

**ANNEXURE TO TENDER NO. DPS/MRPU/5/1/1208**

**Technical Specifications**

**1.0 LED based 3000 lumen – all in one Solar street lights with Lithium Ferro phosphate battery system :**

Supply, Erection, testing and commissioning of all in one street lights LED based 3000 lumen Solar street light system with 35W panel ,256wh battery system with **60months warranty** with 5mts octagonal pole 4mm thick GI Pole including civil foundation as per the attached drawing..

**2.0 Specifications for LED based 3000 Lumen all in one solar street light**

|                             |                                     |
|-----------------------------|-------------------------------------|
| Pole Height                 | 5 mts                               |
| Pole Dia-Top/ Bottom        | 73mm/130mm                          |
| Pole sheet thickness        | 4 mm                                |
| Thickness of Galvanisation  | 65 microns                          |
| System voltage              | 12V DC                              |
| System Lumen Output         | 3000lm, Street Light distribution   |
| System Efficacy             | min 175lm/Watts                     |
| Solar Panel Module Capacity | 12V, 35Watts Peak mono              |
| Solar Cell Efficiency       | min 12% , Polycrystalline           |
| Battery Chemistry           | Lithium Ferro Phosphate, LiFePo4    |
| Battery Capacity            | 256Wh                               |
| Charging Electronics        | Integrated MPPT charger with Driver |
| Charger Efficiency          | >90%                                |
| Driver Efficiency           | >90%                                |
| LED Burning Hours           | >50,000 Hrs at L70                  |
| IP Rating                   | IP65                                |
| Housing                     | Aluminium Pressure Die Cast         |
| Front Cover                 | UV stabilized Polycarbonate cover   |
| Color Temperature           | Typical 5700K                       |
| CRI of Illumination         | >70                                 |
| Motion sensor               | Nil                                 |

|                                       |  |
|---------------------------------------|--|
| Switch for ON-Off                     | Provided   |
| Charging & Discharging LED Indicator  | Provided   |
| Mounting                              | Horizontal & Vertical Pole Mounting options  |
| Adjustable Tilt Angle [Deg]           | 0 -15 degree adjustable, Arm & Pole Mount  |
| Outer Mounting Diameter in mm         | 48 -60 mm  |
| Operating Temp Range for Light Engine | 0 to 45 degree C   |
| Operating Humidity                    | Upto95%  |
| Recommended Pole Height               | 5.0/6.0 Meters above ground  |
| Back up                               | 18-24 hrs  |
| Standard to be followed               | <ul style="list-style-type: none"> <li>• IEC60598-2-3 : Safety of Luminaire for Road and Street Lighting</li> <li>• IEC 62109-1 : Safety of Power Converters used in solar Panel Equipment</li> <li>• EN 50530 : Performance Evaluation of Maximum Power Point Tracking (MPPT)</li> <li>• IEC 61547 : EMC immunity requirements</li> <li>• CISPR 15 : Radio disturbance characteristics</li> <li>• IEC 62133, IEC 61960 &amp; UL1642: Safety of Lithium Ferro Phosphate Battery</li> <li>• IEC 61730-1,2 &amp; IEC 61215 : Safety of Solar Panel Module</li> </ul> |

### 3.0 Bidder's qualification criteria:

1. Bidder shall be manufacturer/ authorized dealer of make which they are offering and shall submit latest authorized dealer certificate.
2. MANUFACTURER OR BIDDER shall have experience in Supply, Erection,testing and commissioning of SOLAR LED STREET LIGHT. The bidder shall submit previous work order/ Purchase order copies and performance Certificates should be enclosed to equal value of this tender or above. In case of dealer, bidder have to submit Authorised Dealer Certificate with their offer.
3. LM 79 (LED with Solid State Lighting goods with control electronics and heat sinks) report for product is to be submitted. This report should contain the

following parameters: Electric, Photometry, CIE colorimetric parameters and Light Intensity Distribution.

4. The bidder shall submit technical catalogue of offered products.

#### **4.0 Delivery**

The solar street lights are to be delivered to:

ASSISTANT STORES OFFICER,  
Heavy Water Plant,  
Muthiahpuram,  
Tuticorin,  
Tamilnadu – 628007.

The quoted rates should be inclusive of packing, forwarding and transportation to this site.

In case of damage occurs during transition the supplier is responsible for the same. Materials have to be replaced at free of cost.

#### **5.0 Guarantee:**

The party shall give a guarantee of **sixty months** from the date of delivery/commissioning at purchaser's site.

#### **6.0 Bidder shall submit the following information along with their offer:**

|                          |  |
|--------------------------|--|
| LED Make & Model         |  |
| Solar panel Make & Model |  |
| Battery Make & Model     |  |
| Standard followed        |  |
| CRI                      |  |
| Efficacy                 |  |
| Guarantee period         |  |
| Any other information    |  |