



## 12W Solar LED Street Light

Amrut is one of the renowned names of the industry engaged in manufacturing and supplying a supreme quality range of Water Treatment plant, Solar Street Lights, Solar module, Solar power pack, Solar System, Solar roof top off grid etc.

The products offered by us are widely admired for their longer functional life, reliable performance and easy installation. Moreover, we provide customized products to the clients that are designed as per the exact details provided by the clients.

### ***Benefits***

- Significant cost savings in **avoiding to lay down electrical wires**, distribution points, employing labor and doing away with digging hassles. **High durability** of solar panels and LEDs. Both solar panels and LEDs last for more than 10 years. In comparison, the conventional sodium and CFL lamps typically require replacement at least once every year, Close to a month's time saved in newly constructed places as a result of easy installation (feedback from builders). **Zero electricity cost. 80% depreciation benefits. Environment friendly** and easy disposal due to absence of harmful substances like mercury and lead. Less heat dissipation. Higher color temperature of light (purer form of light). Carbon Credits and subsidies may be availed for large installations. **Cleaner and Greener environment to breathe!**



### 18W Solar LED System Technical detail

- 12W Solar LED Luminary
- 50W Solar module
- 42 Ah Exide SMF battery
- 4.5 MTR Pole.



### **Light output:**

Reflow soldered OSRAM LEDs should be used with cool white light output. LEDs which can be hand soldered should not be used so as to minimize human interference and increase the reliability of LEDs

1. 150 lm /LED at 350mA
2. Asymmetric lenses with 85x135 angle for optimal spread on streets. Lenses should be such that the light output falling behind the pole should be minimized and falling in front and laterally should be maximized
3. Power saving mode after 6 hours of operation up to 50% of savings for longer life

### **Electronics:**

4. Microcontroller based PWM charging with the following features:
  - a. Constant Current Phase: all charge current available is used to charge battery.
  - b. Constant voltage Phase: Constant battery voltage towards end charge to prevent excessive gassing
  - c. Float Stage (below gassing voltage to avoid electrolyte loss)
5. Constant Current driver. Driver efficiency > 90%
6. Reverse polarity protection without the use of fuse to ease up installation in spite of human error
7. Battery charge indicator for different levels of the battery should be present on the fixture, indicating at least 4 levels of battery for easier maintenance. Apart from this, low battery and charging indicators should also be present
8. Parallel back up LED pads with each LED should be present so as to replace the LEDs easily in case one of them fails in future

### **Physical Luminary:**

9. Aluminum die cast body with toughened glass
10. Single piece MCPCB covering the entire aluminum body for good thermal management to increase the life of LEDs
11. LED junction temperature should never exceed 75 degrees Celsius