

## TECHNICAL SPECIFICATION FOR LED LUMINARIES

S. No	TECHNICAL PARAMETER	RECOMMENDATION FOR INDOOR LIGHT	RECOMMENDATION FOR OUTDOOR LIGHT	RECOMMENDATION FOR RESIDENTIAL LIGHT
1	Efficiency of LED light fitting (Efficacy)	Min 100 Lumens / Watt	Min 110 Lumens / Watt	Min 70 Lumens / Watt
2	Life of LED light fitting	Not less than 50000 burning Hours	Not less than 50000 burning Hours	Not less than 35000 burning Hours
3	Approved make for LED	Nichia/Cree/Osram/ Phillips (Lumiled)/ Sharp/ Seoul/ Everlite/ Citizen (Japan)/ Bridgelux (USA)/ Samsung.	Nichia/Cree/Osram/ Phillips (Lumiled)/ Sharp/ Seoul/ Everlite/ Citizen (Japan)/ Bridgelux (USA)/ Samsung.	Nichia/Cree/Osram/ Phillips (Lumiled)/ Sharp/ Seoul/ Everlite/ Citizen (Japan)/ Bridgelux (USA)/ Samsung.
4	CRI (Colour Rendering Index)	Min 80 for indoor applications.	Min 70 for indoor applications.	Min 70
5	TDD (Total Harmonic Distortion)	Less than 10%	Less than 10%	Less than 20%
6	Voltage Range	140 V to 270 V	140 V to 270 V	140 V to 270 V
7	Type of Housing	Extruded aluminum / CRCA/ Standard alloy housing	High pressure die cast aluminum / Standard alloy for outdoor applications.	Extruded aluminum / High pressure die cast aluminium/ Standard alloy.
8	IP Category	IP 20 or higher for indoor applications.	≥ IP65	≥ IP 20
9	Surge Protection	Shall be provided conforming to relevant is standard / IEC for LED Driver (In-built): EN61000-4-5 or as specified in BOQ. > 2KV	> 4KV	> 2KV
10	Labeling / identification Mark	Manufactures Name/ Logo shall be engraved/ Embossed on housing/ body or on aluminium plate Labels or screen printed on housing / body .	Manufactures Name/ Logo shall be engraved/ Embossed on housing/ body or on aluminium plate Labels or screen printed on housing / body.	Manufactures Name/ Logo shall be engraved/ Embossed on housing/ body or on aluminium plate Labels or screen printed on housing / body.
11	Warranty period	5 years warranty from actual date of completion of work on	5 years warranty from actual date of completion of work on	3 years warranty from actual date of completion of work on complete

		complete luminaire including driver / control gear, LED, all accessories etc.	complete luminaire including driver / control gear, LED, all accessories etc.	luminaire including driver / control gear, LED, all accessories etc.
12	Power Factor	Equal to 0.95 or More	Equal to 0.95 or More	Equal to 0.95 or More
13	Total Power consumption of fitting	Not more than 110% of rated capacity of LED Light fitting.	Not more than 110% of rated capacity of LED Light fitting.	Not more than 110% of rated capacity of LED Light fitting.
14	Approved Make of Driver	Meanwell / Inventronics/ C&S/ Moso Power/ BAG/ Phillips/ Wipro/ Osram/ Bajaj/ Pharos/ Fulham/ Helver/ OEM of Light Fixture	Meanwell / Inventronics/ C&S/ Moso Power/ BAG/ Phillips/ Wipro/ Osram/ Bajaj/ Pharos/ Fulham/ Helver/ OEM of Light Fixture	Meanwell / Inventronics/ C&S/ Moso Power/ BAG/ Phillips/ Wipro/ Osram/ Bajaj/ Pharos/ Fulham/ Helver/ OEM of Light Fixture
15	Type of Driver	Enclosed/Encapsulated	Enclosed/Encapsulated	Enclosed/Encapsulated
16	Efficiency of Driver	≥ 85%	≥ 85%	≥ 85%
17	Testing Facility	LED Luminaire manufacturer shall have In-house NABL accredited Photometry lab.	LED Luminaire manufacturer shall have In-house NABL accredited Photometry lab.	LED Luminaire manufacturer shall have In-house NABL accredited Photometry lab.
18	BIS Registration	All luminaires & drivers shall be BIS registered.	All luminaires & drivers shall be BIS registered.	All luminaires & drivers shall be BIS registered.
19	Housing thickness	Housing of luminaires shall ≥ 0.5 mm for CRCA or 1 mm for Extruded Aluminium or 1.5mm for PDC aluminium or heavier if so required to meet the application requirement.	Housing of luminaires shall ≥ 0.5 mm for CRCA or 1 mm for Extruded Aluminium or 1.5mm for PDC aluminium or heavier if so required to meet the application requirement.	Housing of luminaires shall ≥ 0.5 mm for CRCA or 1 mm for Extruded Aluminium or 1.5mm for PDC aluminium or heavier if so required to meet the application requirement.
20	IK Rating	IK 04 or above	IK 07 or above	NA
21	LED Binning (Standard Deviation Colour Matching)	< 5 (SDCM)	< 5 (SDCM)	< 7 (SDCM)
22	Unified Glare Rating (UGR)	≤ 19	NA	NA