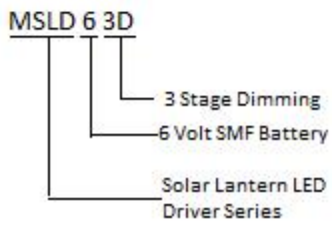
MSLD63D

Solar Lantern LED Driver and SMF Battery Charger with 3 stage Dimming, mobile phone charging



Product Features

- High Efficiency
- Constant Current LED driver
- Three Stage Dimming – (300mA, 200 mA, 100 mA)
- Input – 6V SMF/Lead Acid(5.25V to 6.5V)
- 6V SMF/Lead Acid battery charger.
- Output Voltage: Boost configuration
- High and Low Voltage Cutoff – 5.25V and 6.5V
- Energy Efficient – no power consumption during off mode
- Battery Over Voltage Protection
- Battery Reverse Charging Protection
- Mobile Charger(O/P 6.0V, 150mA)

Application

MSLD63D is a high efficiency LED driver with SMF/Lead Acid battery Charging for 6V SMF battery and efficient three stage Dimming Control.

Its high/low voltage control, state of art protection circuit for Battery Reverse Charging and Battery Over Voltage.

This is best suited for designing of Solar Lanterns, powered with 6V SMF battery. It can drive LED string with output power 1W to 3W.
For best efficiency use 3 LEDs in series.

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Product Electrical Characteristics

LED Driver

Input Voltage	6V SMF/Lead Acid battery
Output Current	As per dimming stage selected
Output Voltage	As per dimming stage
Output Power	1W to 3W
Dimming Control	Three Stage Dimming Low – 100 mA current on load Medium – 200 mA current on load High – 300 mA current on load

Mobile Charger

Input Voltage	6V SMF/Lead Acid battery
Output Current	I50mA
Output Voltage	6V
Configuration	Constant Voltage Battery charger

Connectors

MSLD63D is designed for solder free, easy installation. Design includes following connectors

Driver Connectors

1) CN1: 2 pin 2.5 mm Berge Pin male connector for connecting Solar Panel
2) CN2: 2 pin 2.5 mm Berge Pin male connector for connecting Battery
3) CN3: 2 pin 2.5 mm Berge Pin male connector for connecting LED string
4) CN4: 5 pin 2.5 mm Berge Pin male connector for connecting battery charging indicator led, low/high cutoff indicator led
5) CN6: 6 pin 2.5 mm Berge Pin make connector for connecting Dimming Switch, power on/off button

Charger Connectors

1) CN6: 2 pin 2.5 mm Berge Pin male connector for connecting power supply/power switch for mobile charger
2) CN7: 2 pin 2.5 mm Berge Pin male connector for connecting Mobile charger wire

Connector Type: Berge Pin 2.5mm male

PCB Size/ Quality

MSLD63D is designed considering

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

Mobile Charging

Separate small PCB for mobile charger is available. If required Mobile Charger can be integrated in same PCB

Mobile Charger output:

Voltage: 6 Volt

Current: upto 150 mA

Testing Details

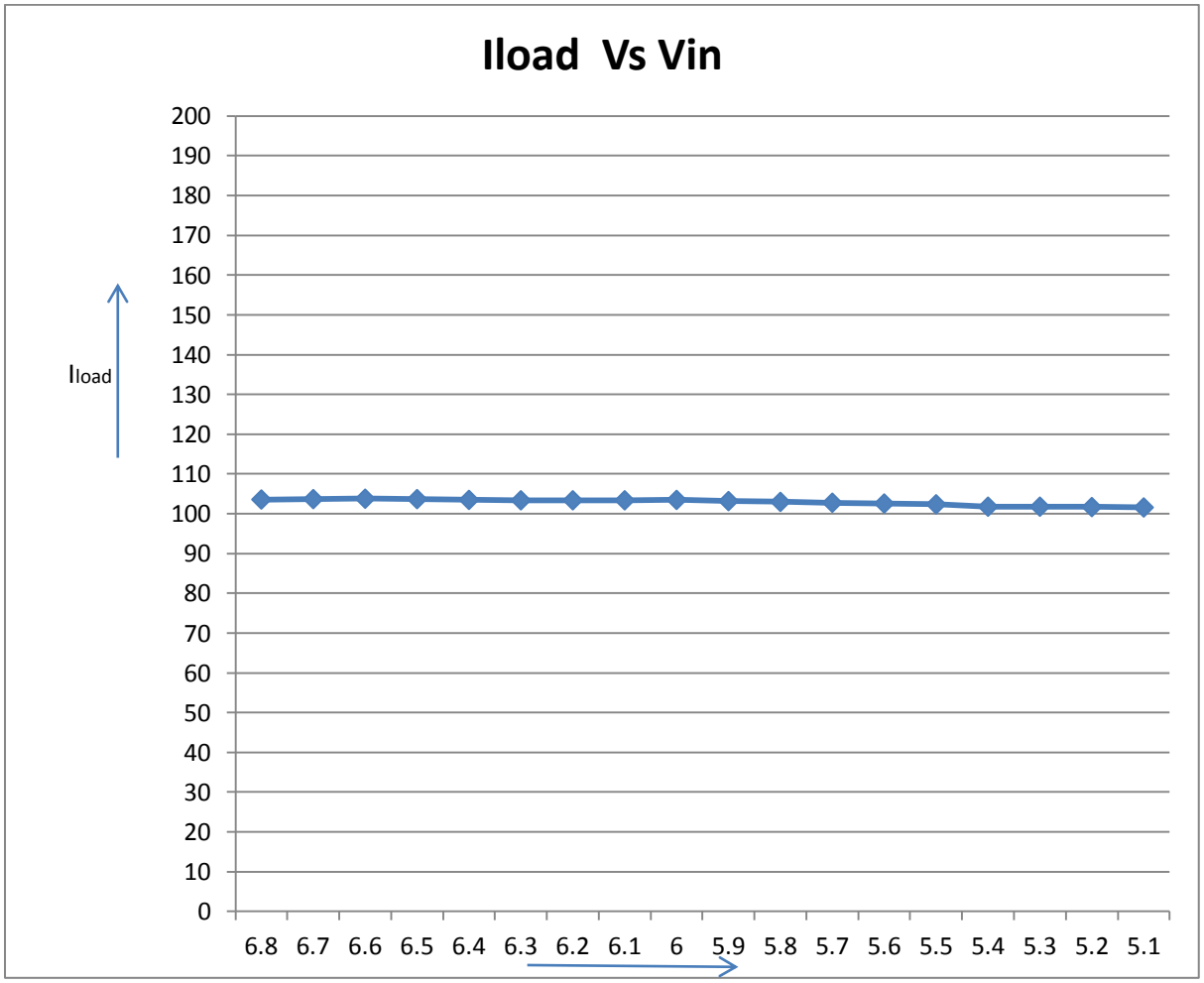
Test Setup

MSLD63D is tested as Solar Lantern with following

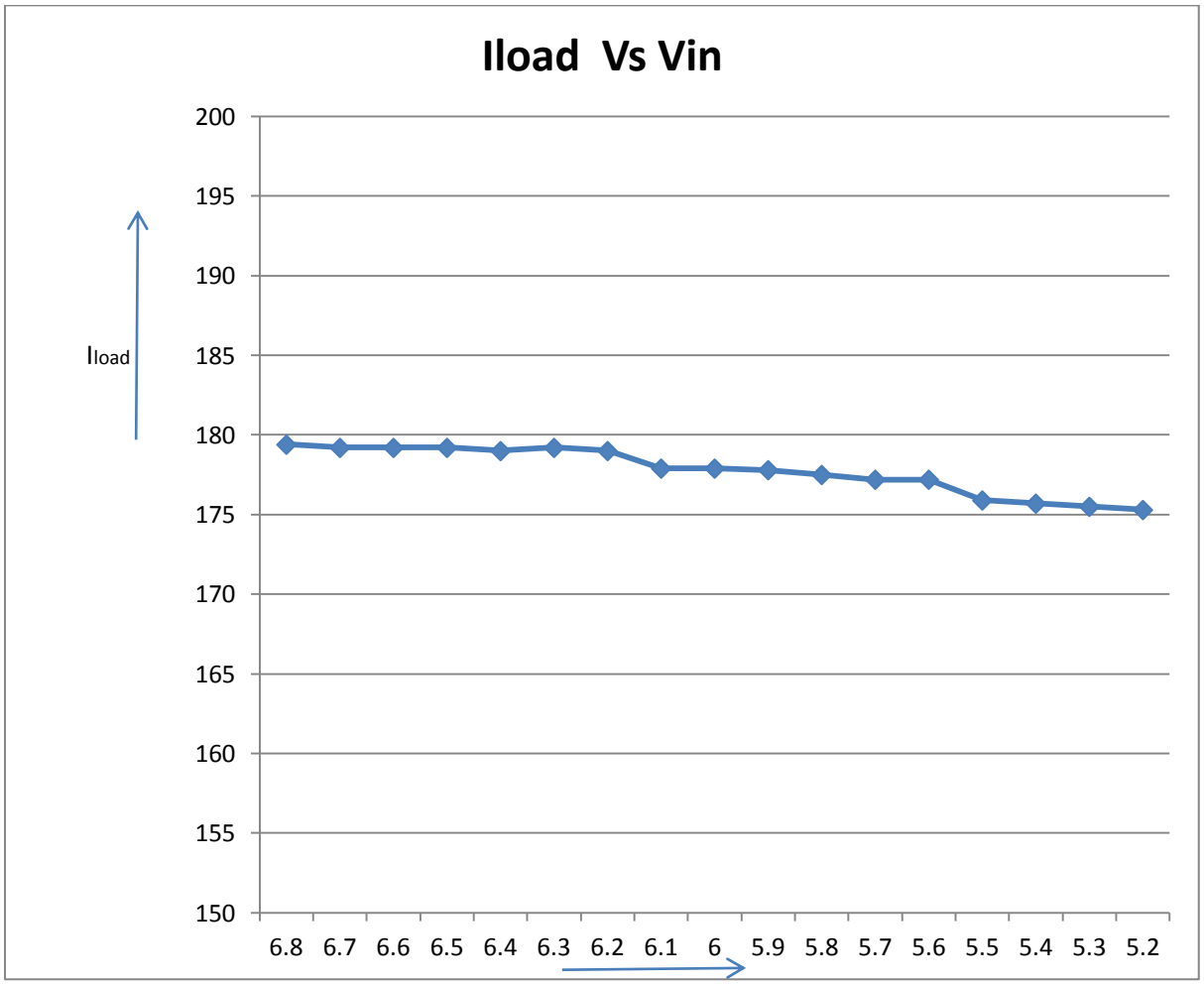
LED Load	No of LED	3
	Manufacturer	Osram
	Model	LUW W5AM
	Forward Current Rating	350 mA
	Forward Voltage	Min:2.7V Typ: 3.2V, Max: 3.7V
	View Angle	170 degree
Power Supply	DC regulated power supply	Voltage varied from 6.8V to 5.2V
Multi-meter	Manufacturer	Fluke 287

Test Results

Current Regulation - Low Current (100mA)



Current Regulation - Medium Current (200mA)



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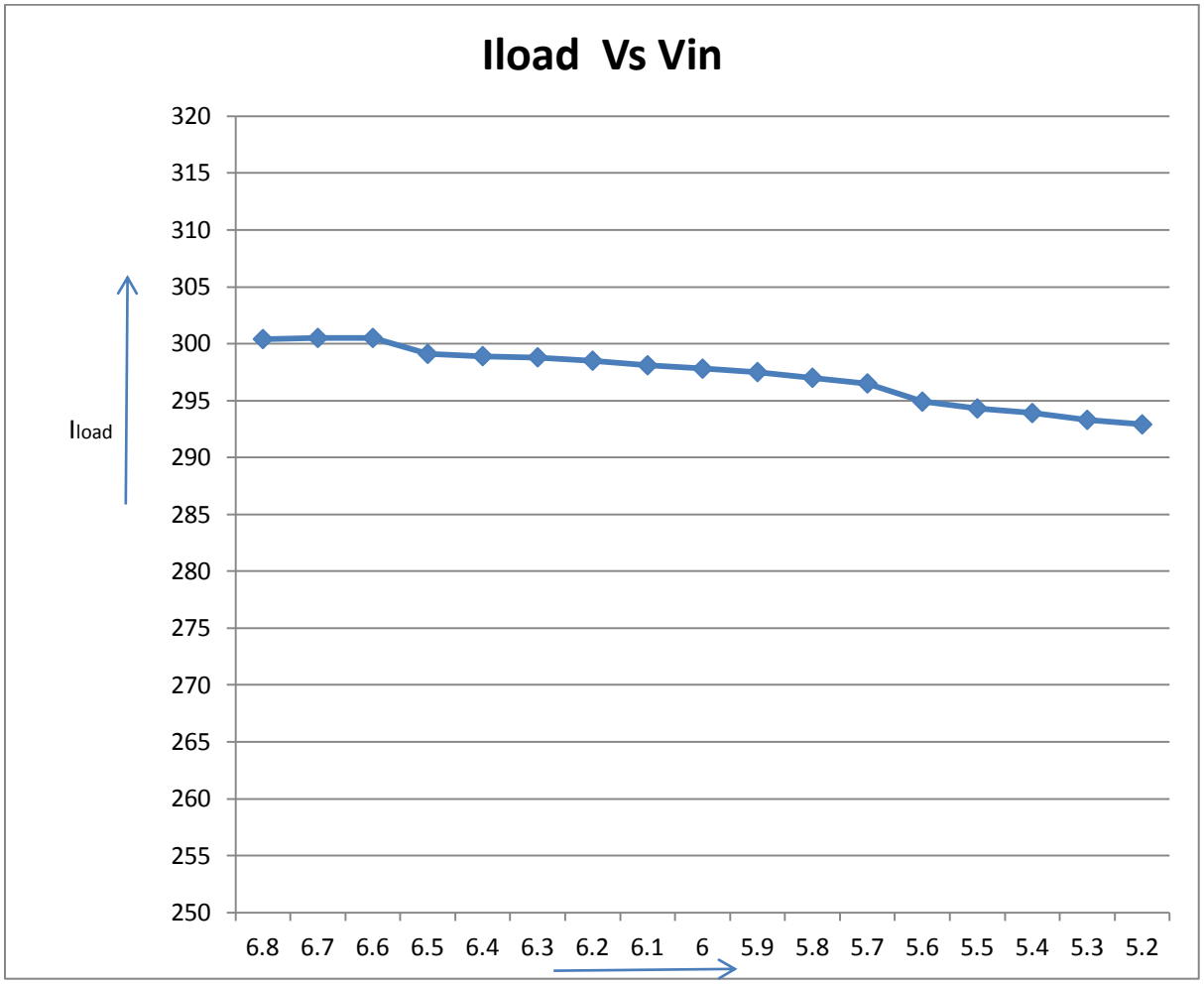
Current Regulation - High Current (300mA)



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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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