

# ZXLD1350 Advance information

## 350mA LED driver with internal switch



### Description

The ZXLD1350 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 7V and 30V and provides an externally adjustable output current of up to 350mA. Depending upon supply voltage and external components, this can provide up to 8 watts of output power.

The ZXLD1350 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 above, or below the set value, by applying an external control signal to the 'ADJ' pin.

The ADJ pin will accept either a DC voltage or a PWM waveform. Depending upon the control frequency, this will provide either a continuous or a gated output current. The PWM filter components are contained within the chip.

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 ADJ pin to ground.

Applying a voltage of 0.2V or lower to the ADJ pin turns the output off and switches the device into a low current standby state.

The device is assembled in a TSOT23-5 pin package.

### Features

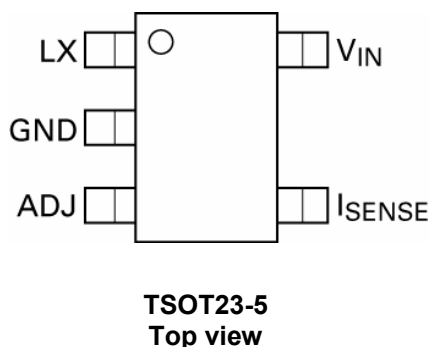
- Simple low parts count
- Internal 30V NDMOS switch
- 350mA output current
- Single pin on/off and brightness control using DC voltage or PWM
- Internal PWM filter
- Soft-start
- High efficiency (up to 95%\*)
- Wide input voltage range: 7V to 30V
- 40V transient capability
- Output shutdown
- Up to 1MHz switching frequency
- Inherent open-circuit LED protection

### Applications

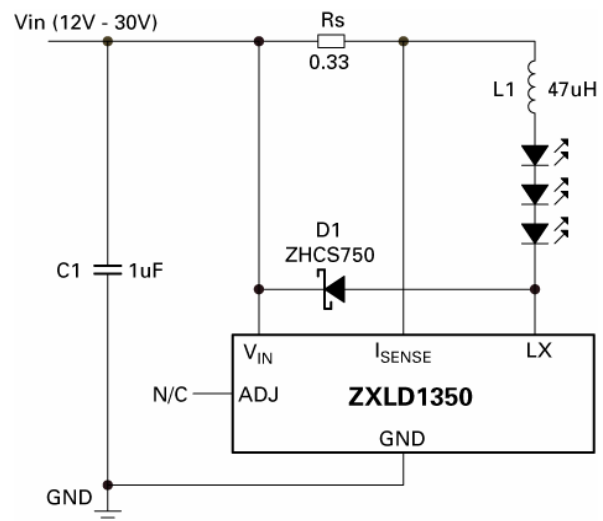
- Low voltage halogen replacement LEDs
- Automotive lighting
- Low voltage industrial lighting
- LED back-up lighting
- Illuminated signs

\* Using standard external components as specified under electrical characteristics. Efficiency is dependent upon the number of LEDs driven and on external component types and values.

### Pin connections



### Typical application circuit



To receive the full data sheet when available please complete the update service form at  
<http://www.zetex.com/3.0/stage2.asp?pno=ZXLD1350&t=a>

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