

PROJECT BACKGROUND

Inside Rohingya camps, solar street lights (SSL) have been installed since 2018 to illuminate the camps at night. Right now, many solar street lights have become no-functional due to different causes and sometimes only the SSL poles are useful. This project objective is to make functional these SSL by replacing/adding the parts (light, panel, battery, controller, arms, angle, bracket with fittings) these other ahead existing Poles (including basement).

PRODUCT REQUIREMENT/SPECIFICATION SHEET

PROJECT	
Project Name	Supply of Solar Street Light (without Pole & Installation)
Quantity	500 sets
Project Requirement	
Design (Yes/No)	No
Supply (Yes/No)	Yes
Installation (Yes/No)	No
Testing (Yes/No)	No
Commissioning (Yes/No)	No
Periodic Maintenance (Duration)	N/A
Troubleshooting Supports (Duration)	N/A

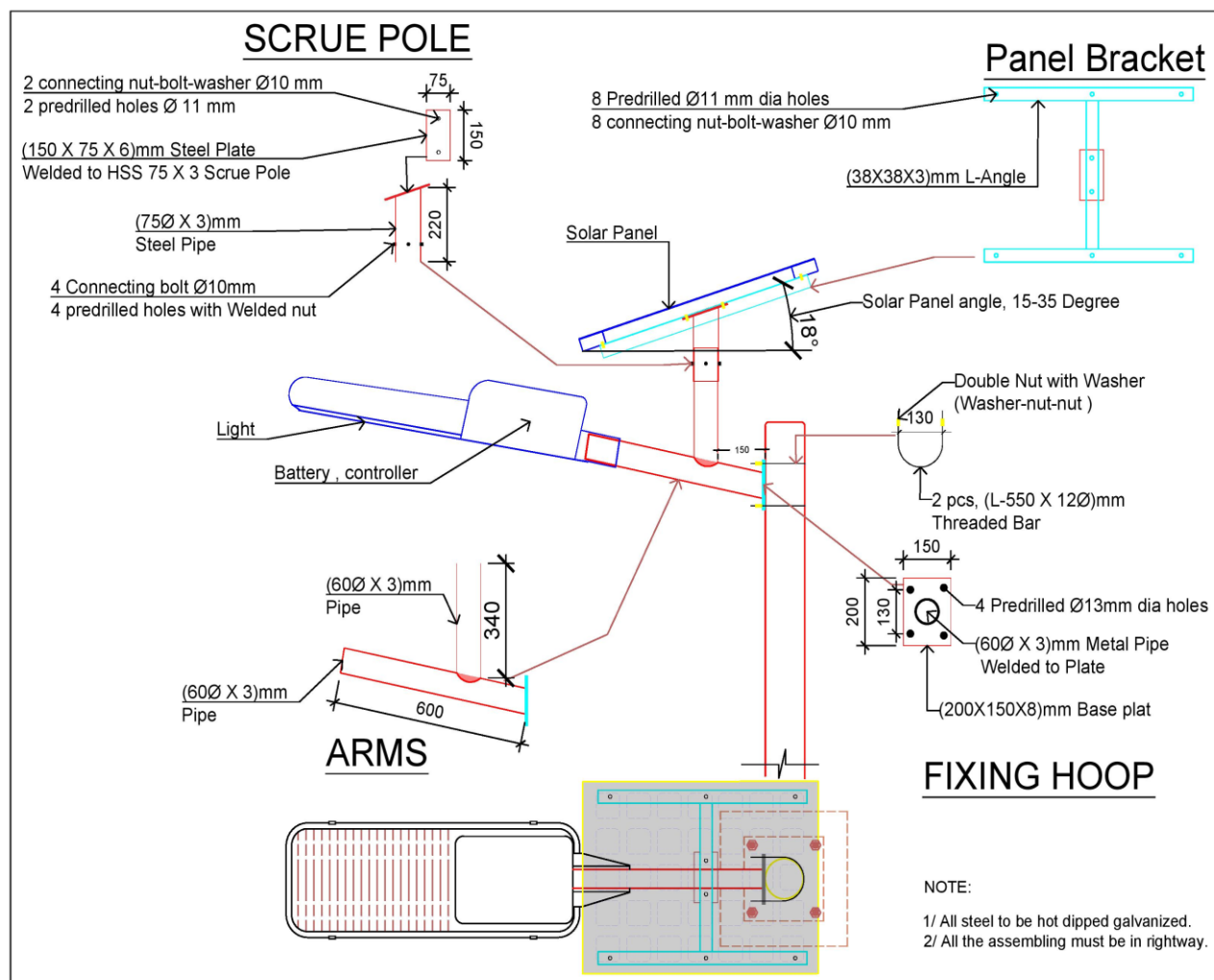
PRODUCT INFO	
Product Name	Solar Street Light (without Pole)
Standard Reference	Comply with the requirements of all relevant Bangladesh Standards (BSTI) or ISO or IEC Standards regarding equipment manufacture, whether or not these are specifically mentioned in the Specification.
Application	Outdoor

GENERAL SPECIFICATION	
Physical Form	Integrated LED lamp, Solar Panel, Battery and Charge controller, Assembling fittings with the existing pole (Angle, Arms, Panel Bracket and necessary fittings, nut-bolt-washer)
LED Lamp	Multichip, 20 Watt
	Comply with IEC 60598; IEC 62471
Luminous Flux	≥ 2200 LM
Luminous Efficiency	≥ 110 LM/W
IP Rating	IP-66

Solar Panel	85 W, 12 V, Type: monocrystalline (high efficiency)
	PV Modules shall be manufactured to any of International Specifications and comply with any of IEEE1262 ("Recommended Practice for Qualifications of Photovoltaic Modules"), IEC 61215/ IEC 61730 and CE Certification. The Modules also shall pass Salt Mist corrosion testing as per IEC 61701.
Solar Panel Bracket	Must fit with the Solar Panel Size and our attached design in preferable. Stainless Steel/ Galvanized Steel L-Angle (38 x 38 x 3 mm) with 8 predrilled holes @ 11mm to fix with Solar Panel and the necessary nut-bolt-washer @ 10mm should be provided as necessary (8 set). PV Panel bracket capable to rotate 180 degree, Light bracket capable to rotate 360 degree. The Solar Panel should be set with 15-35 degree to get maximum sunlight.
Battery	12 V, 40 Ah Lithium Iron Phosphate (LiFePO4)
	Comply with IEC 62133, IEC 61000 or equivalents
Charge Controller	MPPT Solar Charge Controller, 12V DC, 10A, IP Rating -68
	Comply with IEC 62509 and IEC 62093
Protection	Battery over charge, Battery deep discharge, Reverse flow of current, Load short circuit, Reverse polarity
Sensor	Daylight Sensor, Motion Sensor (Optional)
Working time	10 -12 hours
Remote Control	Yes
Lighting Mode	Auto On and off, Dusk to dawn + Time control
Working Temperature	-10 to +70°C
Working Humidity	10% to 90%
Arms	Aluminium/Stainless Steel/ Galvanized Steel Pipe with 600 mm length @ 60 mm dia (HSS 60 x3mm, yield strength @ 350 MPa). Arm will be welded (100 mm from Fixing hoop/Main pole) with 325mm length pipe (HSS 60 x 3mm) on the arm pipe to hold the solar panel bracket. The arm also should have steel plate (200 x 150 x 8 mm) in proper welding to connect SSL pole and plate should have 4 predrilled holes @ 13mm dia in each corner with 35 mm clearance to edges.

Scruce Pole	<p>Aluminium/Stainless Steel/ Galvanized Steel Pipe with 220 mm length @ 75 mm dia (HSS 75 x3mm, yield strength @ 350MPa).</p> <p>Predrilled 4 hole with welded nut to fit @10mm bolt to fix with arm poles (60mm dia). Pipe will be welded with steel plate (150 x 75 x 6 mm) to hold the bracket. Predrilled 2 holes @ 11 mm with 2 connecting nut-bolt-washer @ 10 mm. The solar panel will be in set in 15-35 degree to get maximum sunlight.</p>
Fixing Hoop	<p>Stainless Steel/ Galvanized Steel Plate (200 x 150 x 8 mm) with 4 predrilled holes @ 13 mm dia in each corner with 35 mm clearance to edges. 12 mm dia L-550mm, 2 U-angle threaded stainless steel rod (yield strength 400 Mpa) to fit with hoop plate. The clearance of the U-angle will be 130 mm and in each rod will have 4 nut and 2 washer.</p>
Assembling Structures (Angle, Arms, Fixing Hoop, Scruce Pole, Panel Bracket and necessary fittings)	<p>Aluminium/Stainless Steel/ Galvanized Steel Structure, all the parts should be well assembled and necessary holes/drills should be ensured by suppliers. The specification should be as of the drawing and suppliers may propose different in line with specification and design.</p>
Wiring Cable	<p>1 X C6rm flexible DC cable (no. of wire 70) with MC4 connector</p> <p>Comply with IEC 60085/IEC 60228 / IEC 60502</p>
Compatibility	<p>The SSL will be installed in 100 mm to 140 mm dia (HSS 127x6.4) existing steel Post. All the materials, technology and system should be match with climate and environment of Bangladesh.</p>
Warranty	<p>Solar Panel: ≥ 20 years at $\geq 80\%$ power, from the date of delivery</p> <p>Complete set of integrated LED lamp, Battery and Charge Controller: ≥ 5 years from the date of delivery</p>

DIAGRAM/ PHOTOS/ SKETCH FOR REFERENCE



NOTES AND OTHER REQUIREMENT

Attachment/Drawing	Drawing of the SSL as for reference. The bidders may propose different model that inline with specification and fit with Solar Panel, Light including existing SSL post (100 mm to 140 mm).
Product Delivery	The selected vendor shall deliver the product directly to the camps that will be specified by IOM
Expected Time of Delivery	The selected vendor is expected to deliver the products within 30 days since the notice of award is issued.
Bidding Documents	The bidders shall submit full set product information/specification sheet along with other mandatory bidding documents. The product specification shall include the confirmation for the compliance of relevant standards.

Sample of Product	IOM may request the bidders to submit the sample of product during the bidding. The sample will be returned after the evaluation processes.
Warranty	Bidders shall confirm the product warranty period and if necessary shall indicate whether any conditions associate to the validity of warranty