



## EW-SSTL-25W

### GENERIC

<p><b>Description of store</b></p>	<p>Solar Street Light (LED based) consist of white LED luminaire ( LED + Driver) rating as per configuration along with Solar PV modules and LiFePo4 battery of given capacity, necessary control electronics, interconnecting wires / cables, module mounting structures, etc. to operate from dusk to dawn</p>
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## PV MODULE

<b>Type of PV Module</b>	Only indigenous modules of IEC Tested used. Crystalline high power/efficiency cells used in the solar photovoltaic module
<b>Power output of PV Module</b>	$\geq 75 \text{ Wp}$ at $16.4 \pm 0.2 \text{ Volt}$ at STC
<b>PV Module Efficiency</b>	$\geq 14\%$ .
<b>The open circuit voltage of the PV modules under STC (in volts)</b>	21
<b>Certification / Report</b>	Certified by MNRE/NABL authorized test center as per latest edition of IEC 61215 edition II / IS 14286.
<b>BIS CRS compliance for PV Module</b>	as per IEC 61215 Edition II / BIS 14286 from NABL or IECQ accredited Laboratory
<b>Mnimum warranty period for PV Modules (in Years)</b>	PV module warranted for output wattage $\geq 90\%$ at the end of 10 years and $80\%$ at the end of 25 years

## BATTERY

<b>Type of Battery</b>	Lithium Ferro Phosphate battery (LiFePo4). Operating from dusk to dawn first four hour full brightness, rest of the time at lower level, with motion sensor
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<b>Battery capacity</b>	≥ 12.8 V (nominal), 30 Ah at STC (1 day autonomy)
<b>Cycle/ Current</b>	Battery cycle life 2000 cycle at 80 % discharge

### **LIGHT SOURCE**

<b>Type of LED (Light source)</b>	25 Watt White LED type
<b>LED chip Efficacy (Lumen/watt)</b>	≥ 135
<b>Luminaire System Efficacy - Lumen output - (Lumen/watt)</b>	≥ 120
<b>The color temperature of white LEDs used in the system</b>	5500 degree K – 6500 degree K.
<b>The temperature of heat sink</b>	≤ 20 degree centigrade above ambient temperature during operation
<b>CRI</b>	> 70 %
<b>Lighting quality</b>	Free from glare, flickering and UV

<b>Wattage</b>	Power consumption of the LED Luminaire / Lighting unit $\leq$ 30W (including LED and Driver power loss)
<b>Ingress protection</b>	IP65 or better
<b>Certification/ Test report</b>	Yes test certificate from MNRE/ NABL accredited labs

#### **ELECTRONIC COMPONENTS**

<b>Provision of Fuses</b>	Fuses provided to protect against short circuit conditions
<b>Protection</b>	Full protection against open circuit, accidental short circuit and for reverse polarity provided.
<b>The self consumption of the charge controller</b>	$\leq$ 20 mA at rated voltage and rated current
<b>Indicators on the system</b>	Provided with 2 LED indicators: a green light to indicate charging in progress and a red LED to indicate deep discharge condition of the battery. The green LED glow only when the battery is actually being charged.
<b>Total electronics efficiency</b>	$\geq$ 90 %

## MECHANICAL COMPONENTS

<b>A corrosion resistant metallic frame structure to hold the SPV module</b>	Yes. Provided
<b>Provision on frame structure</b>	Frame structure have provision that the module can be oriented at the suitable tilt angle
<b>Conformity of the specification for Steel tube for street light pole</b>	as per IS:1161:2014 latest
<b>Hot dip galvanized condition the zinc coating on the tubes</b>	as per IS:4736 latest
<b>Nominal bore size of tube / Thickness of tube</b>	40 mm / 4 mm
<b>Height of pole (in m)</b>	7
<b>Battery box</b>	Outside the luminaire enclosure in a vented, acid proof and corrosion resistant, hot dip galvanized metallic box (IP65 or better) with anti-theft locking arrangement for outdoor use
<b>Certification/ Test report for mechanical components</b>	Yes test certificate from MNRE/ NABL accredited labs