spain. To learn more, visit <https://www.cree-led.com/products/leds/optilamp/>.

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About Cree LED

Cree LED, a Penguin Solutions brand, offers one of the industry's broadest portfolios of application-optimized LED chips and components, leading the industry in performance and reliability. With more than 35 years of innovation, our strong IP portfolio and unique business model ensures supply chain continuity. We deliver best-in-class technology and breakthrough solutions for focused applications in high power and mid-power general lighting, horticulture, specialty lighting and video screens. For more information, visit [cree-led.com](https://www.cree-led.com).

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