WE-SPPACM-250WP

CONSTRUCTIONAL

Corrosion resistant frame structure should be provided to hold the SPV module. PV Module shall supply with Module mounting structure	Yes
The frame structure should have provision to adjust its angle of inclination to the horizontal, so that it can be installed at the specified tilt angle	Yes

Mounting type of light source as per site requirements.	ceiling mounted
A vented plastic/ wooden/ metallic box with acid proof corrosion resistant paint for housing the storage battery indoors should be provided	Yes. provided
The system should have two indicators, green (charging under preogress) and red (indicate the battery "Load Cut Off" condition)	Yes
Working temperature	0 deg C to 45 deg C

GENERIC

Power pack model	SPV Module:250 Wp, Battery:24V,75Ah
Solar Inverter: 24V /12 V , 300VA, Pure Sine wave (THD<5%)	Yes
Load	100 Watt load for 5-6 Hours/ day for 250 Wp solar power pack
Indicative A.C. Loads: 3 Nos. of White Light Emitting Diode (W-LED) Luminaire (max. 3.0 Watts each) for 6 Hrs. / day	Yes. Provided

"Indicative A.C. Loads: 2 Nos. of White Light Emitting Diode (W-LED) Luminaire (max. 6.0 Watts each) for 6 Hrs. / day"	Yes. Provided
Provision to Power	for One Fan or A TV set for 5-6 Hrs. / day for 250 Wp solar power pack
Provision for operating the radio	Yes
USB port for mobile Phone Charging	Yes
Solar Photovoltaic lighting systems and power packs A. C. Models shall conform to MNRE specification (Off-grid Solar Applications Scheme 2016-17)	Yes

PV MODULE

Indigenously manufactured PV modules should be used	Yes
The PV modules should be made up of crystalline silicon solar cells and must have a certificate of testing conforming to IEC 61215 Edition II / BIS 14286 from an NABL or IECQ accredited Laboratory.	Yes

Efficiency for PV Modules	>14%
The terminal box on the module should have a provision for opening, for replacing the cable, if required	Yes
"There should be a Name Plate fixed inside the module which will give: (a) Name of the Manufacturer or Distinctive Logo. (B) Model Number (c) Serial Number (d) Year of manufacture"	Yes
A distinctive serial number starting with NSM will be engraved on the frame of the module or screen printed on the tedlar sheet of the module.	Yes

BATTERY

The battery should be Lead Acid, Tubular positive plate flooded electrolyte or Gel or VRLA Type. Battery Ah at C/10 rated	Yes
75 % of the rated capacity of the battery should be between fully charged & load cut off conditions	Yes
Battery should conform to the latest BIS/	Yes

International standards	

LIGHT SOURCE

The luminaries should use white LEDs	Yes
Minimum 18 Lux for 3 W LED Luminaire and Minimum 32 LUX for 16W LED Luminaire when measured from a height of 2.5 meter in an area of 2.5 meter diameter	Yes
The colour temperature of White-LED(s) used in the system	5500 deg K to 6500 deg K
3 Nos. of White Light Emitting Diode (W-LED) Luminaire (max. 3.0 Watts each) .	Yes. Provided
The total input power consumption by the luminaire is not more than 3 W/6W as applicable (including the LED driver consumption).	Yes
White-LED(s) should not emit ultraviolet light	Yes
The light output from the White- LED should be constant throughout the	Yes

operation of lights	
The lamps should be housed in an assembly suitable for indoor use with an appropriate heat sink to dissipate the heat generated by LEDs during operation	Yes
"The temperature of LED should not increase more than 10o above room temperature. This condition should be complied for 5 hours of operation of the lamp at a stretch while battery operating at any voltage between the loads disconnect and the charge regulation set point"	Yes
The luminaries must use the optics and diffuser in order to have uniform and glaze free light	Yes
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 buyer / consignee along with the system	Yes
All Luminaries should have a built in ON/OFF switch and fuse	Yes

2 Nos. of White Light Emitting Diode (W-LED) Luminaire (max. 6.0 Watts each).	Yes. Provided

ELECTRONICS

Electronics should operate at 12 / 24 V and should have adequate temperature compensation arrangement for proper charging of the battery throughout the year	Yes
Total Harmonic Distortion	<5%
Inverter efficiency	>/=90%
The system should have separate ports for connecting each load along with a charging port for mobile and laptop	Yes
The voltage drop from module terminals to the battery terminals should not exceed 1.0 volts including the dropage across the diode and the cable when measured at maximum charging current	Yes
The idle current i.e. when there is no load (& inverter is switched OFF, in case of A.C. Systems) and no display	</=150 mA

The PCB containing the electronics should be capable of solder free installation and replacement	Yes
Necessary lengths of wires/cables, switches suitable for DC use and fuses should be provided	Yes
Necessary lengths of wires/ cables, switches and fuses should be provided	Yes
The inverter output AC voltage should not change with the decreased battery voltage in the operating voltage range of the battery	Yes
No Load protection	Yes
Battery over charge and deep discharge protection	Yes
The load reconnect should be provided at 90% of the battery capacity status	Yes
Battery reverse polarity, Short circuit proection, reverse flow currect protection	Yes

WARRANTY

Warranty for Solar home system including Battery from the date of supply	1 Years
Warranty for PV Modules from the date of supply as per MNRE specn.,	>/=25 Years
PV modules used in Solar Home Lighting System must be warranted for their output peak watt capacity, which should not be less than 90% at the end of Ten (10) years and 80% at the end of Twenty five (25) years	Yes
The Warranty Card to be supplied with the system must contain the details of the system. The manufacturers can also provide additional information about the system and conditions of warranty as necessary	Yes
OPERATION and MAINTENANCE MANUAL shall be furnish to the buyer / consignee as per MNRE (Off-grid Solar Applications Scheme 2016-17) (including IESNA LM-80 report of W-LEDs)	Yes

CERTIFICATION

Availability of Type Test Report from Central Govt./NABL/ILAC accredited lab to prove conformity to specification	Yes
Storage battery shall comply with Bureau of Indian Standards of CRS as on date as applicable	Yes
PV Modules shall comply with Bureau of Indian Standards of CRS as on date as applicable	Yes