



News Release | www.linear.com

Synchronous Step-Down LED Driver Delivers Over 20A of Continuous LED Current

MILPITAS, CA – October 20, 2009 – Linear Technology announces the LT3743, a synchronous step-down DC/DC converter designed to deliver constant current to drive high current LEDs. The device's 5.5V to 36V input voltage range makes it ideal for a wide variety of applications, including industrial, DLP projection and architectural lighting. The LT3743 provides up to 20A of continuous LED current from a nominal 12V input, delivering in excess of 80 Watts. In pulsed LED applications, it can deliver up to 40A of LED current or 160 Watts from a 12V input. Efficiencies as high as 95% eliminate any need for external heat sinking and significantly simplify the thermal design. A frequency adjust pin enables the user to program the frequency between 100kHz and 1MHz so designers can optimize efficiency while minimizing external component size. Combined with a 4mm x 5mm QFN or thermally enhanced TSSOP-28 package, the LT3743 offers a very compact high-power LED driver solution.

The LT3743 offers both PWM and CTRL_SELECT dimming, offering 3,000:1 dimming capability at three LED current levels, making it ideal for color mixing applications such as those required in DLP projectors. Similarly, the LT3743's unique topology enables it to transition between two regulated LED current levels in less than 2usec, enabling more accurate color mixing in RGB applications. LED current accuracy of $\pm 6\%$ is maintained in order to ensure the most accurate luminosity of light from the LED. Additional features include output voltage regulation, open-LED protection, overcurrent protection and a thermal derating circuit.

The LT3743EUFD is available in a 28-pin 4mm x 5mm QFN package, whereas the LT3743EFE is available in a thermally enhanced TSSOP-28. Pricing starts at \$4.80 and \$4.95 each, respectively in 1,000-piece quantities. Extended temperature versions, or "I" grades, namely the LT3743IUFD and LT3743IFE are also available. Pricing starts at \$5.65 and \$5.82 each respectively in 1,000-piece quantities. All versions are available from stock. For more information, visit www.linear.com.

Photo Caption: Full-Featured LED Controller Delivers over 80 Watts of LED Power

Summary of Features: LT3743

- PWM Dimming Provides Up to 3000:1 Dimming Ratio
- CTRL_SEL Dimming Provides Up to 3000:1 Dimming Ratio Between Any Current
- Three-State Current Control for Color Mixing
- $\pm 6\%$ Current Regulation Accuracy
- 5.5V to 36V Input Voltage Range
- Average Current Mode Control
- 2 μ s Maximum Recovery Time Between Any Current Regulation State
- 1 μ A Shutdown Current
- Output Voltage Regulation & Open-LED Protection
- Thermally Enhanced 4mm x 5mm QFN & 28-Pin FE Package

About Linear Technology

Linear Technology Corporation, a manufacturer of high performance linear integrated circuits, was founded in 1981, became a public company in 1986 and joined the S&P 500 index of major public companies in 2000. 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, uModule[®] products, 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.

LT, LTC, LTM, uModule and  are registered trademarks of Linear Technology Corp. All other trademarks are the property of their respective owners.

Press Contacts:

North America / Worldwide

John Hamburger, Director Marketing
Communications
jhamburger@linear.com
Tel 408-432-1900 ext 2419

Doug Dickinson, Media Relations Manager
ddickinson@linear.com
408-432-1900 ext 2233

UK & Nordic

Alan Timmins
alan@ezwire.com
Tel: +44-1-252-629937