

ZXLD1371EV1 EVALUATION BOARD USER GUIDE

DESCRIPTION

The ZXLD1371EV1, Figure 1, is an evaluation board for the ZXLD1371 LED driver chip. The board is in a Buck configuration with an input voltage of 48 VDC and will drive a string of 12 LEDs. It is set for an output current of 1.5A and offers convenient connections for external control inputs and monitoring. The board also includes components for reducing radiated and conducted EMI emissions.

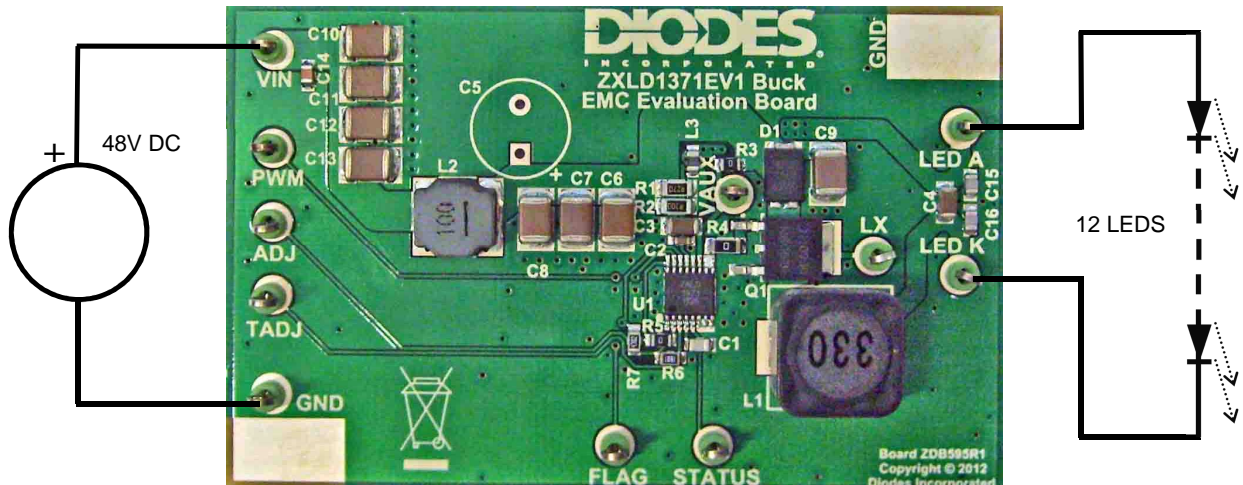


Figure 1: ZXLD1371EV1 evaluation board and connection diagram

QUICK START

- 1) Connect 48V DC supply across Vin and GND points (observe correct polarity).
- 2) Connect LED string across LED A and LED K points (observe correct polarity). LED current is set at 1.5A, so ensure LED string is capable of this current.
- 3) Cover LED string or wear eye protection. Do not look directly at LEDs in use.
- 4) Switch on DC power supply.

ZXLD1371EV1 Connection Point Definition	
Name	Description
Vin	Positive supply voltage. 48V DC
GND	Supply Ground (0V).
PWM	External PWM dimming input
ADJ	External DC dimming input (Remove R8 for DC Dimming)
TADJ	External thermal dimming input (NTC to GND)
VAUX	VAUX monitoring point
FLAG	FLAG pin monitoring point
STATUS	STATUS pin monitoring point
LX	LX monitoring point
LED K	LED Cathode connection
LED A	LED Anode connection

ZXLD1371EV1 Component list

QTY	PCB IDENT	VALUE	DESCRIPTION
1	U1	ZXLD1371	TSSOP16EP LED driver IC – Diodes Zetex
1	Q1	DMN6068LK3	60V N-Channel Enhancement Mode MOSFET – Diodes Inc.
1	D1	PDS5100	Freewheeling diode 5A, 100V – Diodes Inc.
1	R1	0R27	Resistor 1206 1% thick film 250ppm generic
1	R2	0R3	Resistor 1206 1% thick film 250ppm generic
2	R3, R5	0R	Resistor 0805 1% thick film 250ppm generic
1	R4	0R0	Resistor 1206 1% thick film 250ppm generic
1	R6	1k8	Resistor 0805 1% thick film 250ppm generic
1	R7	47k	Resistor 0805 1% thick film 250ppm generic
1	C1	330pF	Capacitor 0805, 100v C0G generic
1	C2	100nF	Capacitor 0603, 100V X7R generic
2	C3, C4	1uF	Capacitor 1206, 100V X7R generic
0	C5	DO NOT FIT	Electrolytic capacitor P5D10
8	C6, C7, C8, C9, C10, C11, C12, C13	2u2F	Capacitor, 1812, 100V X7R generic Murata GRM43ER72A225KA01L
1	C14	100nF	Capacitor 0805, 100v X7R generic
2	C15, C16	1n5F	Capacitor 0805, 100v X7R generic
1	L1	33uH	Coilcraft MSS1278-333MLB NIC Components NPIS27H330MTRF
11	TP1, TP2, TP3, TP4, TP5, TP6, TP7, TP8, TP9, TP10, TP11	Test Point	2.15mm dia. test loops, green, generic, Hughes 100-108

Note: The component values and part numbers are correct at the time of publication. Diodes Inc. reserves the right to substitute other parts where necessary, without further notification.

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