EW-STL-1.5WP

CONSTRUCTIONAL

Mounting of light	Top mount
Housing material	Metal
PV Module	1.5 Wp to 2.0 Wp
Wattage of LED	0.6 W to 0.8 W
Type of Battery	Lithium ion

Battery capacity	2 AH at voltages at 6 V @ C/20
The total electronic efficiency	Minimum 85%
Average duty cycle	4-5 hours a day
Light Uniformity	"The light on the edges of the entire 140 degree spread should not reduce more than 30 % of the light"
Autonomy	Minimum of 2 days (Minimum 8 operating hours)
Light Source: White Light Emitting Diode (White-LED), dispersed soothing to Eyes by using proper optics and diffuser. Single lamp or multiple lamps can be used	Yes
The colour temperature of white LEDs used in the system	5500 deg K – 6500 deg K
The make, model number, country of origin and technical characteristics (including IESNA LM-80 report) of white LEDs used in the lighting system must be furnished to the buyers	Yes

Light Out put (Minimum): When detector is horizontal to center point of bottom of light source - Distance 1 Feet: 95 Lux, 2 feet: 16 Lux, 3 feet: 4.5 Lux, 4 feet: 1.5 Lux, 5 feet: 0.5 Lux	Yes
"Light Out put (Minimum): When detector is at right to center point of bottom of light source - Distance 1 feet: 230Lux, 2 feet: 85 Lux, 3 feet: 40 Lux, 4 feet: 20 Lux, 5 feet: 12 Lux "	Yes
The light output from the W - LED should be constant throughout the duty cycle	Yes
Necessary lengths of wires / cables, switches suitable for DC use and other protections should be provided	Yes
"There will be a Name Plate on the system body which will give: a. Name of the Manufacturer or Distinctive Logo. b. Model Number c. Serial Number d. Year of manufacture "	Yes

GENERIC

Unidirectional LED based solar light (Torch) shall conform to MNRE specification	Yes

A Unidirectional LED based solar light (Torch) is a lighting system consisting of PV module, LED(s), battery and electronics, all placed in a suitable housing	Yes
The battery is charged by electricity generated through the PV module	Yes
The Solar light is basically a portable lighting device suitable for either indoor or outdoor lighting, covering a full range of 140 degrees	Yes

PV MODULE

The PV module (s) shall contain mono/ multi crystalline silicon or thin film solar cells. In case of crystalline silicon solar cell module it is required to have certificate for the supplied PV module as per IEC 61215:2005 specifications or equivalen	Yes
"The power out put of the PV module must be reported under standard test conditions (STC) at loading voltage. The specified module wattage should be at the applicable load voltage. In case of thin film modules for each model the modules should fulfil	Yes

The open circuit voltage of the PV modules under STC should be sufficient enough to charge the battery	Yes
The terminal box on the module should have a provision for opening for replacing the cable, if required.	Yes
"A strip containing the following details should be laminated inside the module so as to be clearly visible from the front side: a) Name of the Manufacturer or distinctive Logo b) Model or Type No. c) Serial No. d) Year of make"	Yes

BATTERY

A copy of the test certificate for the battery (including its make, country of origin and model number) used in the system should be provided to the buyer	Yes
"At least 75% of the rated capacity of the battery should be between fully charged & load cut off conditions.(In case of Li-ion/NiMH/LiFP the DoD (Depth of Discharge) may be up to 90%"	Yes
Battery should conform to the latest BIS/ International standards	Yes

ELECTRONICS

The light output should remain constant with variations in the battery voltages	Yes
Electronics should have temperature compensation for proper charging of the battery throughout the year	Yes
Necessary lengths of wires / cables, switches suitable for DC use and other protections should be provided.	Yes
The system should have protection against battery overcharge and deep discharge conditions	Yes
"Proper protection should be provided to protect against short circuit conditions"	Yes
A blocking diode should be provided as part of the electronics, to prevent reverse flow of current through the PV module(s), in case such a diode is not provided with the PV module	Yes
Full protection against open circuit, accidental short circuit and reverse polarity should be provided	Yes

W-LED(s) should not emit ultraviolet light	Yes
The system should have two indicators, green and red	Yes
a green light to indicate charging in progress and a red LED to indicate deep discharge condition of the battery. The green LED should glow only when the battery is actually being charged	Yes
Adequate protection is to be incorporated for "No Load" condition, e.g. when the lamp is removed and the system is switched ON	Yes

WARRANTY AND CERTIFICATIONS

"Components and parts used in Unidirectional LED based solar light (Torch) should conform to the latest BIS / international specifications, wherever such specifications are available and applicable"	Yes
The PV module will be warranted for a minimum period of 20 years from the date of supply and the Unidirectional LED based solar light (Torch) excluding the battery will be warranted for a period of	20 year

at least 5 years from the date of supply. The batter	
An Operation, Instruction and Maintenance Manual, in English and the local language, should be provided with the system as per MNRE Specn.,	Yes
Availability of Type Test Report from Central Govt./NABL/ILAC accredited lab to prove conformity to specification	Yes
All the test reports shall be furnish to the buyer on demand	Yes