Integrated Device Technology

ZLED7010KIT-D1

Kit Description v. 0.9

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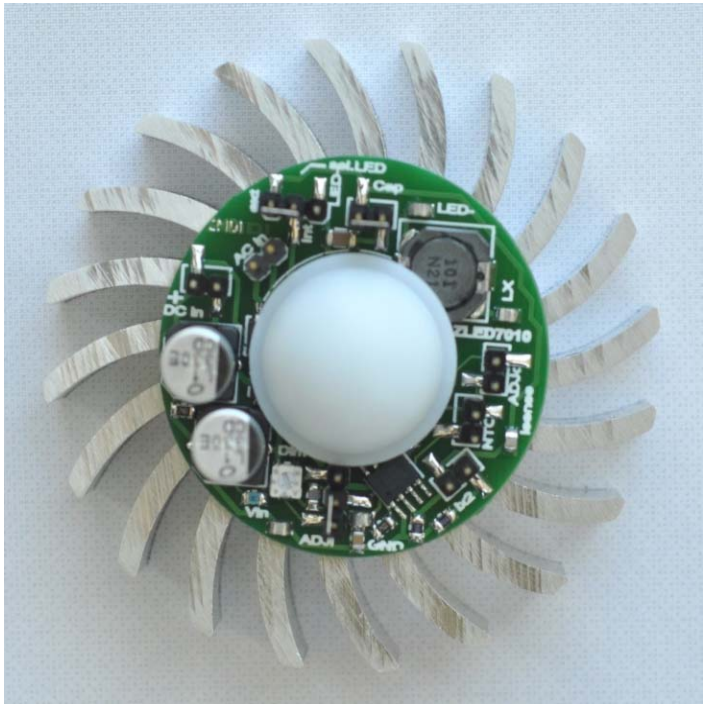
Features

- Kit demonstrates ZLED7010 functionality in a demo application
- Jumpers to access control options of ZLED7010
- 12VAC or 12VDC operation
- 300 mA / 600 mA LED current
- Decorative cool body (much oversized) & diffuser



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Quick Start

Jumper K7 for on-board LED

select filter cap

Connect 12VAC or 12VDC

The driver circuit is intrinsically safe against open LED circuit.

Attach diffuser for eye protection.

Test Terminals TPx give access to all signals of interest.

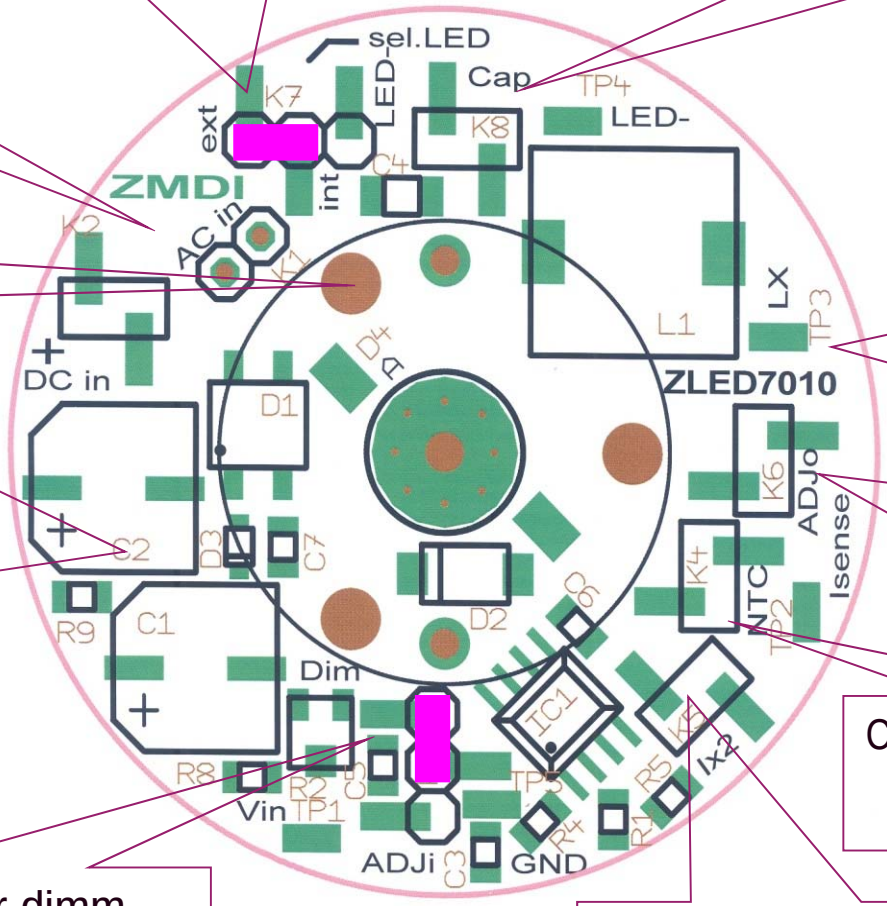
Voltage rating of the bulk caps C1/C2 is limiting max. supply voltage. Replace with 50V caps to supply the kit up to the upper VIN limit.

Module can be chained to ADJi of follower.

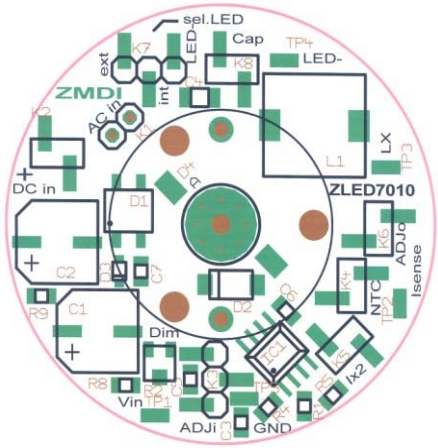
Connect NTC to test dimming at over temperature.

Trimmer provides linear dimm voltage via jumpered K3.

Jumpering K5 will increase LED current from 300mA to 600mA.

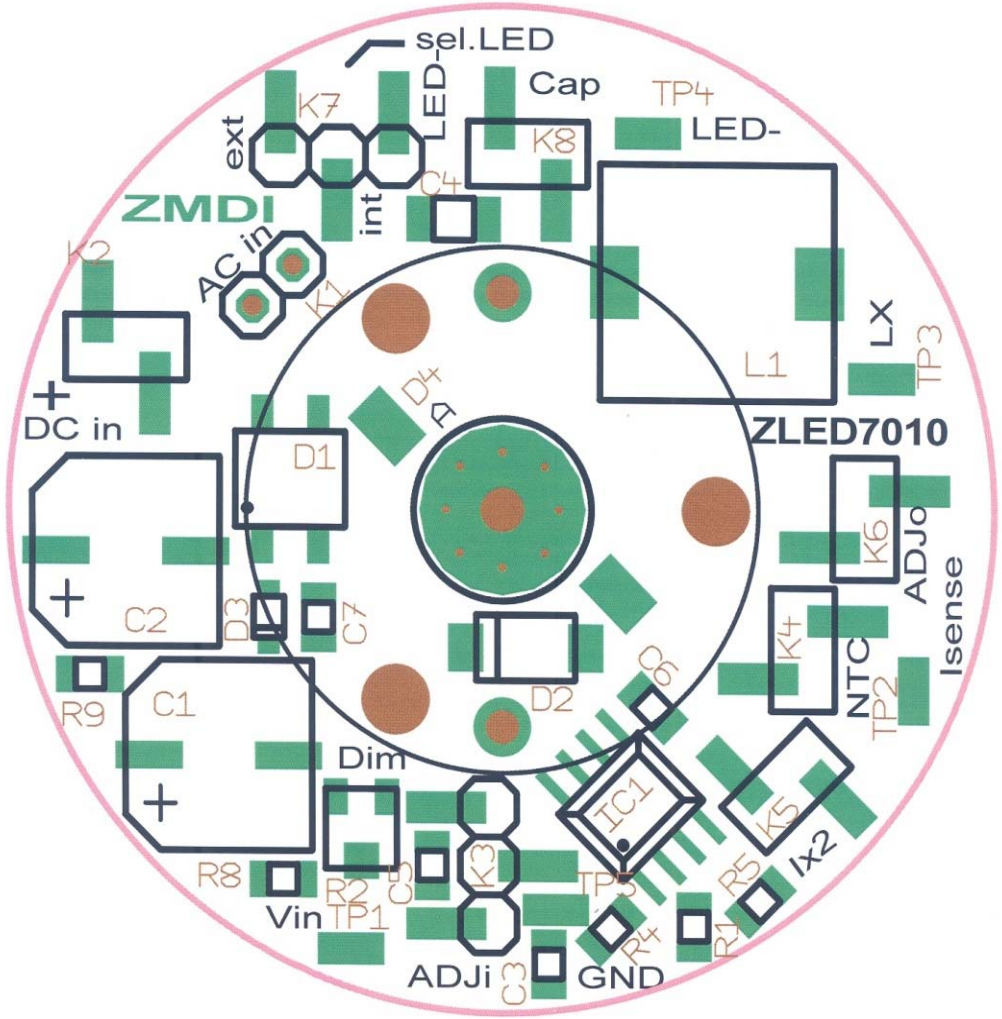


Schematics

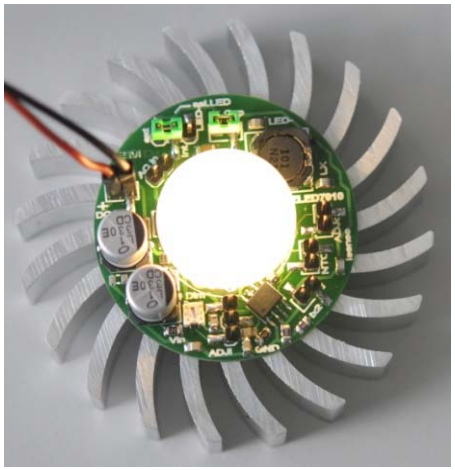

sel.LED
Cap
LED-
ZMDI
ext
int
AC in
DC in
ZLED7010
LX
ADJo
Isense
NTC
Dim
Vin
ADJi
GND
Ix2

K1
AC in
12VAC
D1
K2
DC in
12VDC
C1
330µ
C2
330µ
D3
3.3V
R9
2.4k
C7
100n
R8
12k
P1
10k
K3 ADJi
Linear Dimm
Blank
C3
100n
TP1
VIN
R1
0.316R
R5
0.316R
K5
I x 2
D2
SS16
TP2
Isense
TP3
LX
IC1
ZLED7010
VIN
Isense
RNTC
LX
ADJI
ADJO
RTH
GND
L1
100µH
K7
select LED
ext
int
LED-
K8
Cap
C4
2.2µ
LED
TP4
LED-
C5
100p
K4
R3
NTC
R4
75k
C6
100p
K6
ADJo
TP5
GND

Assembly Map



BOM



No.	Quantity	Symbol	Description	Parameters	Part No.	Manufacturer	Package
1	1	IC1	LED driver		ZLED7010	ZMDI	SOP8
2	1	LED	Power LED 3W		HPB8b-49K3YWA	Huey Jann	
3	1	D1	Schottky Rectifier Bridge	60V / 1A	CDBHD160L	Comchip	TO-269AA
4	1	D2	Schottky Diode	60V / 1A	SS16	various	SMA
5	1	D3	Zener Diode	3.3V / 0.2W		various	SOD323
6	4	R1/R5	Resistor	0.316Ω / 1%		various	0805
7	1	R3	NTC	100kΩ	not assembled		
8	1	R4	Resistor	75 kΩ			0805
9	1	R8	Resistor	12kΩ			0805
10	1	R9	Resistor	2,4kΩ			0805
11	1	P1	Trimmer	10kΩ	TS3	Vishay	
12	1	L1	Power Inductor, shielded	100µH	CDRH103R	Sumida	
13	2	C1/C2	Al El cap	330µF/25V		various	d8x10
14	2	C3/C7	X7R Cap	100nF			0805
15	1	C4	X7R cap	2,2 µF/50V	X7R-G1206	Murata	1206
16	2	C5/6	X7R cap	100pF			0805
17	6	TP1 to TP5	Test Terminal		C12000B	Nicomatic	SOT08-05
18	1	K1	TH Terminal 0.63□				2.54mm grid
19	7	K2 to K8	SMD Terminal 0.63□				2.54mm grid

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Ordering Information

ZLED7000KIT-D1
ZLED7000 MR16 Halogen replacement Demo Kit 12VAC/VDC, incl. 1 ZLED-PCB1

ZLED7001KIT-E1
ZLED7001 Evaluation Board up to 24VAC / 40VDC, incl. 1 ZLED-PCB1

ZLED7010KIT-D1
ZLED7010 Demo Board with LED on cool body 12VAC/VDC

ZLED-PCB1
Test PCB with one 3W white HB-LED, cascadable to one multiple LED string

ZLED-PCB2
10 unpopulated test PCBs for modular LED string with footprints of 9 common HB-LED types

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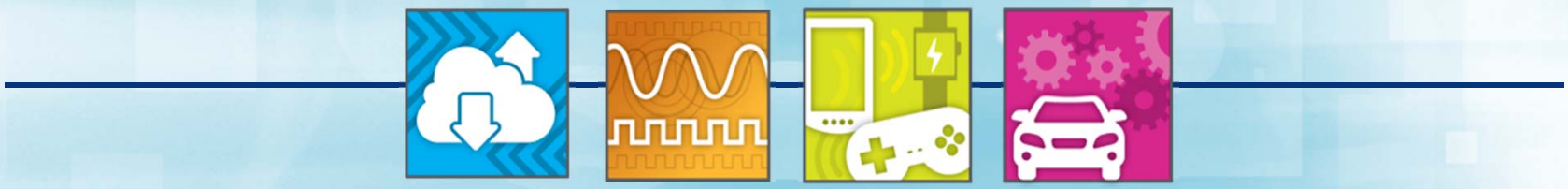
Thank You



Analog Mixed Signal Product Leadership in Growth Markets

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