PT4115E

50V/1.5A Step-down High Brightness LED Driver

GENERAL DESCRIPTION

The PT4115E is a continuous conduction mode inductive step-down converter, designed for driving single or multiple series connected LED efficiently from a voltage source higher than the total LED chain voltage. The device operates from an input supply between 6V and 50V and provides an externally adjustable output current of up to 1.5A.

The PT4115E includes the power switch and a high-side output current sensing circuit, which uses an external resistor to set the nominal average output current, and a dedicated DIM input accepts either a DC voltage or a wide range of pulsed dimming. Applying a voltage of 0.3V or lower to the DIM pin turns the output off and switches the device into a low current standby state.

The PT4115E is available in SOT89-5 package.

FEATURES

- Simple low parts count
- Wide input voltage range: 6V to 50V
- High efficiency (up to 97%)
- Up to 1.5A output current
- Single pin on/off and brightness control using DC voltage or PWM
- Up to 1MHz switching frequency
- Typical 3% output current accuracy
- Inherent open-circuit LED protection
- Inherent Rcs open protection
- High-Side Current Sense
- Hysteretic Control: No need compensation
- Adjustable Constant LED Current
- Thermal shutdown

APPLICATIONS

- Low voltage halogen replacement LEDs
- Automotive lighting
- Low voltage industrial lighting
- LED back-up lighting
- Illuminated signs
- SELV lighting
- LCD TV backlighting

ORDERING INFORMATION

PACKAGE	TEMPERATURE RANGE	ORDERING PART NUMBER	TRANSPORT MEDIA	MARKING
SOT89-5	-40 °C to 85 °C	PT4115EE89E	Tape and Reel 1000 units	PT4115E xxxxxX

Note:

xxxxxX

Assembly Factory Code

Lot Number

TYPICAL APPLICATION CIRCUIT