



80V_{IN}/80V_{OUT}, Constant Voltage, Constant-Current DC/DC Converter

MILPITAS, CA – May 26, 2010 – Linear Technology announces the [LT3956](#), an 80V high-side current sense DC/DC converter designed to operate as a constant-current and constant-voltage regulator. It is ideal for driving high current LEDs as well as charging batteries and supercaps. Its 4.5V to 80V input voltage range makes it ideal for a wide variety of applications, including automotive, industrial and architectural lighting. The LT3956 uses an internal N-channel MOSFET and can drive up to eighteen 350mA white LEDs from a nominal 12V input, delivering in excess of 25 Watts. It incorporates a high-side current sense, enabling use in boost, buck, buck-boost or SEPIC and flyback topologies. The LT3956 delivers efficiencies of over 94% in boost mode, eliminating the need for external heat sinking. A frequency adjust pin permits the user to program the frequency between 100kHz and 1MHz, optimizing efficiency while minimizing external component size and cost. Combined with a 5mm x 6mm QFN package, the LT3956 offers a highly compact 25 Watt LED driver solution.

The LT3956 uses True Color PWM™ dimming, delivering constant LED color with dimming ranges up to 3,000:1. For less demanding dimming requirements, the CTRL pin provides a 10:1 analog dimming range. The LT3956's fixed frequency, current mode architecture ensures stable operation over a wide range of supply and output voltages. A ground referenced voltage FB pin serves as the input for several LED protection features, enabling the converter to operate as a constant-voltage source.


The LT3956EUHE is available in a 36-pin 5mm x 6mm QFN package, priced starting at \$3.50 each in 1,000-piece quantities. An extended temperature I-grade version, the LT3956IUHE, is priced at \$4.12 each, in 1,000-piece quantities. Both versions are available from stock. For more information, visit <http://www.linear.com/pr/3956>.

Photo Caption: 80V, Constant Voltage/Current Converter**Summary of Features: LT3956**

- 3000:1 True Color PWM™ Dimming
- Wide Input Voltage Range: 4.5V to 80V
- Output Voltage Up to 80V
- Internal 3.3A/84V Switch
- Constant-Current & Constant-Voltage Regulation
- 250mV High Side Current Sense
- Drives LEDs in Boost, Buck Mode, Buck-Boost Mode, SEPIC or Flyback Topology
- Adjustable Frequency: 100kHz to 1MHz
- Open LED Protection
- Programmable Undervoltage Lockout with Hysteresis
- Constant-Voltage Loop Status Pin
- PWM Disconnect Switch Driver
- CTRL Pin Adjusts High Side Current Sense Threshold
- Low Shutdown Current: <1uA
- Programmable Soft-Start
- Available in the 36-Lead (5mm × 6mm) QFN 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.

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