

LTC News for Immediate Release

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**Synchronous Buck-Boost High Power White LED Driver
Delivers up to 500mA with 90% Efficiency**

MILPITAS, CA – March 9, 2005 – Linear Technology Corporation announces the LTC3453, a synchronous buck-boost DC/DC converter optimized for driving high current white LEDs at up to 500mA from a single Li-Ion battery input. The regulator operates automatically in either a synchronous buck, synchronous boost, or buck-boost mode, depending on input voltage and LED maximum forward voltage. This is of particular importance in high current LED applications because the LED forward voltage can vary from 2.7V to 4.9V depending on current levels and LED tolerances. The LTC3453's buck-boost topology can deliver 90% efficiency over the entire Li-Ion voltage range of 2.7V to 4.2V. Independent high and low current settings for flash and torch/video modes respectively can be easily programmed with dual current setting resistors and dual enable pins.

Efficiency of 90% can be typically achieved over the range of a Li-Ion battery. LED current is programmable to one of four levels (including shutdown) with dual current setting resistors and dual enable pins. In shutdown, the supply current is only 6uA. The device protects itself under open or shorted LED conditions. A high constant operating frequency of 1MHz allows the use of a small external inductor. The LTC3453 is offered in a low profile (0.75mm), thermally enhanced 16-lead (4mm x 4mm) QFN package.

The LTC3453EDD is available from stock in a QFN-16 package. Pricing starts at \$2.10 each for 1,000-piece quantities.

(more...)

Summary of Features: LTC3453

- High Efficiency: 90% Over Entire Single-Cell Li-Ion Battery Range
- Wide V_{IN} Range: 2.7V to 5.5V
- Up to 500mA Continuous Output Current
- Constant Frequency 1MHz Operation
- Low Shutdown Current: 6uA
- Internal Soft Start
- Open/Shorted LED Protection
- Overtemperature Protection
- Small Thermally Enhanced 16-Lead (4mm x 4mm) QFN Package

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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READER SERVICE: Call toll-free 1-800-4-LINEAR (for literature only), or go to the company's web site: **<http://www.linear.com>**

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