PAM2862

1A LED Driver with Internal Switch

Features

- Simple low parts count
- Internal 30V NDMOS switch
- 1A output current
- Single pin on/off and brightness control Using DC voltage or PWM
- Internal PWM filter
- Soft-start
- High efficiency (up to 95%)
- Wide input voltage range: 6V to 30V
- Output shutdown
- Up to 1MHz switching frequency
- Inherent open-circuit LED protection
- Typical 4% output current accuracy
- Pb-free SOT23-5, SOT89-5 and MSOP-8 Packages

Applications

- Low voltage halogen replacement LEDs
- Low voltage industrial lighting
- LED back-up lighting
- Illuminated signs

Description

The PAM2862 is a continuous mode inductive step-down converter, designed for driving single or multiple series connected LEDs efficiently from a voltage source higher than the LED voltage. The device operates from an input supply between 6V and 30V and provides an externally adjustable output current of up to 1A. Depending upon supply voltage and external components, this can provide up to 24 watts of output power.

The PAM2862 includes the output switch and a high-side output current sensing circuit, which uses an external resistor to set the nominal average output current.

Output current can be adjusted below the set value, by applying an external control signal to the VSET pin.

The VSET pin will accept either a DC voltage or a PWM waveform.

The PWM filter provides a soft-start feature by controlling the rise of input/output current. The soft-start time can be increased using an external capacitor from the VSET pin to ground. Applying a voltage of 0.38V or lower to the VSET pin turns the output off and switches the device into a low current standby state.

Typical Application