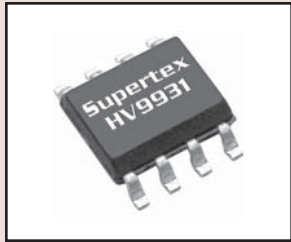


Product Summary Sheet

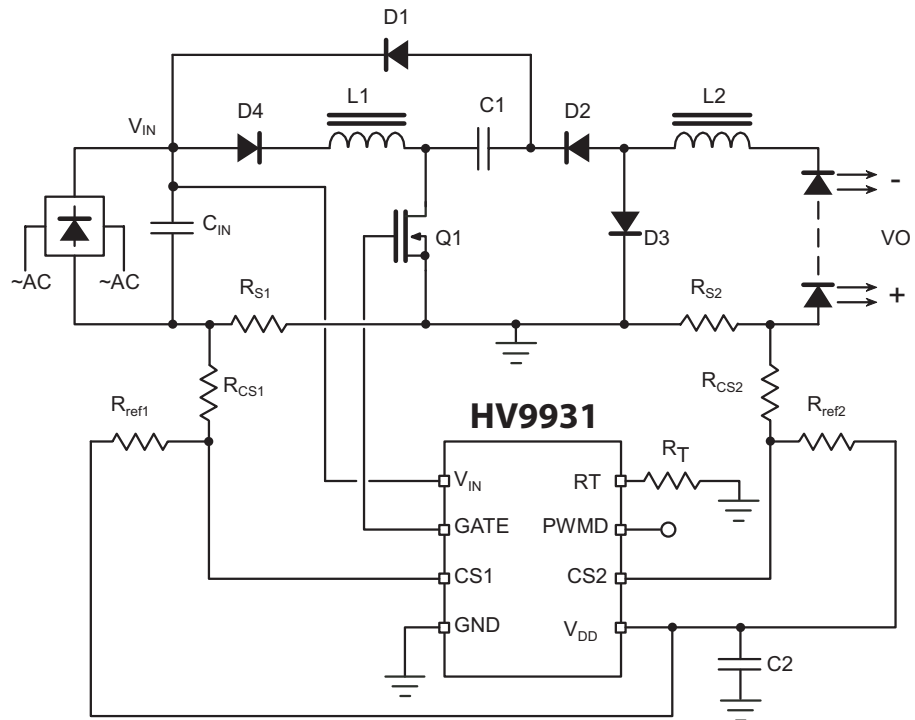
Applications:

- ▶ Traffic Signals
- ▶ Street Lamps
- ▶ Building Accent Lighting
- ▶ Architectural Lighting
- ▶ Offline LED Lamps and Fixtures
- ▶ Decorative Lighting



SOIC (LG)

HV9931 Unity Power Factor LED Lamp Driver



Typical Application Circuit

Product Overview:

The HV9931 is a fixed frequency (or Constant Off-Time) PWM controller IC designed to drive Supertex's proprietary single-stage single-switch non-isolated topology, cascading an input power factor correction (PFC) buck-boost stage and an output buck converter power stage. It can achieve a unity power factor and a very high step-down ratio that enables driving a single high-brightness LED from the 85-265VAC input without a need for a power transformer. The HV9931 uses hysteretic peak current control to regulate both the input and the output current. This patent-pending control technique eliminates a need for loop compensation, limits the input inrush current and is inherently protected from input under-voltage condition. HV9931 provides a low-frequency 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.

The HV9931 is an ideal LED driver for applications such as traffic signals and street lamps where PFC and low THD (Total Harmonic Distortion) are required. PWM and phase dimming capabilities make the HV9931 a great solution for decorative LED lighting and LED lamps.

Features:	Benefits:
Single-Stage Single-Switch PFC	Simple Implementation for Unity PFC Converters; Low THD
Internal 450V Regulator	Works directly from high voltage input (rectified 85VAC to 265VAC). No extra Components
PWM Dimming	Simple control to adjust LED Brightness
Phase Dimming	Allow use with standard wall dimmers to adjust LED brightness
Hysteretic Peak Current Control	Low External Part Count; No compensation components; Easy programming of LED current, one resistor change
Input and Output Current Sensing	More accurate LED current sensing; Inherent output short circuit protection; Low inrush current and input under-voltage protection

HV9931

Unity Power Factor LED Lamp Driver

Ordering Information / Availability

<u>Part Number</u>	<u>Package Option</u>	<u>Samples</u>	<u>Lead Time</u>
HV9931LG-G	8-Pin SOIC (Green)	NOW	

-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>
HV9931DB1	85VAC - 265VAC	25V / 700mA	Now

Product Contact

For any questions regarding the HV9931, please contact your local area Supertex sales office, or contact the main office in the US at:

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Fax: 408-222-4895
EMail: mktg@supertex.com
Website: www.supertex.com

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