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Lumileds Releases the First Ready-to-Use RGB LED Light Sources for Backlights

Luxeon DCC Offers Fast One-Piece Deployment and Key Performance Benefits over CCFLs

SAN JOSE, CA (March 3, 2004) — Lumileds Lighting today announced the availability of Luxeon DCC, the first fully assembled LED-based RGB light sources for use as an alternative to cold cathode fluorescent lamps (CCFLs) in LCD backlights. Available in five sizes for backlights ranging from 5" to 18.1", these ready-to-use systems utilize Lumileds' high-powered Luxeon LEDs to bring the color, control and longevity benefits of solid-state lighting to LCD displays.

Each Luxeon DCC integrates Luxeon red, green and blue emitters in a one-piece unit that can be deployed with light guides and other components to form a complete illumination system for LCD backlighting. This strategy offers significant benefits to backlight and display manufacturers, including:

- **Faster time to market,** because each light source can be deployed in the backlight assembly without the component integration or individual LED selection required by other suppliers.
- **Lower development costs,** both because there is no need to engineer the light source and because Luxeon DCCs are accompanied by reference designs that offer technical guidance for incorporating the modules into backlighting systems.
- **Consistent brightness and color uniformity,** achieved through Lumileds-exclusive intelligent binning that enables LEDs used in each Luxeon DCC to be matched for flux, color, forward voltage and temperature variability.

The industry-leading brightness of the Luxeon LEDs used in the system minimizes the number of LED packages required to generate the necessary light output, limiting

LED arrays to only one edge of the light source. This simplifies engineering and frees critical edge space for other components and design elements.

In addition, backlights built with Luxeon DCC light sources enable display manufacturers to produce a new breed of products offering key performance benefits, including:

- **Vibrant color** produced through Luxeon technology that expands the color gamut by as much as 45 percent, far outstripping the color intensity and fidelity available in conventional CCFL products.
- **Reduced motion artifacts,** minimizing the blurring effect created by fast-moving images because the Luxeon DCC can be programmed to blink at much higher speeds than CCFLs without compromising brightness or lifetime.
- **Optimized color and white point settings,** enabling users to switch between 9600K and 6500K white points without losing color contrast when they move from computer applications (such as spreadsheets and word processing) to video applications (such as movie viewing).
- **Infinite dimming capabilities,** enabling high visibility in bright daylight environments and minimal glare in dark environments.
- **Rugged, unbreakable, mercury-free, low-voltage design** that withstands rough handling, vibrations, ambient temperature fluctuations and even dropping, thanks to the absence of filament and glass.
- **Constant brightness over the life of the backlight,** with the ability to maintain screen brightness without affecting lifetime performance.

"Luxeon LEDs offer significant benefits for LCD displays, but until now backlight and display manufacturers have lacked a way to bring those benefits to market," said Lumileds Product Marketing Manager Palash Desai. "Luxeon DCC solves the problem with fully assembled LED-based light sources that offer easy implementation, along with brightness levels and mechanisms for ensuring color and brightness uniformity that are available only with Lumileds' Luxeon technology."

Luxeon DCC light sources are available from Future Electronics at 1-800-FUTURE1 or www.futureelectronics.com.

About Lumileds Lighting

Lumileds Lighting is the world's leading manufacturer of high-power LEDs and a pioneer in the use of solid-state lighting solutions for everyday purposes including general lighting, automotive lighting, traffic signaling, signage and LCD backlighting. The company's patented Luxeon Power Light Sources are the first to combine the brightness of conventional lighting with the small footprint, long life and other advantages of LEDs. Lumileds also supplies core LED material and LED packaging, and manufactures billions of LEDs annually. A joint venture between Agilent Technologies and Philips Lighting, Lumileds is headquartered in San Jose, California, with operations in Japan, The Netherlands and Malaysia and sales offices throughout the world. For more information, call Lumileds at 408-435-6111 or visit www.lumileds.com.

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