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## **60V Synchronous Buck-Boost LED Driver Delivers over 100W of LED Power**

MILPITAS, CA – March 12, 2012 – Linear Technology announces the [LT3791](#), a synchronous buck-boost DC/DC LED driver and voltage controller, which can deliver over 100W of LED power. Its 4.7V to 60V input voltage range makes it ideal for a wide variety of applications, including automotive, industrial and architectural lighting. Similarly, its output voltage can be set from 0V to 60V, enabling the LT3791 to drive a wide range of LEDs in a single string. Its internal 4-switch buck-boost controller operates from input voltages above, below or equal to the output voltage, ideal for applications such as automotive, where the input voltage can vary dramatically during stop/start, cold crank and load dump scenarios. Transitions between buck, pass-through and boost operating modes are seamless, offering a well-regulated output even with wide variations of supply voltage. The LT3791's unique design utilizes three control loops to monitor input current, LED current and output voltage to deliver optimal performance and reliability.

The LT3791 uses four external switching MOSFETs and delivers from 5W to over 100W of continuous LED power with efficiencies up to 98.5%. LED current accuracy of  $\pm 6\%$  ensures constant lighting while  $\pm 2\%$  output voltage accuracy enables the converter to operate as a constant voltage source. The LT3791 utilizes either analog or PWM dimming as required by the application. Furthermore, its switching frequency can be programmed between 200kHz and 700kHz or synchronized to an external clock. Additional features include output disconnect,

input and output current monitors, open and shorted LED detection and integrated fault protection.

The LT3791EFE is available in 38-lead thermally enhanced TSSOP package, priced starting at \$4.75 each in 1,000-piece quantities. An extended temperature version, or I grade, the LT3791IFE, is also available, priced starting at \$5.25 each in 1,000-piece quantities. A high temperature version, or H grade, the LT3791HFE, is also available, priced starting at \$5.50 each in 1,000-piece quantities. There is also a high reliability MP grade version, LT3791MPFE, available starting at \$14.75 each in 1,000-piece quantities. All versions are available from stock.

For more information, visit [www.linear.com/product/LT3791](http://www.linear.com/product/LT3791)


**Photo Caption:** 60V Input/Output Capable, Synchronous Buck-Boost LED Driver Delivers over 100W of LED Power

### Summary of Features: LT3791

- 4-Switch Single Inductor Architecture Allows  $V_{IN}$  Above, Below or Equal to  $V_{OUT}$
- Wide  $V_{IN}$  Range: 4.7V to 60V
- Wide  $V_{OUT}$  Range: 0V to 60V (55V LED)
- $\pm 2\%$  Output Voltage Accuracy
- Synchronous Switching: Over 98.5% Efficiency
- $\pm 6\%$  LED Current Accuracy:  $0V \leq V_{OUT} < 60V$
- $V_{OUT}$  Disconnected from  $V_{IN}$  during Shutdown
- Accurate Rail-to-Rail LED Current Sense with Monitor Output
- Input Current Sense with Monitor Output
- PWM & Analog Dimming
- Shutdown with Programmable Hysteresis & UVLO
- Capable of 100W or Greater per IC
- 38-Lead TSSOP with Exposed Pad

## 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,  $\mu$ Module<sup>®</sup> subsystems, and wireless sensor network products. For more information, visit [www.linear.com](http://www.linear.com)

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