

Brief Description

The ZLED7001, one of our ZLED family of LED control ICs, is a peak current-mode control LED driver IC that is optimal for buck LED driver applications. The ZLED7001 operates in constant off-time mode. Capable of operating efficiently with voltage sources ranging from 8 VDC to 450 VDC or rectified 110 VAC/ 220 VAC, it is ideal for High Brightness (HB) LED applications. The ZLED7001 provides a PWM input for an external dimming control signal. The ZLED7001's linear dimming input can be used both for linear dimming (0 to 240 mV) and temperature compensation of the LED current.

Because the ZLED7001's response time is limited only by the rate of change in the inductor current, it attains a high performance pulse-width modulation (PWM) dimming response. The ZLED7001 ensures proper output current regulation, without loop compensation, via peak current-mode operation.

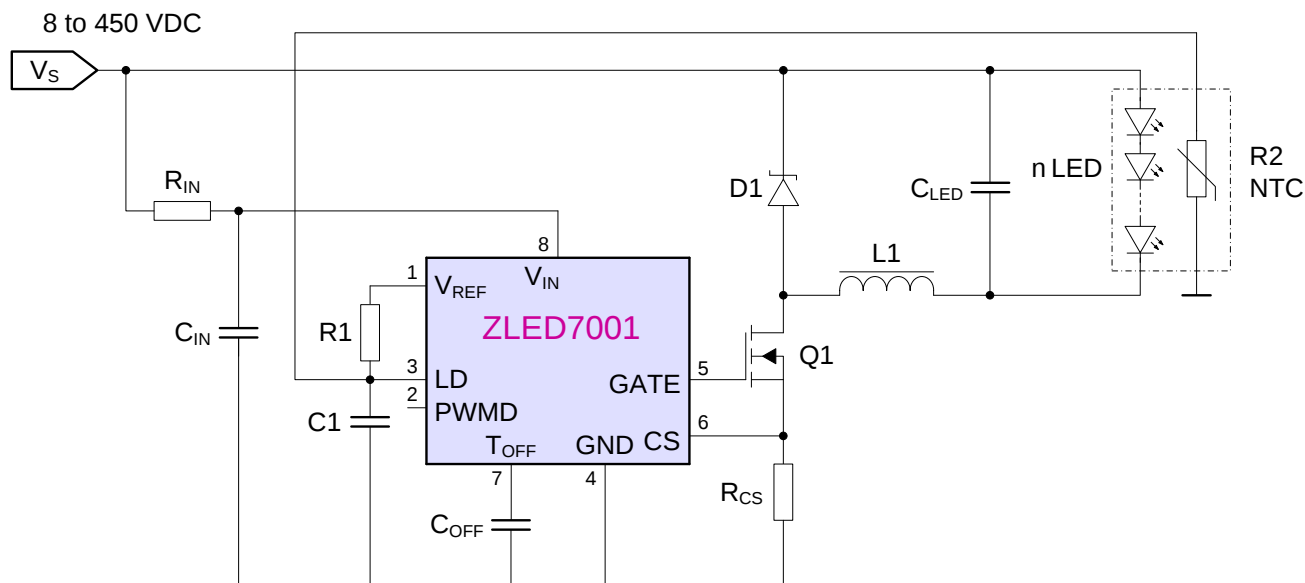
ZLED7001 Features

- Wide input range from 8 VDC to 450 VDC or 110 VAC/220 VAC
- Temperature compensation to protect the LEDs and extend LED lifetime
- Operates in constant off-time mode
- Both PWM and linear dimming control signal inputs available
- Very few external components needed for operation
- Broad range of applications: outputs greater than 1A

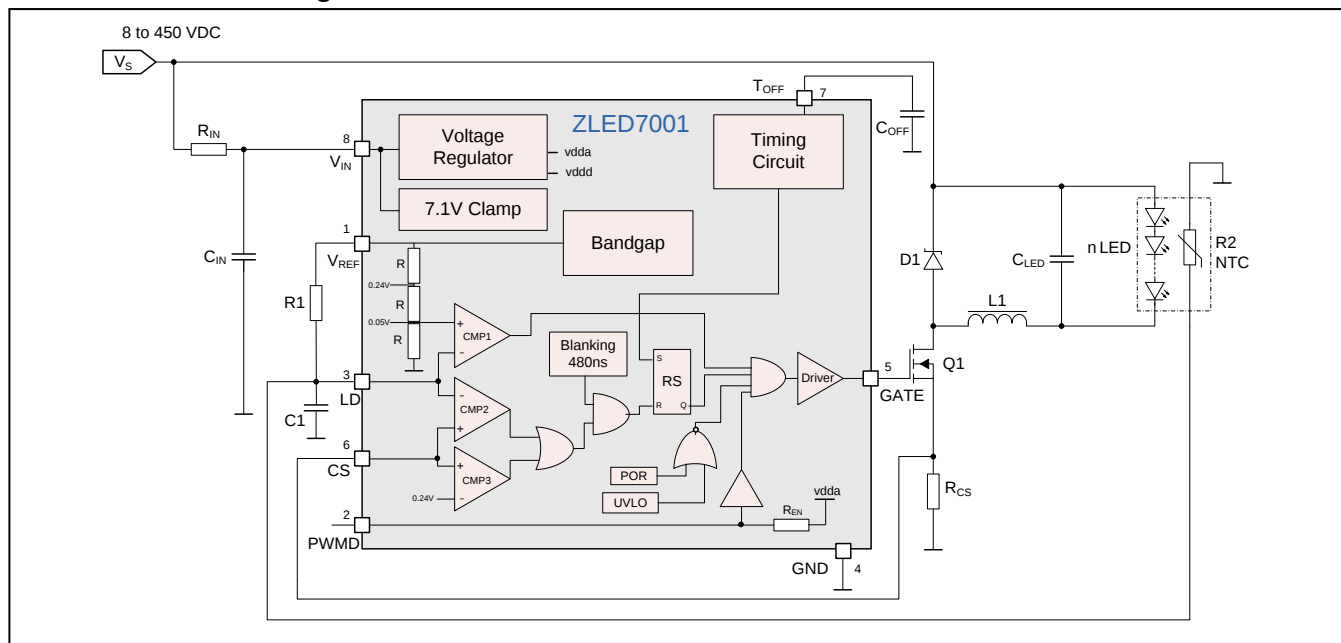
Application Examples

- Line-powered replacement LED lighting
- Illuminated LED signs and other displays
- LED street and traffic lighting
- Constant-current source for general purposes
- Architecture / building LED lighting
- LED backlighting
- Line powered LED flood lighting
- Interior / exterior LED lighting

ZLED7001 Application Circuit

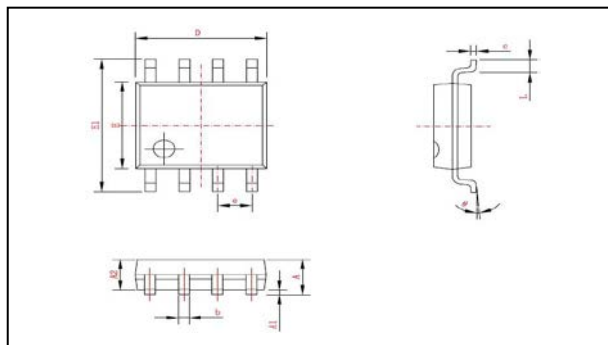


ZLED7001 Block Diagram



SOP-8 Package Dimensions (mm, except θ)

A	1.550 ± 0.200	E	3.900 ± 0.100
A1	0.175 ± 0.075	E1	6.020 ± 0.220
A2	1.450 Typical	e	1.270 Typical
b	0.420 ± 0.070	L	0.835 ± 0.435
c	0.214 ± 0.036	θ	4° ± 4°
D	4.900 ± 0.100		



Ordering Information

Sales Code	Description	Package
ZLED7001ZI1R	ZLED7001 – Universal LED Driver with Temperature Compensation	SOP8 (Tape & Reel)
ZLED7001Kit-E1	ZLED7001 Evaluation Board up to 24VAC / 40VDC, including 1 ZLED-PCB1	Kit
ZLED-PCB1	Test PCB with one 3W white HB-LED, cascadable to one multiple LED string	Printed Circuit Board
ZLED-PCB2	10 unpopulated test _ for modular LED string with footprints of 9 common HB-LED types	Printed Circuit Board

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