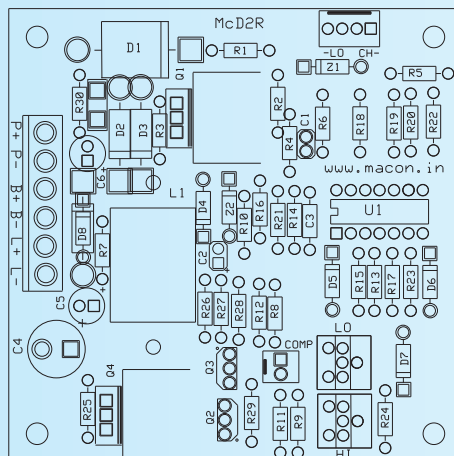
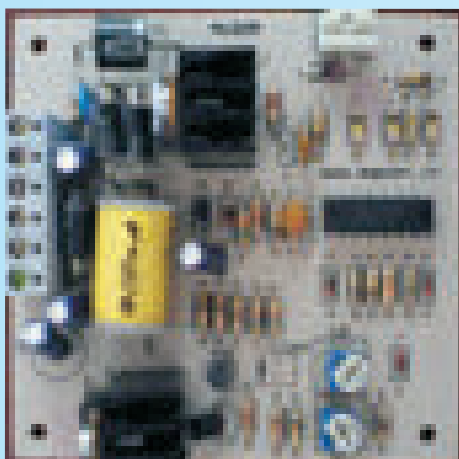




TM

AN ISO 9001-2008 CERTIFIED COMPANY



dim 80 x 80 mm

## McD2R

Solar Dusk to Dawn  
PWM Charge Controller  
(with built-in LED driver)

McD2R is designed with view to providing easy and economical solution to the OEMs making Solar LED street lights. The kit comes with built-in LED driver in smps mode to save power and give constant illumination over entire operating range of a 12V battery. The current limit is factory set to 1000 mA to drive 9 power LEDs in fixture. No need to have any LED driver! The dusk to dawn operation is done by charge controller which has full protections against over charge, deep discharge, reverse polarity and over load/short circuit at output. It comes in modular version with connector on pcb to make connections to panel, battery and LED lights in fixture directly. Indicator LEDs for charging and battery low are provided by relimate cable to be placed on front plate of fixture. OEM thus needs no technical skill to assemble the solar led street lights.

Charging of battery is done in PWM mode, shunt regulation to have the best SOC of battery. Input and output voltage drops are extremely low to have best efficiency of the total system.

### Salient Specifications:

SYSTEM:	12V
CAPACITY:	Panel 50 Wp Max, Load 1A smps for led load
REGULATION:	LOW LOSS, SHUNT TYPE
NLC:	No Load Current/Quiescent current < 5 mA
OVD:	Output Voltage Drop < 100 mV at 1 A load
IVD:	Input Voltage Drop < 300mV at 4 A charge
LVD:	Low Voltage Disconnect, 10.7 V
HVD:	High Voltage Disconnect, 14.4 V
LVR:	Low Voltage Reconnect, 12.7 V
HVR:	High Voltage Reconnect, 14.35 V

(Battery Charging is PWM type by default)

**PROTECTIONS:** Short circuit and overload at load  
Reverse polarity of Battery and Panel  
Reverse current flow from battery to panel  
Lightening protection in panel circuit

**APPLICATION:** IN DOOR USE ONLY.  
**AMBIENCE:** Operating Temp 0 to 50 Deg C, 90% RH  
**DIMENSIONS:** 145 L x 98 W x 30 H ( all dim in mm )

### Indicators and Controls:

**CHARGING:** Green LED. Turns on when panel voltage is more than 12V to indicate positive charging, It starts flickering when battery is charged and goes in PWM mode of absorption.

**BAT LOW:** Red LED. Turns on when battery reaches LVD and disconnects the load.

**Dusk to Dawn operation:** It turns on the load at dusk and shuts down the load at dawn automatically.

**6-WAY TERMINAL:** On board connector marked PV+, PV-, BT+, BT-, LD+ and LD- to make connections to respective inputs and outputs.

**Note:** LD+ and LD- are load terminals which here are to be connected to power LED cluster in fixture directly. The output is SMPS output suitable to drive with constant 1A drive irrespective of battery voltage between HVD and LVD thereby maintaining the constant illumination from fixture.

*It is recommended to use a fuse of 5A in series with battery to protect against inadvertent connection of dangerously high wattage panel input. Output terminals, however, are electronically protected by the kit itself.*

Mfd by:  
MACON POWER PVT LIMITED  
[www.macon.in](http://www.macon.in)