

The lighting level shall take into account appropriate light output ratio of luminaires, coefficient of utilization maintenance factor (of 0.7 or less) to take into account deterioration with time and dust deposition.

LED Luminaire for Outdoor Applications

LED luminaires shall meet the following parameters.

Parameter	Specification
Input voltage	170-260 V
Input Frequency	50 Hz +/- 1 Hz
Power Factor	0.90 (Minimum)
Luminous efficacy	>90 lumens per watt
Beam Angle	Minimum 120°
Total Harmonic Distortion	< 10 %
Working Humidity	10% - 90% RH (Preferably Hermetically sealed
	unit)
Degree of Protection	Minimum IP 65 (for Outdoor fixtures)
Luminaire Casing	Powder coated metal / Aluminium.
Color Temperature	5700 K (cool day light)
Color Rendering Index	>65
Moisture protection in case of	IP 65 (driver unit shall preferably be totally
casing damage	encapsulated)

The LED luminaire (outdoor) housing, heat sink, pole-mounting bracket, individual LED reflectors and front heat resistant tempered glass should be provided.

The LED luminaire (outdoor) housing should be made of non-corrosive, high pressure, die-cast aluminium and the housing should be power coated grey, so as to ensure good weatherability. Each individual LED source should be provided with an asymmetrical distribution high reflectance aluminized reflector, which should ensure that the light distribution of the luminaire is suitable for road lighting applications (wide beam distribution) and should ensure high pole-to-pole spacing.

The luminaire should be provided with in-built power unit and electronic driver.

The luminaire should be suitable for standard street light poles and should be suitable for side entry and bottom entry (post top).