

Brief Description

The ZSLS7025, one of our ZSLS Family of LED control ICs, is a constant current boost converter designed for driving high-brightness LEDs. It is optimal for driving multiple white LEDs connected in series so that the LED current is uniform for better brightness and color control. The wide input voltage range and high output current enables diverse industrial, after-market automotive, and consumer lighting applications.

The ZSLS7025 output current is adjustable via an external current sense resistor and can deliver stable constant output current from a few milliamps up to 2A or higher.

The ZSLS7025 drives a constant current into the load. The control loop features a pulse frequency modulated (PFM) architecture that is inherently stable and does not need loop compensation.

The ZSLS7025 supports pulse-width modulation (PWM) or linear voltage dimming, which allows flexible control of the LED luminance.

The ZSLS7025 can operate in applications with a wide input voltage range from 5V to 100V. An integrated over-voltage protection (OVP) circuit protects the system, even under no-load conditions. The over-voltage protection is adjustable via external resistors R_1 and R_2 .

Features

- Wide application input voltage range: 5V to 100V (Higher voltage supported. See section 2.1 in the data sheet.)
- Constant current output limited only by external component selection
- No loop compensation required
- Internal over-voltage protection
- Internal over-temperature protection
- Brightness control via PWM or DC voltage control signal input
- SOP-8 package

Benefits

- High efficiency: up to 95%
- Minimum bill of materials
- Small form-factor package

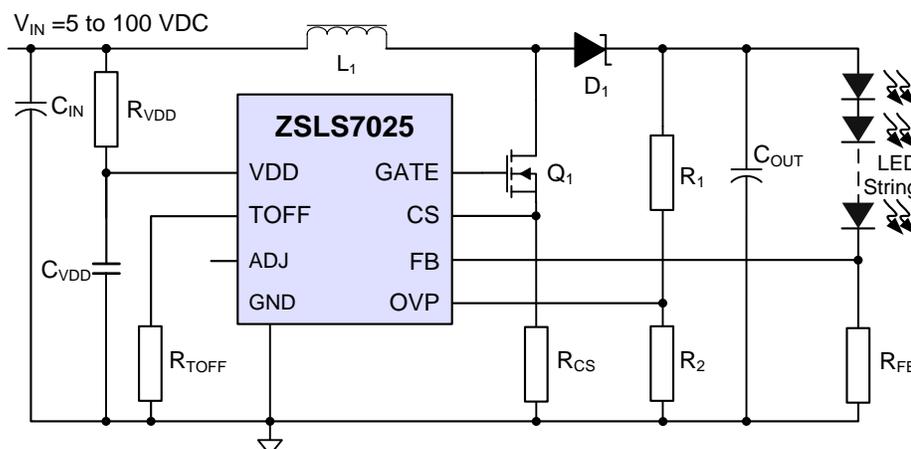
Available Support

- Demonstration Kit

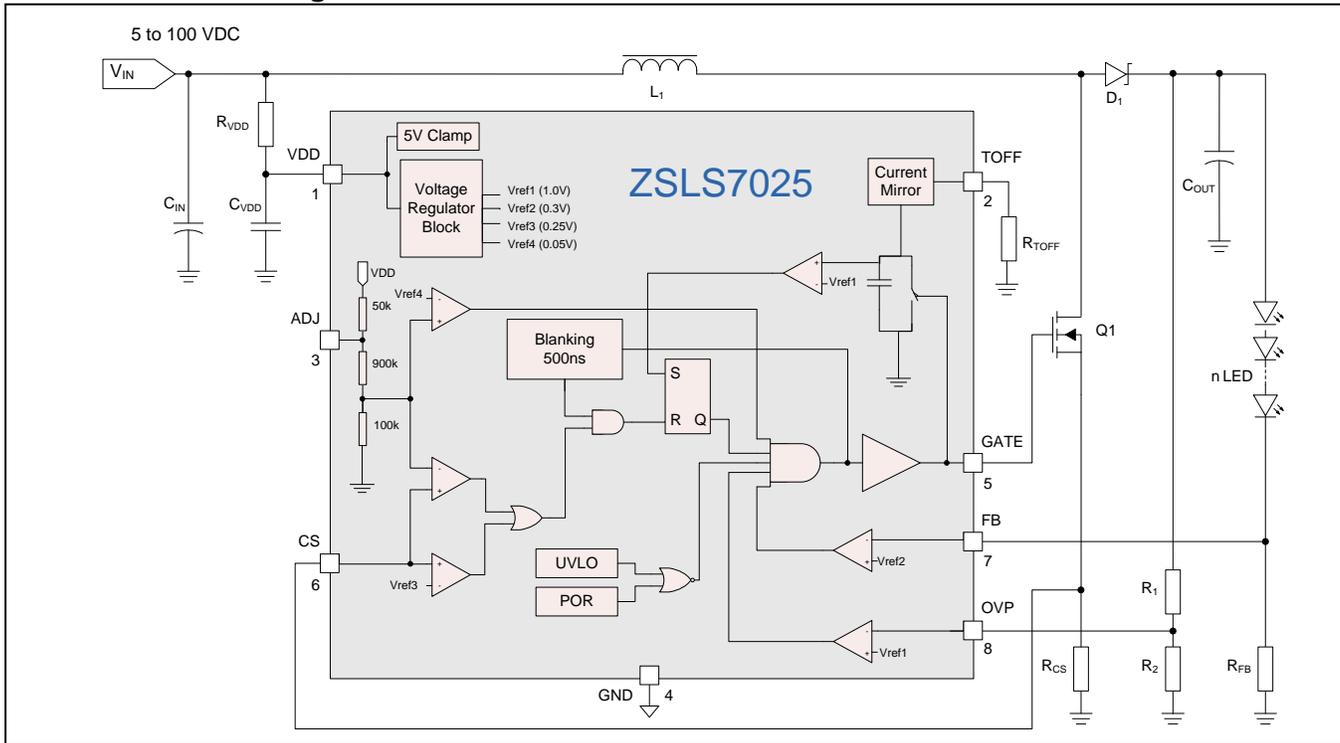
Physical Characteristics

- Junction temperature: -40°C to 125°C
- RoHS compliant

ZSLS7025 Typical Application Circuit



ZSLS7025 Block Diagram



Typical Applications

- ❖ Retro-fit Lighting
- ❖ MR16 Lights
- ❖ SELV Lighting
- ❖ Signage and Outdoor Lighting
- ❖ Architectural/Building Lighting
- ❖ Replacement Tubes
- ❖ LED Backlighting
- ❖ General Purpose Low-Voltage Industrial and Consumer Applications

Ordering Information

Product Sales Code	Description	Package
ZSLS7025ZI1R	ZSLS7025 – Boost LED Driver	SOP-8 (Tape & Reel)
ZSLS7025KIT-D1	ZSLS7025PCB-D1 Demo Board, 1 ZLED-PCB10, and 5 ZSLS7025 ICs	Kit

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