

DESCRIPTION

The PT6910 is a continuous mode inductive step-down converter, designed for driving single or multiple series white LEDs efficiently from a voltage source higher than the output LED voltage. The IC operates from an input supply between 6V and 36V and provides an externally adjustable output current of up to 1.2Amp.

The PT6910 includes the internal switch and a high-side output current sensing circuit, which uses an external resistor to set the nominal average output current. Also the output current can be adjusted below the set value by using the external ADJ pin.

The ADJ pin will accept either a DC voltage or a PWM waveform. Depending upon the control PWM frequency, the IC will provide either a continuous or a gated output current with the internal PWM filter circuit.

The PT6910 provides a soft-start feature. And the soft-start time can be increased by using an external capacitor from the ADJ pin to ground if you need a longer soft-start time. Anyway if you apply a voltage of 0.1V or lower to the ADJ pin, the output switch will be off and the IC will go into a low current standby state.

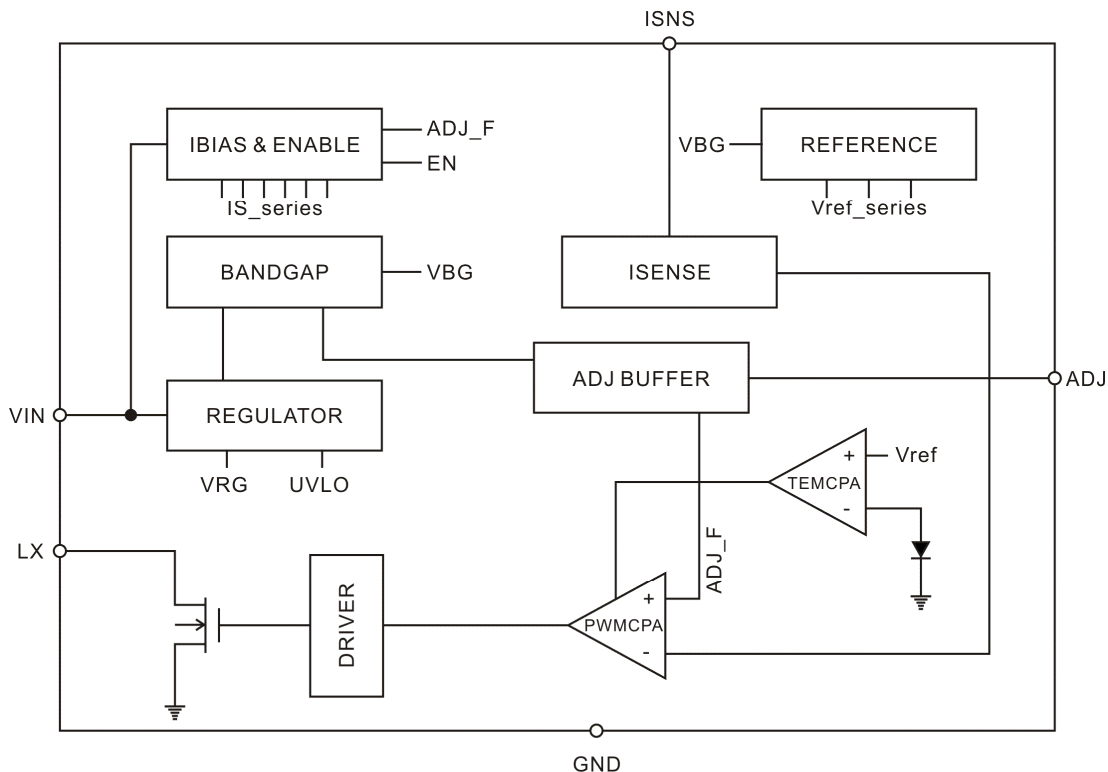
FEATURES

- High Efficiency (up to 95%)
- Soft-Start (Adjustable)
- Maximum 1.2A Output Current
- Low/High Frequency PWM Dimming with Internal PWM Filter
- Wide Input Voltage: 6V ~ 36V
- Internal Open-Circuit LED Protection
- Typical 5% Output Current Accuracy
- SOT-89-5L

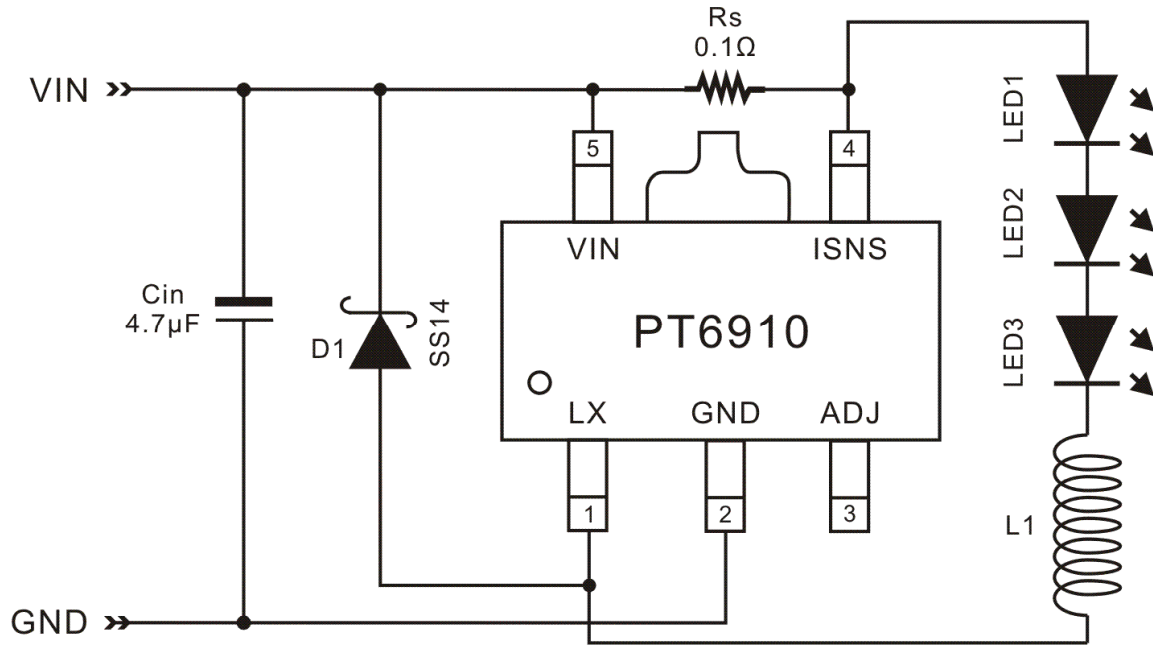
APPLICATIONS

- DC/DC LED Driver
- Low Voltage Industrial LED Lighting
- Low Voltage Halogen Replacement LEDs
- Decorative LED Lighting
- LED Table Lighting

BLOCK DIAGRAM



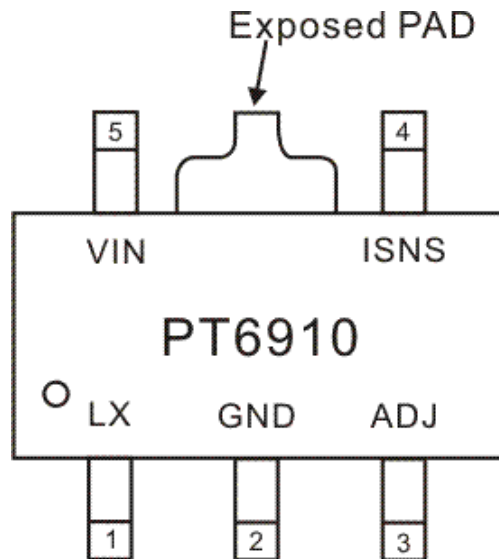
TYPICAL APPLICATION



ORDER INFORMATION

Valid Part Number	Package Type	Top Code
PT6910	SOT-89-5L	PT6910

PIN CONFIGURATION



PIN DESCRIPTION

Pin Names	Description	Pin No.
LX	Drain of The Internal NMOS Switch	1
GND	Signal Ground	2
ADJ	Multi-Function ON/OFF and Brightness Control Pin. Leave Floating for Normal Operation. Drive to Voltage Below 0.1V to Turn Off Output Current. Drive with DC Voltage (0.3V to 1.35V) to Adjust Output Current from 25% to 110% of I_{OUT} . Drive with PWM Signal from Open-Collector or Open-Drain Transistor, to Adjust Output Current from 25% to 100% of I_{OUT} for $f > 10\text{KHz}$ and from 1% to 100% for $f < 500\text{Hz}$. Connect a Capacitor from This Pin to Ground to Increase Soft-start Time.	3
ISNS	Output Current Sense Pin	4
VIN	Input Supply Pin.	5
Exposed PAD	Power Ground	