

## **SOLAR EMERGENCY LIGHT**

A 0.5 watt LED solar emergency light with mobile charging facility has been innovated. This light can provide the lumen of 210 lux, Backup of more than 28 hours along with LI-ION battery and the facility of AC and solar Charging. The weight of the light is 120 gram. We have also developed a circuit for mobile charging direct from Solar PV cell. This light is powered by solar energy using solar cells that convert solar energy (sunlight) directly to electricity. The electricity is stored in batteries and used for the purpose of lighting whenever required. These systems are useful in non-electrified rural areas and reliable for emergency lighting system for important domestic, commercial and industrial applications. This light can also be charged in the ambient light. The feasible study shows that it can work 0 degree up to 60 degree temperature. The study of intensity of Luminas shows that up to 12 hours this light provides 210 lux lumine and up to 16 hours it provides 120 lux and after 20 hours 60 lux, after 24 hours 18 lux. During the sunny days this light can be charged with 5 watt panel in 4 hours and With 3 watt panel in three hours. If no sun is available this light can be charged in ambient light within 10 hours. The mobile can be charged in 2 hours in sunny days and 5 hours by ambient light. Due to portability it can be used indoor as well outdoor and in transit. This light is a good utility product in rural/urban/mountains.

Home lighting System is powered by solar energy using solar cells that convert solar energy (sunlight) directly to electricity. The electricity is stored in batteries and used for the purpose of lighting whenever required. These systems are useful in non-electrified rural areas and as reliable emergency lighting system for important domestic, small houses, shopkeepers etc.



## R & D Achievements

Uttarakhand State Council For Science & Technology

[www.ucost.in](http://www.ucost.in)

### SOLAR HOME LIGHT SYSTEM (150 WATT)

#### Features:

- 100 Watt solar panel with 10 ft lead
- Watt two led bulb an/one tv/laptop/2 DC Fan
  - 50 Ah 12 volt dry battery
  - AC charger
- Multi mobile charger lead
  - 10 hours BACKUP
- 1 year warranty for system
- 10 years warranty for solar panel

Free energy- solar, No climate change,  
No pollution, No heat effect, No global  
warming

#### Technical Specification:

- Type of Luminary -LED Rated Power of Luminary 3 Watt
- Input operating Voltage- 12V DC
- Nominal Input Voltage -11 to 14Volts
- DC Range Battery fully/trickle charging -14.40Volts + / - 0.2V
- Battery Deep discharge cut off - 11.20V + / - 0.2 V

