

Product Summary Sheet

Applications:

- ▶ Automotive LED Lighting
- ▶ RGB LED Backlight
- ▶ DC/DC LED Driver Modules
- ▶ Battery Powered LED Lamps



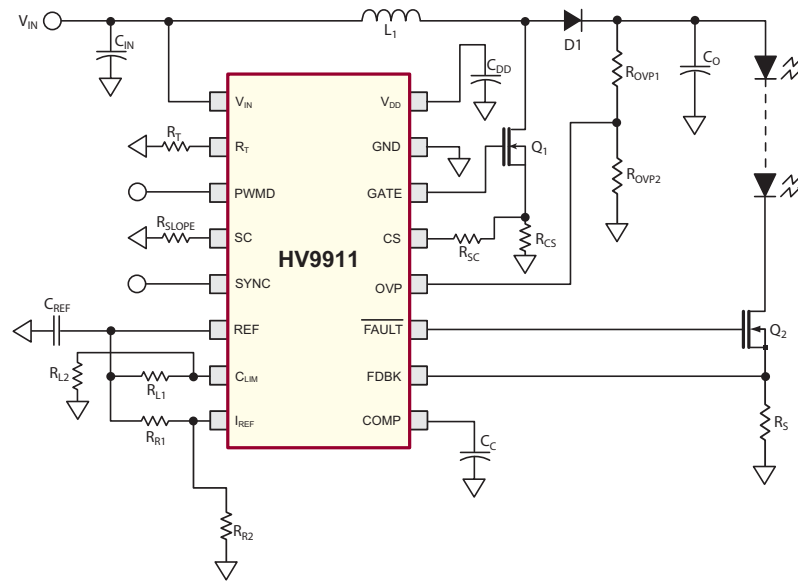
SOIC (NG)



112805

HV9911

Switch-mode LED Driver IC with High Current Accuracy



Typical Application Circuit

Product Overview:

The HV9911 is a current mode control LED driver IC designed to control single switch PWM converters in a constant frequency or fixed off-time mode. The controller uses a peak current control scheme (with programmable slope compensation) and includes an internal transconductance amplifier to control the output current in closed loop enabling high LED current accuracy and good transient response. HV9911 can be synchronized using the SYNC pin to eliminate any beat frequency or sub-harmonic noise when using multiple LED drivers. Programmable input current limit enables current limiting during input under voltage and output overload conditions. The IC also includes internal protection features for open LED over voltage and output short circuit. A high voltage internal regulator allows operation from 9V to 250V. HV9911 provides a PWM dimming input that can accept an external control signal with a duty ratio of 0-100% and a frequency of up to a few kilohertz. Linear dimming (LED current adjustment) can be implemented using the reference input to the internal amplifier.

The HV9911 based LED driver is ideal for RGB LED backlight applications where LED current accuracy is needed. The HV9911 based LED drivers can be used in boost, buck and buck-boost (flyback) topologies.

Features:	Benefits:
Internal Transconductance Op Amp	Closed Loop System. Tighter line and load regulation of the LED current with good transient response to PWM Dimming
Synchronization	Prevent sub-harmonic oscillations associated with driving multiple LED drivers - Phase control operation with external clock
Fixed Frequency or Fixed Off-time operation	Flexibility in use of various converter topologies: Boost, Fly-back, and Buck
Programmable internal OVP comparator and short circuit protection	Integrated Open LED and output short circuit protection
Slope Compensation	Allows for wider range of operation (larger strings of LED) in fixed frequency mode
PWM and Linear Dimming	Digital and Analog Control for LED Current
Internal 9V-250V Regulator	Low Voltage and High Voltage Applications. (Can be extended to 450V with one 200V external zener.)

Supertex inc.

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Ordering Information / Availability

<u>Part Number</u>	<u>Package Option</u>	<u>Samples</u>	<u>Lead Time</u>
HV9911NG-G	16 Pin SOIC (Green)	Now	4-5 Weeks

-G indicates the part is RoHS compliant (Green).



Demo Boards Available - NOW

<u>Part Number</u>	<u>V_{IN}</u>	<u>V_{LED} (max)/I_{out}</u>	<u>Availability</u>
HV9911DB1	24VDC±10%	35V-80V / 350mA	2 weeks lead time

Product Contact

For any questions regarding the HV9911 please contact your local area Supertex sales office, or contact the main office in the US at:

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