

A. TECHNICAL SPECIFICATIONS OF LED TUBE LIGHT FIXTURES

Sr. No	Criteria	Specification for LED tube light fitting
1	Light Source	SMD/COB LED Chip
2	LED Chip Efficacy	Minimum 130Lm/W.
3	Tube Light Efficacy	Minimum 100 Lm / W
4	Lumen maintenance @ 85°C and LED Life at 25°C,230 V	Minimum 80% upto 50,000 Hrs (Indoor application) and Life expectancy up to 50,000 Hrs for LED.
5	Tube Light Life Hrs	Minimum 50,000
6	Tube Light Wattage	18/20 W LED Tube Light
7	CCT	5000 -5700 °K
8	Forward current	< 60 mA
9	Ingress Protection	IP 20
10	CRI (Typical)	Minimum 80
11	Product Beam angle (Typical)	> 120°
12	Total Harmonics Distortion	<10%
13	Driver Efficiency	>85%
14	Life Expectancy of Driver	Minimum 50,000 Hours
15	Power factor	>0.90 at full load, 230 V _{ac}
16	Operating Voltage Range	100 V – 300 V
17	Voltage Range for Tube Light “ON” and Safety	100 V – 300 V
18	Rated Voltage for Performance and Life Time	220 V – 240 V
19	Surge Voltage	Withstand 4 kV
20	Input Frequency	47 to 55 Hz
21	Working Temp	-10 to 45 deg C
22	Outer Body Luminaire Temperature	Max. upto 70°C (with ±5°C) at 25°C Ambient temp
23	Working Humidity	10% - 90% RH
24	Adequate di-electric protection	(Isolation-minimum 1.5 KV di-electric resistance) to be provided in the Tube Lights design to prevent any possibility of electric shocks to user from leakage or short circuiting from Tube Light body.
25	Make of LED	The LED shall be of Surface Mounted Design (SMD) or Chip on Board Design (COB).
26	Tube light body	Back portion : Die-cast aluminium / Extruded aluminium with proper heat dissipation and should meet all the safety

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		standards. Front portion : High quality non-ageing and non-yellowing polycarbonate or acrylic diffuser complying to all the safety standards.
27	Fixture body	Should be of high quality Powder coated CRCA & white epoxy powder coated from inside and outside. The luminaire must be strong and robust enough so as to carry the weight of tube.
28	Driver	Inbuilt driver must be provided.
29	Warranty	5 year for tube light and fixture.