

**Technical Specification of Portable LED Light Tower with Genset**

S. No.	Description	Specification
<b>A. Dimensions</b>		
1	Height (Close Height of System)	1050mm (+/-50 mm)
2	Height (Telescopic Mast)	Minimum 4000 mm
3	Dimensions in mm (L x W x H)	530 x 485 x 1050 (+/-50 mm)
4	Diameter after Rigger Open	1050 mm (+/- 100 mm)
5	Maximum Weight Lighting System (Without Packing Box and Accessories)	< 45 kg
6	Wheel size & quantity	Dia 150 mm (+/-10mm) & 02 Nos
7	Thickness of FRP Body	4.0 mm (+/- 1.0 mm)
8	Bottom Base Plate	3.0 mm (+/- 0.2 mm)
9	Top Hexagonal Bracket	Pipe Dia 25.4 mm
<b>B. Construction of Material</b>		
1	Main Body	Fibre reinforced plastic (FRP)
2	Telescopic Tower	Aluminium alloy & anodized
3	Riggers, Wheel Bracket	Mild steel (CRC Sheet) with Powder coated
4	Bottom Base Plate	Aluminium with Powder coated
5	Top Hexagonal Bracket	MS Pipe (CRC Pipe Dia 25.4 mm) with Powder coated.
6	Bracket (Cradle) For LED	SS 304
7	Wheels	Rubber or Nylon
8	Hardware(Bolt, Nut and Washers)	Stainless steel
9	LED Luminaire Casing	Pressure die-cast aluminium / Extruded Aluminium
10	Finishing	Anodized/ Powder Coated
11	Lamp cover	High Efficacy, toughened glass of thickness $\geq 4\text{mm}$ / UV stabilized Poly Carbonate lens or as specified. Transparency $\geq 95\%$
12	Secondary Optics	Poly carbonate lens/ Silicon
13	Impact Resistance	$\geq \text{IK07}$
<b>C. Telescopic Tower Mast Detail (Construction)</b>		

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2	Height of Tower mast in telescopic conditions (From Ground) with LED Luminaire	Minimum 4000 mm
3	Tower Mast Height in Collapsible condition with LED Light	Maximum 1050mm (+/-50 mm)
4	Tower mast Pipe Thickness	Minimum 1.55 mm
5	Method of step up and step down of Tower/telescopic/ Vertical Mast.	Pneumatic type with on & off switch and automatic with remote / Wi-Fi. In addition provision of manually lifting of the mast shall also be provided.
6	Step up and step down time of Tower/Telescopic/Vertical Mast	120 seconds maximum.

**D. LED Luminaires & Drivers****(i) LED Flood Light**

1	LED Make	Nichia/Osram/Samsung/Lumileds/Cree /Avago/Bridgelux/Seoul OR ANY OTHER LED BRAND WHICH IS approved with LM-80 and LM-79.
2	Type LED	High Power LED/ or SMD (Surface Mounting Device)
3	LED Luminaries (6 x 60W Module) Power	360W Nominal (354.35W) Maximum 360 watt only. Compulsory to have 6 x 60 watt. Make and brand of Led luminaire to be given with bid along with BIS Certificate. In absence the bid will be rejected.
4	Total Luminous Flux	≥ 51000 lm. This has to be achieved using max 360 watt led output.
5	Luminous Efficacy	≥ 145 lm/W
6	LED Life	≥ 50,000 Burning hours.
7	Depreciation	30% Max after 50,000 burning hours.
8	LED Luminaire Ingress Protection (Degree of Protection)	IP65
9	CCT (Correlated Colour Temperature)	6000K (+/-500K)
10	Operating temperature range of Luminaire (Led Flood Light)	-20 deg. C to +50 deg. C

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11	Beam Angle	Street Light 90 to 120° or as specified High Mast 40° to 90° or as specified
12	CRI (Colour Rendering Index)	≥ 75
13	Power Control with RF device with wireless remote & Mobile App through Wi-Fi device (QR Code)	a) Power On/Off, Tower Up / down by Remote. b) Power On/Off, Tower Up / down & Dimming of light with Mobile App through Wi-Fi (QR Code)
14	No. of Remotes	02 Nos (one as spare) with minimum 30 meters without obstacle & Minimum 15 meters with obstacles range operation

**(ii) Driver**

1	Driver Type	Constant current potted driver with short circuit protection with inbuilt high voltage cut off and dimming function
2	Output Rated Power & Number of Drivers	200W & Minim 02 Nos.
3	Input Operating Voltage	100- 305V AC or as specified (Auto Restart)
4	Output Voltage	27V- 56V DC
5	Output Rated Current	3.5 -5.55A
6	Input Voltage Range	220-240V AC
7	Input Current AC	2.4 A
8	Frequency	50Hz
9	Surge protection	Internal ≥ 5kV & External ≥ 10KV
10	THD	≤10%
11	Efficiency of Driver electronic	≥85%
12	Driver Components	Industrial grade only
13	Ingress Protection (Degree of Protection)	IP65
14	Power Factor	≥ 0.95 at 230V AC
15	Working Temperature	(-) 40 °C to + 90 °C

**(iii) General Set up Parameters**

1	Installation Time (Rigger Opening + Tower Telescopic Time + Light up of LED etc)	Maximum 02 minutes
2	Closing Time (Tower Collapse Time + Rigger Folding + Light Folding etc.)	Maximum 02 Minutes

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3	Fuel (Petrol) Consumptions when Operated on Genset EP 1000 or equivalent	Approx. 400ml per Hour
4	Total run time with EP1000 or equivalent Genset Fuel Tank Capacity: 3.6L on full load of 360 watt and 51000 lumen output	Minimum 8.0 hrs
5	The strength of the Tower/ telescopic collapsible mast/ Vertical Mast tower is to provide support for it to remain erect at wind speed of	45 Km / hr
6	Provision of Change Over switch with suitable rating and its function	Should be provided Function : For operation of Portable Light i. in Manual mode means: LED Light on/ off, Dimming and Tower up/ down manually through switches and ii. In Auto mode means: Operate with Remote: LED Light on/off, tower up/ down or with Mobile App: LED On/Off, Dimming & Tower up- down
7	LED Dimming Function	In Manual Mode: Rotary Type Dimmer shall be provided. Non rotary dimmer won't be accepted. Picture of Rotary dimmer to be attached with bid.
8	RF Device with Remote & Mobile Application	In Auto Mode : i. To Power On/Off and Tower up / down operation through Remote ii. To Power On/Off with LED Light Dimming and Tower up /down operation through mobile App/ QR or Barcode scan
<b>(iv) Photometric Parameters of System</b>		
1	Lux at 5 meter & Lux at 60 mtr Radius with 180 Degree Light Direction	At 5 Meters Min 510 Lux & 60 Meters Min 9 Lux. The lab report should clearly specify this.
2	Lux at 5 meter & Lux 60 mtr Radius with 360 Degree Light Direction	At 5 Meter min 90 lux & lux at 60 meter min 1.5 Lux .The lab report should clearly specify this.
<b>(v) Accessories and Packings</b>		
1	Ruggedized Storage Box for main equipment compulsory	

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2 Tool Kit  
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Tool Kit:

- i. D Spanner 10-11: 2 NOS.,
- ii Allen Key Set : 2,3,5 & 6
- iii Screwdriver : 1 No.

3	AC Cord for AC Mains / Genset Supply	Yes, 1 No.
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4	Operating Manual	English Language
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**E. GENSET DETAILS (Honda Make Model: EP 1000 or equivalent)**

1	Genset details	Min 750 VA with CPCB Compliance
2	Generator rated output (va) 230v/ 50hz	0.75 kVA
3	Fuel tank capacity	3.6 Ltrs (Minimum)
4	Starting system	Recoil Start
5	Type of fuel	Petrol
6	Type of cooling	Air cooled
7	Type of air filter (Cleaner)	Foam Air Filter
8	Lab report should have picture of the LED light tower	Product Picture mandatory else offer will be rejected.

**F. Other qualifying and quality criteria**

- |   |   |
|---|---|
| 1 | The type test report issued by Laboratory shall put actual measured or observed value in front of the asked specification for Total run time with EP 1000 or equivalent Genset Fuel Tank Capacity: 3.6 litre fuel in hours. Merely writing compliance in the Lab test report won't be accepted if actual value is not mentioned for run time. |
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