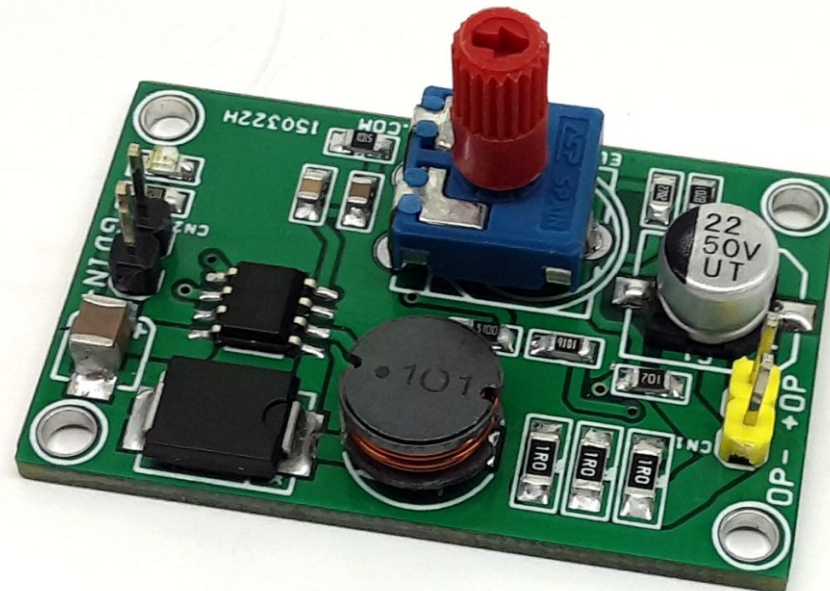


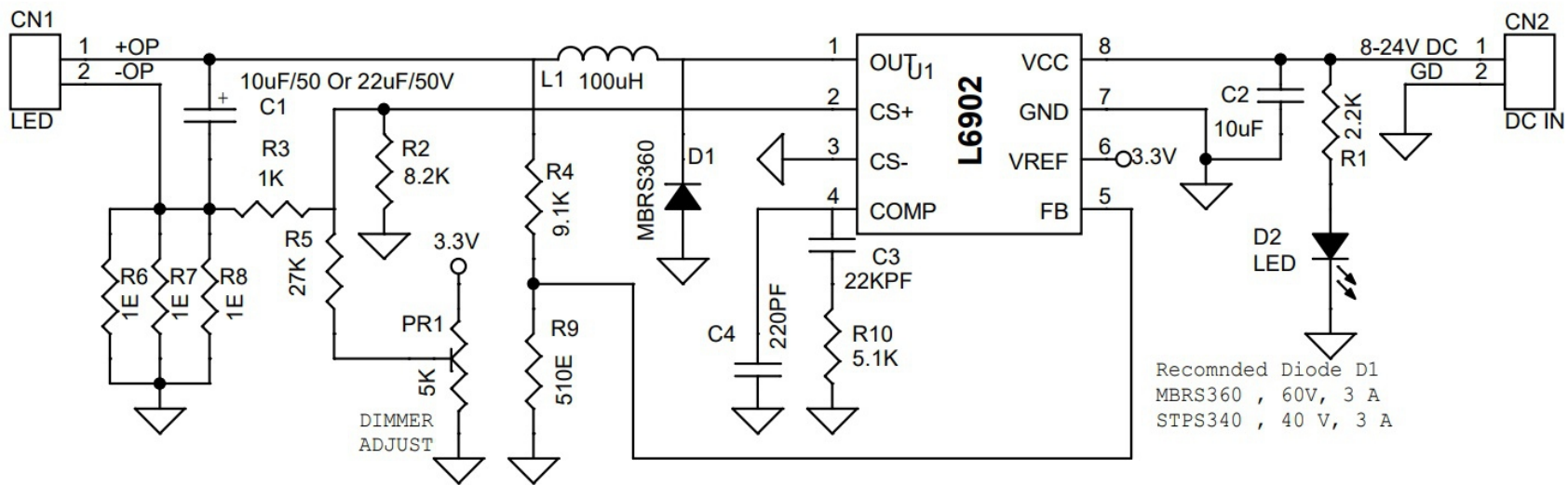
## LED Dimmer for Super High Brightness LEDs

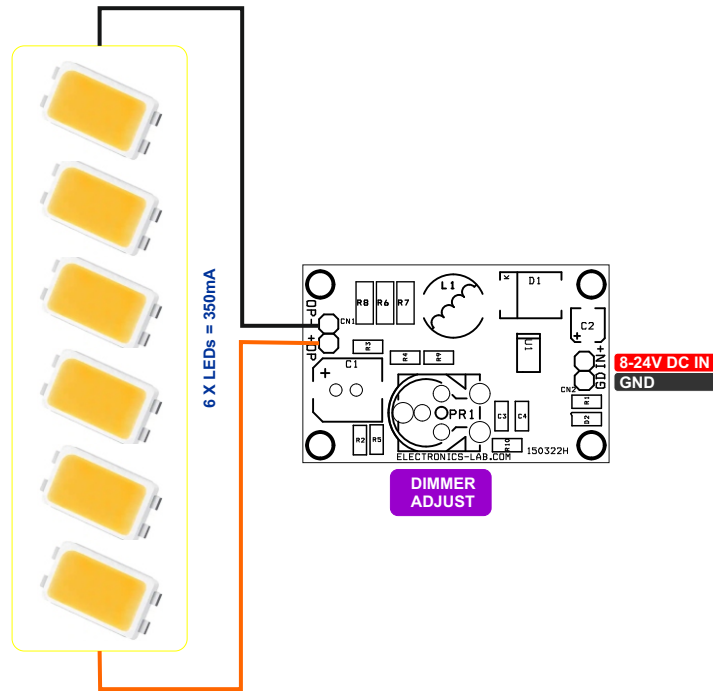
This is a high-efficiency and reliability DC/DC converter with a dimming feature for super high brightness LEDs. The project is built using L6902D chip. L6902 is a complete and simple step-down switching regulator with adjustable current limit. The current control loop with external sense resistors R6, R7, and R8 are able to work in constant current mode providing up to 350mA output current with an accuracy of 5%. Potentiometer PR1 helps to control the dimming of the LEDs. PR1 is connected to the 3.3V reference pin of the chip. When the dimming (CS+) pin is grounded (0V) the maximum output current is provided (350mA) and vice versa when 3.3V is applied to the pin, the current provided is zero and so the LED is off.

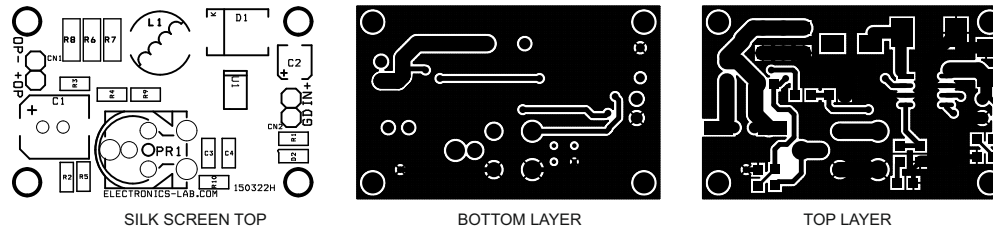
### Features

- Supply 24V DC (Range 8 to 24V DC)
- Load 6XLEDs in Series (High Brightness LEDs)
- Output Current Adjustable 0 to 350mA
- Switching Frequency DC-DC Converter 250Khz
- 4 X 2.5MM Mounting Holes -PCB
- PCB Dimensions 40.64 x 26.04mm









PCB DIMENSIONS 40.64MM X 26.04MM

BOM						
NO.	QNTY.	REF.	DESC.	MANUFACTURER	SUPPLIER	SUPPLIER PART NO
1	1	CN1	2 PIN MALE HEADER PITCH 2.54MM	WURTH	DIGIKEY	732-5315-ND
2	1	CN2	2 PIN MALE HEADER PITCH 2.54MM	WURTH	DIGIKEY	732-5315-ND
3	1	C1	22uF/50V	PANASONIC	DIGIKEY	PCE4797CT-ND
4	1	C2	10uF/35V	YAGEO/MURATA	DIGIKEY	
5	1	C3	22KPF/50V SMD SIZE 0805	YAGEO/MURATA	DIGIKEY	
6	1	C4	220PF/50V SMD SIZE 0805	YAGEO/MURATA	DIGIKEY	
7	1	D1	MBRS360	ONSEMI	DIGIKEY	MBRS360T3GOSCT-ND
8	1	L1	100uH/1AMP	TDK	DIGIKEY	445-180842-1-ND
9	1	PR1	5K TRIMMER POTENTIOMETER	AMPHENOL PHIER	DIGIKEY	1993-1136-ND
10	1	R1	2.2K 5% SMD SIZE 0805	YAGEO/MURATA	DIGIKEY	
11	1	R2	8.2K 1% SMD SIZE 0805	YAGEO/MURATA	DIGIKEY	
12	1	R3	1K 1% SMD SIZE 0805	YAGEO/MURATA	DIGIKEY	
13	1	R4	9.1K 1% SMD SIZE 0805	YAGEO/MURATA	DIGIKEY	
14	1	R5	27K 1% SMD SIZE 0805	YAGEO/MURATA	DIGIKEY	
15	3	R6,R7,R8	1E 1% SMD SIZE 1206	YAGEO/MURATA	DIGIKEY	
16	1	R9	510E 1% SMD SIZE 0805	YAGEO/MURATA	DIGIKEY	
17	1	R10	5.1K 1% SMD SIZE 0805	YAGEO/MURATA	DIGIKEY	
18	1	U1	L6902 SOIC8	ST	DIGIKEY	497-5330-1-ND
19	1	D2	LED RED SMD SIZE 0805	LITE ON INC	DIGIKEY	160-1427-1-ND