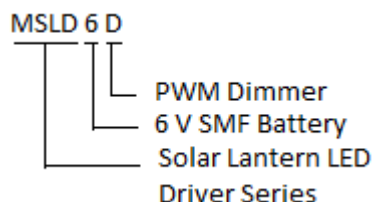
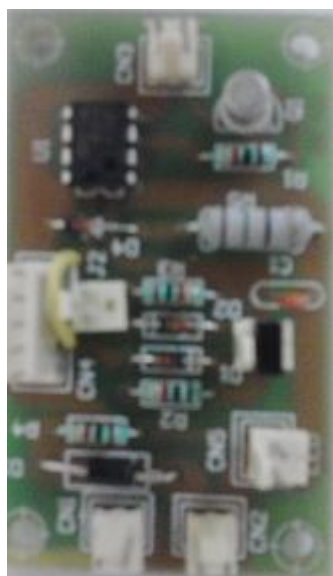


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MSLD6D

Solar Lantern LED Driver and SMF Battery Charger with PWM Dimming, mobile phone charging



Product Features

- High efficiency > 85%
- PWM Dimming
- Battery reverse discharging protection
- LED charging indicator
- Battery over voltage protection
- Best suited for commercial 6V SMF solar charged lanterns
- Solder free design
- Low cost

Application

MSLD6D is a high efficiency LED driver with SMF battery charging for 6V SMF and efficient PWM Dimming control. It houses state of art protection circuits for Battery reverse charging, over voltage protection.

This is best suited for designing of Solar Lanterns, powered with 6V SMF battery. It can drive LED string with output power 1.5W to 2.4W

Product Program

Input Voltage	6V SMF battery
Output Current	400mA – 800mA
Output Voltage	5.7 Volt at LED string
Output Power	
Dimming Control	PWM Control

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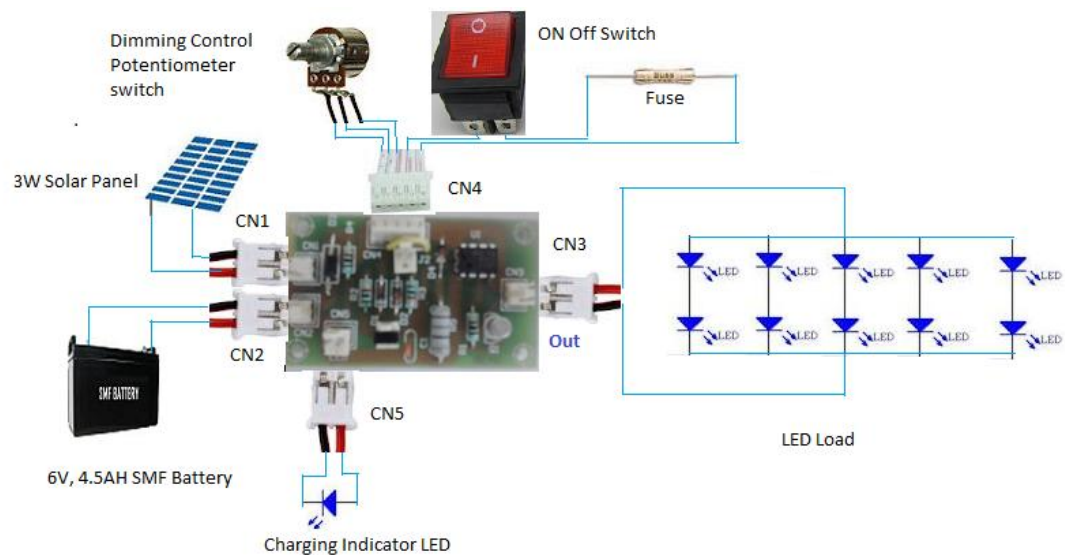
PWM switching freq.	200 Hz
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Connectors

MSLD6D is designed for solder free, easy installation. Design includes following connectors

- 1) CN1: 2 pin relimate male connector for connecting Solar Panel
- 2) CN2: 2 pin relimate male connector for connecting Battery
- 3) CN3: 2 pin relimate male connector for connecting LED string
- 4) CN4: 5 pin relimate male connector for connecting potentiometer switch for PWM dimming control , fuse and power on/off switch
- 5) CN5: 2 pin relimate male connector for connecting LED charging indicator

Connector Type: Relimate



PCB Size/ Quality

MSLD6D is designed considering

- Compact PCB to fit properly in lantern designs
- Components sufficiently spaced for heat dissipation
- PCB is designed with high quality FR-4 material
- Connectors mounted on PCB are 2 pin and 5 pin relimate connector of 2.54 mm
- PCB size is 2.5 inch * 3 inch

Mobile Charging

Separate small PCB for mobile charger is available.

Details ---- XXX

Testing Details

Test Setup

MSLD6D is tested as Solar Lantern with following

LED Load	No of LED	12
	Manufacturer	Nichia Corporation
	Model	NESW157B
	Forward Current Rating	50 mA
	Forward Voltage	Typ: 2.9V, Max: 3.1V
	View Angle	120 degree
	Luminance	6.1 Candella
Battery	Manufacturer	Amptek
	Type	SMF(Rechargeable)
	Nominal Voltage	6
	C20 Rating	4.5AH

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Photo Voltaic Panel	Manufacturer	Maharishi Solar Technology
	Model	MS B06
	Max Power	3 Watt
	Voc	10.5 V
	Isc	0.44 amps
	Vmp	8.2 V
	Imp	0.36 amps
LED hosting	Cover	Two transparent glass
	Outer Glass	XXXX
	Inner Glass	XXXX
	LED Strips	3
	No of LED per strip	4
	LED electrical connections	6 parallel array of LED's. Each array contains 2 LEDs in series

Test Results

Test Name	Test Description	Test Results		
Lux Measurement	Lux is measurement of illuminance. It measures luminous flux per unit area	Distance	Horizontal	Vertical
		1 feet	48	120
		2 feet	8	44
		3 feet	4	24
		4 feet	2	12
		5 feet	1	9
Duty Cycle	Average hours lantern should operate in a day, under average insolation of 5.5 kWh/sqm on a horizontal surface	5 hours		
Discharge Time	Discharge time of fully charged battery by continuous operation of Lantern	18 hours		
Charging Time	Time required to fully charge battery using solar panel with following insolation	Insolation	Time to charge	
		-	-	
		-	-	

About Moxie Devices

Moxie Devices is a professionally managed company engaged in the designing, manufacturing, distribution and export of Solar energy and LED based Products for various applications. Our products exemplify TQI (Technology, Quality and Innovation). Our products are known for their enormous energy efficiency and reliable performance.

Our focus is to provide environmentally conscious solutions by creating products that are designed to meet unique customer needs and protect the environment for today and for the future. Moxie Devices is a professionally managed company engaged in the designing, manufacturing, distribution and export of Solar energy and LED based Products for various applications. Our products exemplify TQI (Technology, Quality and Innovation). Our products are known for their enormous energy efficiency and reliable performance

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