



100V, Constant-Current & Constant-Voltage Controller with Input & Output Current Sense

MILPITAS, CA – April 17, 2012 – Linear Technology announces the [LT3796](#), a 100V, high-side current sense DC/DC controller designed to regulate a constant-current or constant-voltage that is ideal for driving high brightness (HB) LEDs. Its 6V to 100V input voltage range supports a wide variety of applications, including automotive, industrial and architectural lighting. The LT3796 uses an external N-channel MOSFET and can drive up to 85V of white LEDs from a nominal 12V input, delivering in excess of 50 Watts. The LT3796 is ideal for charging batteries or supercaps at constant current and voltage. The LT3796 incorporates a high-side current sense, enabling its use in boost, buck, buck-boost or SEPIC and flyback topologies. Additionally, it offers both input and output current limiting and monitoring for added reliability and design flexibility. The LT3796 can deliver efficiencies of over 94% in boost mode, minimizing the need for external heat sinking. A frequency adjust pin enables the user to program the frequency between 100kHz and 1MHz, optimizing efficiency while minimizing external component size and cost. Combined with a thermally enhanced TSSOP-28 package, the LT3796 offers a highly compact HB LED driver or charger solution.

The LT3796 uses True Color PWM™ dimming, which delivers constant LED color with dimming ranges of up to 3,000:1. For less demanding dimming requirements, the CTRL pin can be used to offer a 10:1 analog dimming range. Its fixed frequency, current-mode architecture ensures stable operation over a wide range of supply and output voltages.

Robust open and short-circuit protection maximize overall system reliability, whereas C/10 detection optimizes both battery and supercap charging designs. Additional features include frequency synchronization, programmable UVLO and a programmable fault restart timer.

The LT3796EFE is available in a thermally enhanced TSSOP-28 package. Pricing starts at \$3.45 each. An extended temperature version, or I-grade, the LT3796IFE, is also available, priced starting at \$3.86 each. Finally, a high temperature, or H-grade option, is available, the LT3796HFE with pricing starting at \$4.11 each. All prices are in 1,000-piece quantities and all versions are available from stock. For more information, visit www.linear.com/product/LT3796


Photo Caption: 100V, Constant-Current & Constant-Voltage Controller

Summary of Features: LT3796

- 3,000:1 True Color PWM™ Dimming
- Wide Input Voltage Range: 6V to 100V
- Current Monitoring Up to 100V
- High Side PMOS Disconnect and PWM Switch Driver
- Constant-Current and Constant-Voltage Regulation
- Dual Current Sense Amplifiers with Reporting
- C/10 Detection for Battery and Supercap Charging
- Linear Current Sense Threshold Programming
- Short-Circuit Protection
- Adjustable Frequency: 100kHz to 1MHz
- Frequency Synchronization
- Programmable Open LED Protection with VMODE Flag
- Programmable Undervoltage Lockout with Hysteresis
- Soft-Start with Programmable Fault Restart Timer
- Low Shutdown Current: <1μA
- Available in 28-Lead TSSOP Package

About Linear Technology

Linear Technology Corporation, a member of the S&P 500, has been designing, manufacturing and marketing a broad line of high performance analog integrated circuits for major companies worldwide for three decades. The Company's products provide an essential bridge between our analog world and the digital electronics in communications, networking, industrial, automotive, computer, medical, instrumentation, consumer, and military and aerospace systems. Linear Technology produces power management, data conversion, signal conditioning, RF and interface ICs, μ Module[®] subsystems, and wireless sensor network products. For more information, visit www.linear.com

LT, LTC, LTM, μ Module and  are registered trademarks and True Color PWM is a trademark 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
Tel: 408-432-1900 ext 2233

UK & Nordic

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