

## LED LIGHT

Item No.	Description of Item	Unit	Rate without GST & LWC (₹)
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**ITEM : LED Downlighter (Recessed/Surface Type)**

1. Supplying, installation, Testing & Commissioning of LED Recessed/ surface Down lighter (Round/ square/ Rectangular) **SMD** with powder-coated pressure Die-cast Aluminium with high-transmission opal PMMA/ polycarbonate/ prismatic diffuser having uniform light distribution and construction as per IS : 10322. The driver rated output wattage should be 10% to 15% higher than lamp rating and efficiency Driver >80%, Operating voltage AC 140-270 Volt, frequency 50/60 hz, Operating temp range 0<sup>0</sup> to 40<sup>0</sup> C, internal surge protection of 2.5 KV with Short & Open circuit protection, THD < 10% , PF ≥0.9, IP20, CRI >80, life time (LED, Driver & electrical circuitary), of minimum 50000 Burning Hours (Life projection shall be calculated as per TM-21 methodology) and 70% of initial Lumen maintained till life ends, CCT 3000°K / 4000°K / 5700°K / 6000°K / 6500°K, Maximum power consumption should not more than the specified rating and Fixture shall be confirming to relevant BIS standards and trade mark certificate (T.C.). Manufactures Word Mark/ Name Engraved/ Embossing/ Screen printing on housing Complete in all respect and LED Chips of SMD Low to mid-power, as per requirement (LM-80 tested) and necessary inter-connections with 1.5 sq mm FR, PVC insulated copper conductor single core cable and earthing etc. as required with Minimum 5 year OEM comprehensive on-site warranty against manufacturing defects including driver and LED module. All test report except L80 should be from 3rd party NABL accredited Lab as per BIS shall be submitted. Shape size and CCT shall be as approved by Engineer-in-Charge as per requirement.

**System lumen efficacy shall be as below:**

**1.1 System lumen efficacy ≥ 110 lm/Watt**

1.1.1	5 - 7 Watt	Each	<b>561.00</b>
1.1.2	8 - 10 Watt	Each	<b>647.00</b>
1.1.3	12 - 15 Watt	Each	<b>704.00</b>
1.1.4	18 - 20 Watt	Each	<b>873.00</b>
1.1.5	22 - 24 Watt	Each	<b>1,158.00</b>

## 2. LED Down lighter (COB Type)

Supplying, installation, Testing & Commissioning of LED Recessed/ surface Down lighter (Round/ square/ Rectangular) **COB** with powder-coated pressure Die-cast Aluminium with high-transmission opal PMMA/ polycarbonate/ prismatic diffuser having uniform light distribution and construction as per IS : 10322. The driver rated output wattage should be 10% to 15% higher than lamp rating and efficiency Driver >80%, Operating voltage AC 140-270 Volt, frequency 50/60 hz, Operating temp range 0<sup>0</sup> to 40<sup>0</sup> C, internal surge protection of 2.5 KV with Short & Open circuit protection, THD < 10% , PF ≥0.9, IP20, CRI >80, life time (LED, Driver & electrical circuitary), of minimum 50000 Burning Hours (Life projection shall be calculated as per TM-21 methodology) and 70% of initial Lumen maintained till life ends , CCT 3000°K / 4000°K / 5700°K / 6000°K / 6500°K, Maximum power consumption should not more than the specified rating and Fixture shall be confirming to relevant BIS standards and trade mark certificate (T.C.). Manufactures Word Mark/ Name Engraved/ Embossing/ Screen printing on housing Complete in all respect and LED Chips of SMD Low to mid-power, as per requirement (LM-80 tested) and necessary inter-connections with 1.5 sq mm FR, PVC insulated copper conductor single core cable and earthing etc. as required with Minimum 5 year OEM comprehensive on-site warranty against manufacturing defects including driver and LED module. All test report except L80 should be from 3rd party NABL accredited Lab as per BIS shall be submitted. Shape size and CCT shall be as approved by Engineer-in-Charge as per requirement.

**System lumen efficacy shall be as below:**

### 2.1 System lumen efficacy ≥ 110 lm/Watt

2.1.1 5 - 7 Watt	Each	<b>633.00</b>
2.1.2 8 - 10 Watt	Each	<b>896.00</b>
2.1.3 12 - 15 Watt	Each	<b>1,373.00</b>
2.1.4 18 - 20 Watt	Each	<b>1,421.00</b>
2.1.5 22 - 24 Watt	Each	<b>1,708.00</b>

### 3. LED Panel light 2'x2'

Supplying, installation, Testing & Commissioning of LED Recessed/ surface Down lighter (Round/ square/ Rectangular) **2'x2'** with powder-coated pressure Die-cast Aluminium/CRCA sheet body with high-transmission opal PMMA/ polycarbonate/ prismatic diffuser having uniform light distribution and construction as per IS : 10322. The driver rated output wattage should be 10% to 15% higher than lamp rating and efficiency Driver >80%, Operating voltage AC 140-270 Volt, frequency 50/60 hz, Operating temp range 0<sup>0</sup> to 40<sup>0</sup> C, internal surge protection of 2.5 KV with Short & Open circuit protection, THD < 10% , PF ≥0.9, IP20, CRI >80, life time (LED, Driver & electrical circuitary), of minimum 50000 Burning Hours (Life projection shall be calculated as per TM-21 methodology) and 70% of initial Lumen maintained till life ends , CCT 3000°K / 4000°K / 5700°K / 6000°K / 6500°K, Maximum power consumption should not more than the specified rating and Fixture shall be confirming to relevant BIS standards and trade mark certificate (T.C.). Manufactures Word Mark/ Name Engraved/ Embossing/ Screen printing on housing Complete in all respect and LED Chips of SMD Low to mid-power, as per requirement (LM-80 tested) and necessary inter-connections with 1.5 sq mm FR, PVC insulated copper conductor single core cable and earthing etc. as required with Minimum 5 year OEM comprehensive on-site warranty against manufacturing defects including driver and LED module. All test report except L80 should be from 3rd party NABL accredited Lab as per BIS shall be submitted. Shape size and CCT shall be as approved by Engineer-in-Charge as per requirement.

**System lumen efficacy shall be as below:**

#### 3.1 System lumen efficacy ≥135 lm/Watt

3.1.1 22 - 24 Watt	Each	<b>1,978.00</b>
3.1.2 27 - 30 Watt	Each	<b>2,169.00</b>
3.1.3 33 - 36 Watt	Each	<b>2,313.00</b>
3.1.4 38 - 40 Watt	Each	<b>2,528.00</b>
3.1.5 50 - 60 Watt	Each	<b>3125.00</b>

4. **LED Industrial Batten light**

Supplying and delivery of LED Industrial Batten light made of CRCA Sheet Body (Thickness  $\geq 0.50$  mm) and construction as per relevant IS, along with LED lamp (Opal finish polycarbonate housing with Aluminium end-cap) voltage AC 140-270 Volt, freq 50/60 hz, Operating temp range  $0^{\circ}$  to  $40^{\circ}$  C, internal surge protection of 2.5 KV(internal) with Short & Open circuit protection , THD  $< 10\%$  , P. F. $\geq 0.9$ , IP20, CRI  $>80$ , and minimum 40000 Burning Hours (Life projection shall be calculated as per TM-21 methodology), CCT  $5700^{\circ}\text{K}$  / $6500^{\circ}\text{K}$ , and Fixture shall be of relevant BIS standard and trade mark certificate ( T.C.). Manufactures Word Mark/ Name Engraved/ Embossing/ Screen printing on housing, with Minimum 5 year OEM warranty. All test report except L80 should be from 3rd party NABL accredited Lab as per BIS shall be submitted.

**(System lumen efficacy  $\geq 115$  lm/Watt)**

4.1.1	Single fittings along with S/F of 1 no. 18-20 W LED lamp as per specification	Each	<b>621.00</b>
4.1.2	Twin fittings along with S/F of 2 no. 18-20 W LED lamps as per specification	Each	<b>989.00</b>

**LED Strip Luminaries (Length of 5 mtr)**

5.0 Supplying, installation, Testing & Commissioning of **25 watt LED Strip** (Length of 5 mtr) of Uncoated Synthetic material and Superior adhesive for easy installation and no. of LED 144 LED/mtr, system lumen efficiency 600 lm/mtr as per IS : 10322. The driver rated output wattage should be 10% to 15% higher than lamp rating and Driver efficiency  $>80\%$ , Operating voltage AC 140- 270 Volt, freq 50/60 hz, Operating temp range 0 degree to 40 degree C internal surge protection of 2.5 KV with Short & Open circuit protection, THD  $< 10\%$  , P. F. $\geq 0.9$ , IP20, CRI  $>80$ , life time (LED,Driver & electrical circuitry), of minimum 40000 Burning Hours (Life projection shall be calculated as per TM-21 methodology) and 70% of initial Lumen maintained till life ends as per LM80 report, CCT  $3000^{\circ}\text{K}$  /  $4000^{\circ}\text{K}$  / $6500^{\circ}\text{K}$ , Maximum power consumption should not more than the specified rating and Fixture shall be of relevant BIS standard and trade mark certificate ( T.C.). Manufactures Word Mark/ Name Engraved/ Embossing/ Screen printing on housing, complete in all respect and LED Chips of SMD Low to mid-power, as per required (LM-80 tested) and necessary inter-connections with 1.5 sq mm FR, PVC insulated copper conductor single core cable and earthing etc. as required with Minimum 5 year OEM comprehensive on-site warranty against manufacturing defects including driver and LED module. All test report except L80 should be from 3rd party NABL accredited Lab as per BIS shall be submitted.

5.1	Color WW/NW/CDL (Length of 5 mtr)	Each	<b>1259.00</b>
5.2	Color Magic 3 in 1 (Length of 5 mtr)	Each	<b>1736.00</b>

## 6. **LED Street Light fixture**

Supplying, installation, Testing & Commissioning of Street light LED fixture powder coated pressure die cast aluminum body finish with corrosion resistance fasteners (SS hardware) & silicon gasket for proper sealing with driver as per the requirement with Driver efficiency >80%, Input voltage: 140-270 Volt AC, freq 50/60 hz, Operating temp range 0° to 50° C and working RH 10% - 90%, internal surge protection of 5 KV internal and external SPD min. 10 KV, L,N,E as per IEC 61000-4-5. The driver rated output wattage should be 10% to 15% higher than lamp rating and at least 2 driver for 200W & above and Driver efficiency >85%, THD < 10% as per IEC 61000-3-2 , P. F.≥0.9, IP- 66, IK-08 specified below, CRI >70, under voltage and over voltage protection, high efficiency lens with type II/III distribution as required with UV stabilized optical lens, life time (LED,Driver & electrical circuitry) of minimum 50000 Burning Hours (Life projection shall be calculated as per TM-21 methodology) and 70% of initial Lumen maintained till life ends. CCT 3000°K / 4000°K / 5700°K /6000°K/6500°K, Maximum power consumption should not more than the specified rating and Fixture shall be of relevant BIS standard complete in all respect and LED Chips of SMD mid to high-power (2.5 to 4 watt for 200 watt and above, as per required (LM-80 tested) and necessary inter-connections with 1.5 sq mm FR, PVC insulated copper conductor single core cable and earthing etc. as required with Minimum 5 year OEM comprehensive on-site warranty against manufacturing defects including driver and LED module. All test report except L80 should be from 3rd party NABL accredited Lab as per BIS shall be submitted. Shape size and CCT shall be as approved by Engineer-in-Charge as per requirement.

**System lumen efficacy shall be as below:**

### 4.1 **System lumen efficacy ≥135 lm/Watt**

6.1.1	25 Watt	Each	<b>1,333.00</b>
6.1.2	45 Watt	Each	<b>2,408.00</b>
6.1.3	72 Watt	Each	<b>3,436.00</b>
6.1.4	90 Watt	Each	<b>4,534.00</b>
6.1.5	100 Watt	Each	<b>5,299.00</b>
6.1.6	120 Watt	Each	<b>6,469.00</b>
6.1.7	150 Watt	Each	<b>7,831.00</b>
6.1.8	180 Watt	Each	<b>10,029.00</b>
6.1.9	200 Watt	Each	<b>12,083.00</b>
6.1.10	250 Watt	Each	<b>14,472.00</b>

**7. LED Flood Light fixture**

Supplying, installation, Testing & Commissioning of Flood light LED fixture powder coated pressure die cast aluminum body finish with corrosion resistance fasteners (SS hardware) & silicon gasket for proper sealing with driver as per the requirement with Driver efficiency >80%, Input voltage: 140-270 Volt AC, freq 50/60 hz, Operating temp range 0° to 50° C and working RH 10% - 90%, internal surge protection of 5 KV internal and external SPD min. 10 KV, L,N,E as per IEC 61000-4-5. The driver rated output wattage should be 10% to 15% higher than lamp rating and at least 2 driver for 200W & above and Driver efficiency >85%, THD < 10% as per IEC 61000-3-2 , P. F.≥0.9, IP- 66, IK-08 specified below, CRI >70, under voltage and over voltage protection, high efficiency lens with type II/III distribution as required with UV stabilized optical lens, life time (LED,Driver & electrical circuitry) of minimum 50000 Burning Hours (Life projection shall be calculated as per TM-21 methodology) and 70% of initial Lumen maintained till life ends. CCT 3000°K / 4000°K / 5700°K /6000°K/6500°K, Maximum power consumption should not more than the specified rating and Fixture shall be of relevant BIS standard complete in all respect and LED Chips of SMD mid to high-power (2.5 to 4 watt for 200 watt and above, as per required (LM-80 tested) and necessary inter-connections with 1.5 sq mm FR, PVC insulated copper conductor single core cable and earthing etc. as required with Minimum 5 year OEM comprehensive on-site warranty against manufacturing defects including driver and LED module. All test report except L80 should be from 3rd party NABL accredited Lab as per BIS shall be submitted. Shape size and CCT shall be as approved by Engineer-in-Charge as per requirement.

**System lumen efficacy shall be as below:**

**7.1 System lumen efficacy ≥135 <135 lm/Watt**

7.1.1 50 Watt	Each	<b>1,572.00</b>
7.1.2 70 Watt	Each	<b>4,343.00</b>
7.1.3 100 Watt	Each	<b>5,155.00</b>
7.1.4 150 Watt	Each	<b>6,828.00</b>
7.1.5 200 Watt	Each	<b>8,739.00</b>
7.1.6 250 Watt	Each	<b>14,472.00</b>