

LTC News for Immediate Release

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Dual 1.3A White LED Step-Up Converters Drive 16 100mA LEDs with 1000:1 Dimming Ratio

MILPITAS, CA – August 24, 2005 – Linear Technology Corporation announces the LT3486, a dual step-up DC/DC converter specifically designed to drive up to 16 white LEDs (8 LEDs in series per channel) with constant current. In addition true PWM dimming delivers constant current to the LEDs, keeping the emitted light at a constant color. Dimming is controlled with the duty cycle of the PWM driver. This method allows for a wide 1000:1 dimming range. The LT3486's high efficiency, current mode and fixed frequency operation ensures uniform LED brightness, low noise and maximum battery life. Its two independent converters are capable of driving asymmetric LED strings (up to 8 in a series per converter) from an input voltage of 2.5V to 24V, delivering efficiencies up to 85%. Its 5mm x 3mm DFN package and tiny externals provide a very compact footprint for space-constrained handheld applications. Its 2.5V to 24V input voltage range enables it to operate in applications from Li-Ion powered handheld devices to automotive backlighting applications.

The LT3486 switching frequency can be set between 200kHz and 2MHz via a single resistor, enabling the designer to minimize solution footprint and maximize efficiency. Because the LT3486 utilizes constant frequency architecture, noise is minimized, eliminating potential interference with any onboard RF or audio circuitry. Additional features include internal soft-start/inrush current limiting, and open LED protection. The combination of the LT3486's high efficiency, versatility, low noise, and extremely small "total solution" footprint make it ideal for a variety of backlighting applications requiring many white LEDs in a space constrained form factor.

The LT3486EDHC is available from stock in a 5mm x 3mm DFN-16 package while the LT3486EFE is in a TSSOP-16E package. Pricing starts at \$2.50 each and \$2.60 each respectively for 1,000 piece quantities. Both parts are available from stock.

(more...)

Summary of Features: LT3486

- Wide (1000:1) Dimming Range
- Independent Dimming and Shutdown Control of the LED Drivers
- Drives Up to 16 White LEDs at 25mA (8 per Driver) from a Single Li-Ion Cell
- Drives Up to 16 White LEDs at 100mA (8 per Driver) from 12V Supply
- $\pm 3\%$ LED Current Programming Accuracy
- Open LED Protection: 36V Clamp Voltage
- Fixed Frequency Operation: Up to 2MHz
- Wide Input Voltage Range: 2.5V to 24V
- Available in (5mm x 3mm x 0.75mm) 16-Pin DFN and 16-Pin TSSOP Packages

COMPANY BACKGROUND: Linear Technology Corporation was founded in 1981 as a manufacturer of high performance linear integrated circuits. Linear Technology products include high performance amplifiers, comparators, voltage references, monolithic filters, linear regulators, DC-DC converters, battery chargers, data converters, communications interface circuits, RF signal conditioning circuits, and many other analog functions. Applications for Linear Technology's high performance circuits include telecommunications, cellular telephones, networking products such as optical switches, notebook and desktop computers, computer peripherals, video/multimedia, industrial instrumentation, security monitoring devices, high-end consumer products such as digital cameras and MP3 players, complex medical devices, automotive electronics, factory automation, process control, and military and space systems.

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