



AN ISO 9001-2008 CERTIFIED COMPANY

## McLSL

6W/9W/12W/18W/24W/30W/36W/40W

MICROCONTROLLER BASED  
SOLAR STREET LIGHT LUMINAIRE  
DUSK TO DAWN WITH MULTIPLE  
DIMMING AND TIMER OPTIONS

**McLSL** series come in different configurations. All versions use fully weather-proof, long lasting and rugged Aluminum Pressure Die Cast housing with ingress protection of IP65. It uses high lumen power LEDs of wide view angle. Power LEDs are selected from the reputed source for long lasting lighting backed by excellent thermal management.

The fixture comes complete with built-in Dusk to Dawn Controller, constant power LED driver with or without auto-dimming after preset times. Auto-dimmable versions are useful where full illumination is not required after midnights- to save on panel and battery cost. One of the unique dimming programs is initial 5 hours full light followed by 5 hours of dim light and then followed by about 2 hours of again full light just before dawn. All programs (see details in our McUDxxx product brochure) are settable at user's end by different pins on the controller.

Charge controllers are of PWM type with ultra low losses at input and output side. Full protections provided against over-charge and deep-discharge of battery, reverse connections of battery and panel, against output short.

Only 2 pairs of cable available for direct connections to panel and battery in stand alone versions. Rest every thing is taken care of by the unit.

Operational status is indicated by three different LED indicators on the power LED pcb itself.

Can be mounted on the pole or on the wall.

**Ease of Installation:** Most of the times, panel and luminaire are fitted first at the time of installation of poles at site. Battery is fitted after installation. The unique program is provided in the controller so that when there is no battery or fuse is blown, the entire controller disables all the operation. Only when battery is connected, the electronics is enabled.

Works uninterruptedly even during lightning in monsoon due to in-built time delay of 10sec to switch off. Conformal coating to the controllers withstand unfavourable ambience of high humidity or polluted air.

### Indicators :

**CHRG** : Green LED.

1. On: When panel is connected properly and voltage is more than battery voltage
2. Green flickering: Battery voltage has reached HVD and PWM absorption started.

**BTLO** : Red LED.

1. Red: When battery voltage is less than LVD level, it turns on and disconnects the supply to the load.
2. Off: When battery voltage is equal to or more than LVR.
3. Red flickering: When battery voltage is between LVD and LVR.

**BT NML**: Blue LED

1. Turns on when battery voltage is more than LVR
2. Turns off when battery voltage reaches LVD

**FAULT CONDITIONS:** If only panel is connected without battery, both CHRG and BTLO LEDs will flicker alternately. This will also happen if battery voltage is more than 15V. Operation is disabled.

### Solar Charge Controller used :

McUD81M for upto 18W load with upto 100Wp panel

McUD171M for upto 40W load with upto 200Wp panel

### Salient Specifications:

SYSTEM:	12V
CAPACITY:	Panel 100Wp Max for 6/9/12/18W Panel 200Wp Max for 18/24/30/36/40W
WLED:	Power LEDs 110lm/w, 120 deg view angle, 5600 K, CRI 90, Each LED driven to 1W only
LED DRIVE	Constant Power, 350mA per LED
REGULATION:	ULTRA LOW LOSS PWM
NLC:	No Load Current/Quiescent current < 5mA
OVD:	Output Voltage Drop < 300mV
IVD:	Input Voltage Drop < 300mV
LVD:	Low Voltage Disconnect, 11.0V
HVD:	High Voltage Disconnect, 14.4V
LVR:	Low Voltage Reconnect, 12.3V
HVR:	High Voltage Reconnect, 14.35V
PROTECTIONS:	Reverse polarity of Battery and Panel Reverse current flow from battery to panel Electronic Over load / output shorts Battery over voltage disable
EFFICIENCY:	87%
APPLICATION:	OUT DOOR, FOR STREET LIGHTING / GARDEN / PARKING / LAWNS
AMBIENCE:	Operating Temp 0 to 50 Deg C, 90% RH

Mfg by:  
**MACON POWER P LTD**  
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