

Laboratory Classic Testing & Research Centre, B-97, Sector-64, Noida, Uttar Pradesh

Accreditation Standard ISO/IEC 17025: 2005

Certificate Number TC-6151

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ELECTRICAL TESTING

I.	BATTERIES			
1.	Secondary Cells & Batteries (Nickel System)	Continuous Low Rate Charging	IS 16046: 2015 IEC 62133:2012 Cl. 7.2.1	0.01 V to 60 V 0.01 A to 10 A
		Molded Case Stress	IS 16046: 2015 IEC 62133:2012 Cl. 7.2.3	1 °C to 200 °C
		Temperature Cycling	IS 16046: 2015 IEC 62133:2012 Cl. 7.2.4	(-) 45 °C to 200 °C
		Incorrect Installation Of (Cell)	IS 16046: 2015 IEC 62133:2012 Cl. 7.3.1	0.1 Ω to 10 Ω
		External Short Circuit	IS 16046: 2015 IEC 62133:2012 Cl. 7.3.2	60 mΩ to 100 mΩ
		Free Fall	IS 16046: 2015 IEC 62133:2012 Cl. 7.3.3	Up to 1 m
		Thermal Abuse	IS 16046: 2015 IEC 62133:2012 Cl. 7.3.5	1 °C to 200 °C
		Crushing Of Cells	IS 16046: 2015 IEC 62133:2012 Cl. 7.3.6	0.1 kN to 15 kN
		Low Pressure	IS 16046: 2015 IEC 62133:2012 Cl. 7.3.7	11.6 kPa
		Overcharge	IS 16046: 2015 IEC 62133:2012 Cl. 7.3.8	0.01 V to 60 V 0.01 A to 10 A

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		Forced Discharge	IS 16046: 2015 IEC 62133:2012 Cl. 7.3.9	0.01 V to 60 V 0.01 A to 10 A
		Charging procedure	IS 16046: 2015 IEC 62133:2012 Cl. 8.1	0.01 V to 60 V 0.01 A to 10 A 20 °C to 200 °C
		Continuous Charging At constant voltage (Cell)	IS 16046: 2015 IEC 62133:2012 Cl. 8.2.1	0.01 V to 60 V 0.01 A to 10 A 20 °C to 200 °C
		Molded Case Stress At high temperature	IS 16046: 2015 IEC 62133:2012 Cl. 8.2.2	1 °C to 300 °C
		External Short Circuit (Cell)	IS 16046: 2015 IEC 62133:2012 Cl. 8.3.1	80 mΩ± 20 mΩ
		External Short Circuit (Battery)	IS 16046: 2015 IEC 62133:2012 Cl. 8.3.2	80 mΩ± 20 mΩ 1 °C to 200 °C
		Free Fall	IS 16046: 2015 IEC 62133:2012 Cl. 8.3.3	Up to 1 m
		Thermal Abuse	IS 16046: 2015 IEC 62133:2012 Cl. 8.3.4	1 °C to 200 °C
		Crushing Of Cells	IS 16046: 2015 IEC 62133:2012 Cl. 8.3.5	0.1 kN to 15 kN
		Overcharge	IS 16046: 2015 IEC 62133:2012 Cl. 8.3.6	0.01 V to 60 V 0.01 A to 10 A
		Forced Discharge (Cell)	IS 16046: 2015 IEC 62133:2012 Cl. 8.3.7	0.01 V to 60 V 0.01 A to 10 A

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II.	SAFETY TEST FACILITY			
1.	Electrical Equipment for Measurement, Control and Laboratory Use	Durability of markings	IEC 61010: 2010 Cl. 5.3	Qualitative
		Residual Energy	IEC 61010: 2010 Cl. 6.1.1/6.3/6.10.3	V_{rms} : 0.5 V_{ac} to 500 V_{ac} 1 μ s to 10 s
		Accessibility	IEC 61010: 2010 Cl. 6.2	Qualitative
		Accessible stored energy	IEC 61010: 2010 Cl. 6.3.1/6.3.2	V_{rms} : 0.5 V_{ac} to 40 kV_{ac} 1 μ s to 10 s Up to 30 A
		Bonding impedance	IEC 61010: 2010 Cl. 6.5.1.2 /6.5.1.3/6.5.1.4/ 6.5.2/6.5.3	0.1 V to 30 V 1 A to 50 A
		Terminals for external circuits (capacitive discharge) Clearance & Creepage distance	IEC 61010: 2010 Cl. 6.6.2, 6.10.3b	V_{rms} : 0.5 V_{ac} to 40 kV_{ac} 1 μ s to 10 s
		Humidity	IEC 61010: 2010 Cl. 6.7/10.5.1	Ambient to 180°C 10 % to 99 % RH
		Dielectric strength	IEC 61010: 2010 Cl. 6.8.2 IEC 61010 2010 Cl. 6.8.4	0.1 kV_{ac} to 5 kV_{ac} 0.1 kV_{dc} to 5 kV_{dc} Up to 100 mA 1ms to 99s
		Stability	IEC 61010: 2010 Cl. 7.4	0.1 Nm to 6 Nm 1 N to 500 N 0 ° to 90° inclination
		Strength of handles	IEC 61010: 2010 Cl. 7.5.2	Qualitative
		Static	IEC 61010: 2010 Cl. 8.2.1	Qualitative
		Impact	IEC 61010: 2010 Cl. 8.2.2	Qualitative
		Drop test	IEC 61010: 2010 Cl. 8.3	Qualitative

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		Heating Equipment	IEC 61010: 2010 Cl. 10.4	25°C to 200°C
		Enclosures	IEC 61010: 2010 Cl. 10.5.2	25°C to 200°C
		Cleaning/decontamination	IEC 61010: 2010 Cl. 11.2	Qualitative
2.	Self-Ballasted LED Lamps For General Lighting Services	Verification of Marking	IS 16102-1: 2012 Cl. 5 IEC 62560: 2011 Cl. 5	Qualitative
		Gauges for Interchangeability - Bending test Unit (Both Clockwise & Anti-clockwise)	IS 16102-1: 2012 Cl. 6 IEC 62560: 2011 Cl. 6	0.01 mm to 300mm 1N to 500N 0.001kg to 10 kg 0.75 Nm to 3Nm
		Protection against accidental contacts with live parts	IS 16102-1: 2012 Cl. 7 IEC 62560: 2011 Cl. 7	10N 0.001 V _{ac} - 50 V _{ac} V _{ac} : 0.1 kV to 5 kV V _{dc} : 0.1 kV to 5 kV 1mA - 100mA 1s to 99s 1 MΩ - 100x10 ⁶ MΩ 500V _{dc} 0.01s to 9000s
		Insulation Resistance and Electric strength	IS 16102-1: 2012 Cl. 8 IEC 62560: 2011 Cl. 8	V _{ac} : 0.1 kV – 5 kV V _{dc} : 0.1 kV – 6 kV 1mA - 100mA 1 s to 99s 1 MΩ -100x10 ⁶ MΩ 500V _{dc} 0.01s to 9000s
		Mechanical Strength - Torque screw driver - Torsion Test Unit	IS 10322 Cl. 9 & Cl. 4.12 IS 16102-1: 2012 Cl. 9 IEC 62560: 2011	1 Nm to 6 Nm 0.5 Nm to 4 Nm
		Cap Temperature Rise	IS 16102-1: 2012 Cl. 10 IEC 62560: 2011 Cl. 10	25 °C to 200 °C

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		Resistance to Heat - Ball Pressure	IS 16102-1: 2012 Cl. 11 IEC 62560: 2011 Cl. 11	20 N 0.01 mm to 300 mm 25 °C to 180 °C 0.01 s to 9000 s
		Resistance to Flame and Ignition - Glow Wire	IS 16102-1: 2012 Cl. 12 IEC 62560: 2011 Cl. 12	550 °C to 960 °C 0.01 s to 9000 s
		Fault Condition - High Voltage	IEC 62560: 2011 Cl. 13	V _{ac} : 0.001 V to 600 V I _{ac} : 0.0001 A to 20 A 0.00001 kW to 6 kW 25°C to 200°C V _{ac} : 0.1 kV to 5 kV V _{dc} : 0.1 kV to 6 kV 1 mA – 100 mA 1 s to 99s 1 MΩ -100x10 ⁶ MΩ 500 V _{dc}
		Creepage distances and clearances	IS 16102-1: 2012 Cl. 14 IEC 62560: 2011	0.01 mm to 300 mm
III.	LAMPS, LUMINAIRES AND ACCESSORIES			
1.	Luminaires General Requirements and Tests	Verification of Marking - N-hexane	IS 10322 (Part 1): 2014 Cl. 3 IEC 60598-1: 2014	Qualitative
		Verification of Construction - Glow Wire Test	IS 10322 (Part 1): 2014 Cl. 4 IEC 60598-1: 2014	Qualitative 0.01 mm to 300 mm 0.1 Nm to 6 Nm 1 N to 500 N 0.75 Nm 0 ° to 90 ° 550°C to 960°C 1 °C to 100°C 0.1 % to 95 % RH Up to 100 kg

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		External and Internal Wiring	IS 10322 (Part 1): 2014 Cl. 5 IEC 60598-1: 2014	Qualitative 1 N to 500 N 0.1 Nm to 6 Nm
		Provision for Earthing	IS 10322 (Part 1): 2014 Cl. 7 IEC 60598 -1: 2014	0.1 V to 30 V, 1 A to 40 A
		Insulation Resistance and Electric Strength, Touch Current and Protective Conductor Current - Tripping Current	IS 10322 (Part 1): 2014 Cl. 10 IEC 60598 -1: 2014	V _{ac} : Up to 600 V I _{ac} : Up to 20 A 0.001 W to 5 kW V _{ac} : 0.1 kV to 5 kV V _{dc} : 0.1 kV to 5 kV Up to 100 mA Up to 99 s 1 MΩ to 100x10 ⁶ MΩ @ 500 V _{dc} 0.01 s to 9000 s
		Creepage Distance and Clearance	IS 10322 (Part 1): 2014 Cl. 11 IEC 60598-1: 2014	0.01 mm to 300 mm
		Endurance and Thermal - Climatic Test chamber	IS 10322 (Part 1): 2014 Cl. 12 IEC 60598-1: 2014	V _{ac} : Up to 600 V I _{ac} : Up to 20 A 0.001 W to 5 kW 25°C to 200°C 25°C to 250°C
		Resistance to Heat, Fire and Tracking - Ball Pressure - Environmental chamber - Glow Wire - Comparative Tracking Index - Needle Flame	IS 10322 (Part 1): 2014 Cl.13 IEC 60598-1: 2014	20N 0.01 mm to 300 mm 25°C to 180°C 550°C to 960°C 175 V to 600 V @ 50 Hz Up to 700°C
		Screw Terminal	IS 10322 (Part 1): 2014 Cl. 14 IEC 60598-1: 2014	0.01 mm to 300 mm 1 Nm to 6 Nm 1 N to 500 N

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		Screw less Terminals and Electrical Connections	IS 10322 (Part 1): 2014 Cl. 15 IEC 60598-1:2014	0.1 Nm to 6 Nm 1 N to 500 N
2.	Luminaires General Requirements and Tests - For Lighting chain	Verification of Marking - N-hexane	IS 10322 (Part 1/Sec 3): 2014 Cl. 3 IEC 60598 - 1: 2014 IS 10322 (Part 5/Sec 7): 2013 Cl. 6 IEC 60598-2-20 Cl. 20.5	Qualitative
Verification of Construction		IS 10322 (Part 1/Sec 4): 2014 Cl. 4 IEC 60598-1: 2014 IS 10322 (Part 5/Sec 7): 2013 Cl. 7 IEC 60598-2-20 Cl. 20.6	Qualitative 0.01 mm to 300 mm 0.1 Nm to 6 Nm 1 N to 500N 0.75 Nm	
External and Internal Wiring		IS 10322 (Part 1/Sec 5): 2014 Cl. 5 IEC 60598 - 1: 2014 IS 10322 (Part 5/Sec 7): 2013 Cl. 11 IEC 60598-2-20 Cl. 20.10	Qualitative 1 N to 500 N 1 Nm to 6 Nm	
Provision for Earthing		IS 10322 (Part 1/Sec 7): 2014 Cl. 7 IEC 60598 -1: 2014 IS 10322 (Part 5/Sec 7): 2013 Cl. 9 IEC 60598-2-20 Cl. 20.8	0.1 V to 30 V 1 A to 40 A	
Protection against electrical shock		IS 10322 (Part 5/Sec 8): 2014 Cl. 8 IEC 60589-5-7: 2012 Cl. 12 IS 10322 (Part 5/Sec 3): 2013 IEC 60598-2-20 Cl. 20.11	0.1 V to 50 V	

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		Insulation Resistance and Electric Strength, Touch Current and Protective Conductor Current - Tripping current	IS 10322 (Part 1/Sec 10): 2014 Cl. 10 IEC 60598 -1: 2014 Cl. 15 IS 10322 (Part 5/Sec 7): 2013 IEC 60598-2-20 Cl. 20.14	V _{ac} : Up to 600 V I _{ac} : Up to 20 A 0.001 W to 5 kW V _{ac} : 0.1 kV to 5 kV V _{dc} : 0.1 kV to 5 kV Up to 100 mA Up to 99 s 1 MΩ to 100x10 ⁶ MΩ @ 500 V _{dc} 0.01 s to 9000 s
		Creepage Distances and Clearances	IS 10322 (Part 1/Sec 11): 2014 Cl. 11 IEC 60598-1: 2014 Cl. 8 IS 10322 (Part 5/Sec 7): 2013 IEC 60598-2-20 Cl. 20.7	0.01 mm to 300 mm
		Endurance Test and Thermal Test - Climatic Test chamber	IS 10322 (Part 1/Sec 12): 2014 Cl. 12 IEC 60598-1: 2014 Cl. 13 IS 10322 (Part 5/Sec 7): 2013 IEC 60598-2-20 Cl. 20.12	V _{ac} : Up to 600 V I _{ac} : Up to 20 A 0.001 W to 5 kW 25°C to 200°C 25°C to 250°C
		Resistance to Heat, Fire and Tracking - Ball Pressure - Environmental chamber - Glow Wire - Comparative Tracking Index - Needle Flame	IS 10322 (Part 1/Sec 13): 2014 Cl.13 IEC 60598-1: 2014 Cl. 16 IS 10322 (Part 5/Sec 7): 2013 IEC 60598-2-20 Cl. 20.15	20N 0.01 mm to 300 mm 25°C to 180°C 550°C to 960°C 175 V to 600 V @ 50 Hz Up to 700°C
		Screw Terminal	IS 10322 (Part 1/Sec 14): 2014 Cl. 14 IEC 60598-1: 2014 Cl. 10 IS 10322(Part 5/Sec7):2013 IEC 60598-2-20 Cl. 20.9	0.01 mm to 300 mm 1 Nm to 6 Nm 1 N to 500 N

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		Screw less Terminal and Electrical Connection	IS 10322 (Part 1/Sec 15): 2014 Cl. 15 IEC 60598-1:2014 IEC 60598-2-20	0.1 Nm to 6 Nm 1 N to 500 N
3.	Luminaires General Requirements and Tests - For Fixed General Purpose Luminaires.	Verification of Marking - N-hexane	IS 10322 (Part 5/Sec 1): 2012 Cl. 6 IS 10322 (Part 1): 2014 IEC 60598 - 1: 2014 IEC 60598-2-1: 1987 Cl.1.5	Qualitative
		Verification of Construction - Glow wire	IS 10322 (Part 5/Sec 1): 2012 Cl. 7 IS 10322 (Part 1): 2014 IEC 60598 - 1: 2014 IEC 60598-2-1: 1987 Cl. 1.6	Qualitative 0.01 mm to 300 mm 0 Nm to 6 Nm 1 N to 500 N 0 ° to 90 ° 550°C to 960°C 1 °C to 180 °C 30 % to 95 % RH Weight: 1mg to 100 kg
		Creepage Distances and Clearances	IS 10322 (Part 5/Sec 1): 2012 Cl. 8 IS 10322 (Part 1): 2014 IEC 60598 - 1: 2014 IEC 60598-2-1: 1987 Cl. 1.7	0.01 mm to 300 mm
		Terminals	IS 10322 (Part 5/Sec 1): 2012 Cl. 10 IS 10322 (Part 1): 2014 IEC 60598 - 1: 2014 IEC 60598-2-1: 1987 Cl. 1.9	0.01 mm to 300 mm Up to 6 Nm 1 N to 500 N

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		External and Internal Wiring	IS 10322 (Part 5/Sec 1): 2012 Cl. 11 IS 10322 (Part 1): 2014 IEC 60598 - 1: 2014 IEC 60598-2-1: 1987 Cl. 1.10	Qualitative 1 N to 500 N 0.1 to 6 Nm
		Protection Against Electric Shock	IS 10322 (Part 5/Sec 1): 2012 Cl. 12 IS 10322 (Part 1): 2014 IEC 60598 - 1: 2014 IEC 60598-2-1: 1987 Cl. 1.11	0.1 V to 50 V
		Endurance and Thermal - Climatic Test chamber	IS 10322 (Part 5/Sec 1): 2012 Cl. 13 IS 10322 (Part 1): 2014 IEC 60598 - 1: 2014 IEC 60598-2-1: 1987 Cl. 1.12 IS 10322 (Part 5/Sec 1): 2012 Cl. 14	V _{ac} : Up to 600V I _{ac} : Up to 20 A 0.001 W to 6 kW 25°C to 200°C 25°C to 250°C
		Insulation Resistance and Electric Strength - Tripping Current	IS 10322 (Part 5/Sec 1): 2012 Cl. 15 IS 10322 (Part 1): 2014 IEC 60598 - 1: 2014 IEC 60598-2-1: 1987 Cl. 1.14	V _{ac} : Up to 600V I _{ac} : Up to 20 A Up to 12 kW V _{ac} : 0.1 kV to 5 kV V _{dc} : 0.1 kV to 5 kV Up to 100 mA Up to 99 s 1 MΩ TO 100x10 ⁶ MΩ @ 500 V _{dc} 0.01 s to 9000 s

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		Resistance to Heat, Fire and Tracking - Ball Pressure - Environmental chamber - Glow Wire - Comparative tracking index - Needle Flame	IS 10322 (Part 5/Sec 1): 2012 Cl. 16 IS 10322 (Part 1): 2014 IEC 60598 - 1: 2014 IEC 60598-2-1: 1987 Cl. 1.15	20 N 0.01 mm to 300 mm 70°C to 180°C 10 % to 97% RH 550°C to 960°C 175 V to 600 V @ 50 Hz 25°C to 700°C
4.	Luminaires General Requirements and Tests - Recessed Luminaires	Verification of Marking - N-hexane	IS 10322 (Part 1/Sec 3): 2014 Cl.3 IEC 60598-1: 2014 Cl. 6 IS 10322 (Part 5/Sec 2): 2012 IEC 60598-2-2 Cl. 2.5	Qualitative
Verification of Construction - Glow wire		IS 10322(Part 1/Sec 4):2014 Cl. 4 IEC 60598-1: 2014 Cl. 7 IS 10322 (Part 5/Sec 2): 2012 IEC 60598-2-2 Cl. 2.6	Qualitative 0.01 mm to 300 mm 0.1 Nm to 6 Nm 1N to 500 N 0.75 Nm 0° to 90° 550°C to 960°C Ambient to 95% RH 1mg to 100 kg	
External and Internal Wiring		IS 10322 (Part 1/Sec 5): 2014 Cl. 5 IEC 60598- 1: 2014 Cl. 11 IS 10322(Part 5/Sec 2)2012 IEC 60598-2-2 Cl. 2.10	Qualitative 1 N to 500 N 0.1 Nm to 6 Nm	
Provision for Earthing		IS 10322 (Part 1/Sec 7): 2014 Cl. 7 IEC 60598-1: 2014 Cl. 9 IS 10322 (Part 5/Sec2)2012 IEC 60598-2-2 Cl. 2.8	0.1 V to 30 V, 1 A to 40 A	

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		Protection against Electric Shock	IS 10322 (Part 5/Sec 2): 2014 Cl. 12 IEC 60598-5-2:2012 Cl. 12 IS 10322(Part 5/Sec 2)2012 IEC 60598-2-2 Cl. 2.11	0.1 V to 50 V
		Insulation Resistance and Electric Strength, Touch Current and Protective Conductor Current - Tripping Current	IS 10322 (Part 1/Sec 10): 2014 Cl. 10 IEC 60598 -1: 2014 Cl. 15 IS 10322 (Part 5/Sec 2): 2012 IEC 60598-2-2 Cl. 2.14	V _{ac} : Up to 600V I _{ac} : Up to 20 A 0.001 W to 5 kW V _{ac} : 0.1 kV to 5 kV V _{dc} : 0.1 kV to 5 kV Up to 100 mA Up to 99 s 1 MΩ TO 100x10 ⁶ MΩ @ 500 V _{dc} 0.01 s to 9000 s
		Creepage Distances and Clearances	IS 10322 (Part 1/Sec 11): 2014 Cl. 11 IEC 60598-1: 2014 Cl. 8 IS 10322(Part 5/Sec 2)2012 IEC 60598-2-2 Cl. 2.7	0.01 mm to 300 mm
		Endurance Test and Thermal Test - Climate test chamber	IS 10322 (Part 1/Sec 12): 2014 Cl. 12 IEC 60598-1: 2014 Cl. 13 IS 10322(Part 5/Sec 2)2012 IEC 60598-2-2 Cl. 2.12	V _{ac} : Up to 600V I _{ac} : Up to 20 A 0.001 W to 5 kW 25°C to 200°C 25°C to 250°C
		Resistance to Heat, Fire and Tracking - Ball Pressure - Environmental chamber - Glow Wire - Comparative tracking index - Needle Flame	IS 10322 (Part 1/Sec 13): 2014 Cl.13 IEC 60598-1: 2014 Cl. 16 IS 10322 (Part 5/Sec 2): 2012 IEC 60598-2-2 Cl. 2.15	20 N 0.01 mm to 300 mm 25°C to 180°C 10 % to 97% RH 550°C to 960°C 175 V to 600 V @ 50 Hz 100°C to 700°C

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		Screw Terminal	IS10322 (Part 1/Sec14): 2014 Cl. 14 IEC 60598-1: 2014 IEC 60598-2-2 Cl. 2.9	0.01 mm to 300 mm 1 Nm to 6 Nm 1 N to 500 N
		Screw less Terminal and Electrical Connection	IS 10322 (Part 1/Sec 15): 2014 Cl. 15 IEC 60598-1:2014 Cl. 10 IS 10322 (Part 5/Sec 2): 2012 IEC 60598-2-2	0.1 Nm to 6 Nm 1 N to 500 N
5.	Luminaires General Requirements and Tests - Luminaires for road and street Lighting	Verification of Marking - N-hexane	IS 10322 (Part 1/Sec 3): 2014 Cl.3 IEC 60598-1: 2014 IS 10322 (Part 5/Sec 3) 2012 Cl. 5 IEC 60598-2-3 Cl. 3.5	Qualitative
		Verification of Construction	IS 10322 (Part 1/Sec 4): 2014 Cl. 4 IEC 60598-1: 2014 IS 10322 (Part 5/Sec 3): 2012 Cl. 6 IEC 60598-2-3 Cl. 3.6	Qualitative 0.01 mm to 300 mm 0.1 Nm to 6 Nm 1 N to 500 N 0.75 Nm
		External and Internal Wiring	IS 10322 (Part 1/Sec 5): 2014 Cl. 5 IEC 60598-1: 2014 IS 10322 (Part 5/Sec 3): 2012 Cl. 10 IEC 60598-2-3 Cl. 3.10	Qualitative 1 N to 500 N 0.1 Nm to 6 Nm
		Provision for Earthing	IS 10322 (Part 1/Sec 7): 2014 Cl. 7 IEC 60598-1: 2014 IS 10322 (Part 5/Sec 3): 2012 Cl. 8 IEC 60598-2-3 Cl. 3.8	0.1 V to 30 V, 1 A to 40A

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		Protection against Electric Shock	IS 10322 (Part 5/Sec 8): 2014 Cl. 8 IEC 60598-5-2: 2012 IS 10322 (Part 5/Sec 3): 2012 Cl. 11 IEC 60598-2-3 Cl. 3.11	0.1 V to 50 V
		Insulation Resistance and Electric Strength, Touch Current and Protective Conductor Current - Tripping Current	IS 10322 (Part 1/Sec10): 2014 Cl. 10 IEC 60598-1: 2014 IS 10322 (Part 5/Sec 3): 2012 Cl. 13.6 IEC 60598-2-3 Cl. 3.14	V _{ac} : Up to 600V I _{ac} : Up to 20 A 0.001 W to 5 kW V _{ac} : 0.1 kV to 5 kV V _{dc} : 0.1 kV to 5 kV Up to 100 mA Up to 99 s 1 MΩ TO 100x10 ⁶ MΩ @ 500 V _{dc} 0.01 s to 9000 s
		Creepage Distances and Clearances	IS 10322 (Part 1/Sec 11): 2014 Cl. 11 IEC 60598-1: 2014 IS 10322 (Part 5/Sec 3): 2012 Cl. 7 IEC 60598-2-3 Cl. 3.7	0.01 mm to 300 mm
		Endurance Test and Thermal Test - Climate test chamber	IS 10322 (Part 1/Sec 12): 2014 Cl. 12 IEC 60598-1: 2014 IS 10322 (Part 5/Sec 3): 2012 Cl. 13.4 IEC 60598-2-3 Cl. 3.12	V _{ac} : Up to 600V I _{ac} : Up to 20 A 0.001 W to 5 kW 25°C to 200°C 25°C to 250°C
		Resistance to Heat, Fire and Tracking - Ball Pressure - Environmental chamber - Glow Wire	IS 10322 (Part 1/Sec 13): 2014 Cl.13 IEC 60598-1: 2014 AS/NZS 60598-1: 2013 IS 10322 (Part 5/Sec 3): 2012 Cl. 13.7	20 N 0.01 mm to 300 mm 25°C to 180°C 10 % to 97% RH 550°C to 960°C

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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		- Comparative tracking index - Needle Flame	IEC 60598-2-3 Cl. 3.15	175 V to 600 V @ 50 Hz 100°C to 700°C
		Screw Terminal	IS 10322 (Part 1/Sec 14): 2014 Cl. 14 IEC 60598-1: 2014 IS 10322 (Part 5/Sec 3): 2012 Cl. 9 IEC 60598-2-3 Cl. 3.9	0.01 mm to 300 mm 1 Nm to 6 Nm 1 N to 500 N
		Screw less Terminals and Electrical Connections	IS 10322 (Part 1/Sec 15): 2014 Cl. 15 IEC 60598-1:2014 IEC 60598-2-3	0.1 Nm to 6 Nm 1 N to 500 N
6.	Luminaires General Requirements and Tests - Portable General Purpose Luminaires	Verification of Marking - N-hexane	IS 10322 (Part 1/Sec 3) 2014 Cl.3 IEC 60598-1: 2014 IS 10322 (Part 5/Sec 4): 1987 Cl. 5 IEC 60598-2-4 Cl. 4.5	Qualitative
		Verification of Construction - Glow Wire Test	IS 10322 (Part 1/Sec 4): 2014 Cl. 4 IEC 60598-1: 2014 IS 10322 (Part 5/Sec 4): 1987 Cl. 6 IEC 60598-2-4 Cl. 4.6	Qualitative 0.01 mm to 300 mm 0.1 Nm to 6 Nm 1 N to 500 N 0.75 Nm 0 ° to 90 ° 550°C to 960°C Up to 100°C Ambient to 95 % RH 1 mg to 100 kg
		External and Internal Wiring	IS 10322 (Part 1/Sec 5): 2014 Cl. 5 IEC 60598-1: 2014 IS 10322 (Part 5/Sec 5): 1987 Cl. 10 IEC 60598-2-4 Cl. 4.10	Qualitative 1 N to 500 N 0.1 Nm to 6 Nm

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		Provision for Earthing	IS 10322 (Part 1/Sec 7): 2014 Cl. 7 IEC 60598 -1: 2014 IS 10322 (Part 5/Sec 4): 1987 Cl. 8 IEC 60598-2-4 Cl. 4.8	0.1 V to 30 V 1A to 40A
		Protection against Electric Shock	IS 10322 (Part 5/Sec 5): 1987 Cl. 11 IEC 60598-5-2: 2012 Cl. 11 IS 10322 (Part 5/Sec 4): 1987 IEC 60598-2-4 Cl. 4.11	Voltage AC : 0.1 V to 50 V
		Insulation Resistance and Electric Strength, Touch Current and Protective Conductor Current - Tripping Current	IS 10322 (Part 1/Sec 10): 2014 Cl. 10 IEC 60598 -1: 2014 Cl. 13.6 IS 10322 (Part 5/Sec 4): 1987 IEC 60598-2-4 Cl. 4.14	V _{ac} : Up to 600V I _{ac} : Up to 20 A 0.001 W to 5 kW V _{ac} : 0.1 kV to 5 kV V _{dc} : 0.1 kV to 5 kV Up to 100 mA Up to 99 s 1 MΩ TO 100x10 ⁶ MΩ @ 500 V _{dc} 0.01 s to 9000 s
		Creepage Distance and Clearance	IS 10322 (Part 1/Sec 11): 2014 Cl. 11 IEC 60598-1: 2014 Cl. 7 IS 10322 (Part 5/Sec 4): 1987 IEC 60598-2-4 Cl. 4.7	0.01 mm to 300 mm
		Endurance and Thermal - Climatic Test chamber	IS 10322 (Part 1/Sec 12): 2014 Cl. 12 IEC 60598-1: 2014 Cl. 13.4 IS 10322 (Part 5/Sec 4): 1987 IEC 60598-2-4 Cl. 4.12	V _{ac} : Up to 600V I _{ac} : Up to 20 A 0.001 W to 5 kW 25°C to 200°C 25°C to 250°C

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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Resistance to Heat, Fire and Tracking - Ball Pressure - Environmental chamber - Glow Wire - Comparative tracking index - Needle Flame	IS 10322 (Part 1/Sec 13): 2014 Cl.13 IEC 60598-1: 2014 Cl. 13.7 IS 10322 (Part 5/Sec 4): 1987 IEC 60598-2-4 Cl. 4.15	20 N 0.01 mm to 300 mm 25°C to 180°C 10 % to 97% RH 550°C to 960°C 175 V to 600 V @ 50 Hz Up to 700°C
		Screw Terminal	IS 10322 (Part 1/Sec 14): 2014 Cl. 14 IEC 60598-1: 2014 Cl. 9 IS 10322(Part 5/Sec 4)1987 IEC 60598-2-4 Cl. 4.9	0.01 mm to 300 mm 1 Nm to 6 Nm 1 N to 500 N
		Screw less Terminals and Electrical Connections	IS 10322 (Part 1/Sec 15): 2014 Cl. 15 IEC 60598-1:2014 IEC 60598-2-4	0.1 Nm to 6 Nm 1 N to 500 N
7.	Luminaires General Requirements and Tests - Flood Lights	Verification of Marking - N-hexane	IS 10322 (Part 1/Sec 3): 2014 Cl.3 IEC 60598-1: 2014 IS 10322(Part 5/Sec 5): 1987 Cl. 5 IEC 60598-2-5 Cl. 5.5	Qualitative
		Verification of Construction	IS 10322 (Part 1/Sec 4): 2014/ Cl. 4 IEC 60598-1: 2014 IS 10322(Part 5/Sec 5): 1987 Cl. 6 IEC 60598-2-5 Cl. 5.6	Qualitative 0.01 mm to 300 mm 0.1 Nm to 6 Nm 1 N to 500 N 0.75 Nm
		External and Internal Wiring	IS 10322 (Part 1/Sec 5): 2014 Cl. 5 IEC 60598-1: 2014 IS 10322 (Part 5/Sec 5): 1987 Cl. 10	Qualitative 1 N to 500 N 0.1 Nm to 6 Nm

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		Provision for Earthing	IEC 60598-2-5 Cl. 5.10 IS 10322 (Part 1/Sec 7): 2014 Cl. 7 IEC 60598-1: 2014 IS 10322(Part 5/Sec 5): 1987 Cl. 8 IEC 60598-2-5 Cl. 5.8	0.1 V to 30 V 1 A to 40 A
		Protection against Electric Shock	IS 10322 (Part 5/Sec 8): 2014 Cl. 8 IEC 60598-5-2: 2012 Cl.11 IS 10322(Part 5/Sec 5)1987 IEC 60598-2-5 Cl. 5.11	0.1 V to 50 V
		Insulation Resistance and Electric Strength, Touch Current and Protective Conductor Current - Tripping Current	IS 10322 (Part 1/Sec 10): 2014 Cl. 10 IEC 60598 -1: 2014 Cl. 13.6 IS 10322 (Part 5/Sec 5) : 1987 IEC 60598-2-5 Cl. 5.14	V _{ac} : Up to 600V I _{ac} : Up to 20 A 0.001 W to 5 kW V _{ac} : 0.1 kV to 5 kV V _{dc} : 0.1 kV to 5 kV Up to 100 mA Up to 99 s 1 MΩ TO 100x10 ⁶ MΩ @ 500 V _{dc} 0.01 s to 9000 s
		Creepage Distance and Clearance	IS 10322 (Part 1/Sec 11): 2014 Cl. 11 IEC 60598-1: 2014 Cl. 7 IS 10322 (Part 5/Sec 5) : 1987 IEC 60598-2-5 Cl. 5.7	0.01 mm to 300 mm
		Endurance and Thermal - Climatic Test chamber	IS 10322 (Part 1/Sec 12): 2014 Cl. 12 IEC 60598-1: 2014 Cl. 13.4 IS 10322 (Part 5/Sec 5): 1987 IEC 60598-2-5 Cl. 5.12	V _{ac} : Up to 600V I _{ac} : Up to 20 A 0.001 W to 4 kW 25°C to 200°C 25°C to 250°C

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		Resistance to Heat, Fire and Tracking - Ball Pressure - Environmental chamber - Glow Wire - Comparative tracking index - Needle Flame	IS 10322 (Part 1/Sec 13): 2014 Cl.13 IEC 60598-1: 2014 Cl. 13.7 IS 10322 (Part 5/Sec 5) : 1987 IEC 60598-2-5 Cl. 5.15	20 N 0.01 mm to 300 mm 25°C to 180°C 10 % to 97% RH 550°C to 960°C 175 V to 600 V @ 50 Hz Up to 700°C
		Screw Terminal	IS 10322 (Part 1/Sec 14): 2014 Cl. 14 IEC 60598-1: 2014 Cl. 9 IS 10322(Part 5/Sec 5)1987 IEC 60598-2-5 Cl. 5.9	0.01 mm to 300 mm 1 Nm to 6 Nm 1 N to 500 N
		Screw less Terminal and Electrical Connection	IS 10322 (Part 1/Sec 15): 2014 Cl. 15 IEC 60598-1:2014 IEC 60598 -2-5	0.1 Nm to 6 Nm 1 N to 500 N
8.	Luminaires General Requirements and Tests - Hand lamp	Verification of Marking - N-hexane	IS 10322 (Part 1/Sec 3): 2014 Cl.3 IEC 60598-1: 2014 IS 10322 (Part 5/Sec 6): 2013 Cl. 6 IEC 60598-2-8 Cl. 8.5	Qualitative
		Verification of Construction	IS 10322 (Part 1/Sec 4): 2014 Cl. 4 IEC 60598-1: 2014 IS 10322 (Part 5/Sec 6): 2013 Cl. 7 IEC 60598-2-8 Cl. 8.6	Qualitative 0.01 mm to 300 mm 0.1 Nm to 6 Nm Force gauge: 1 N to 500 N 0.75 Nm
		External and Internal Wiring	IS 10322 (Part 1/Sec 5): 2014 Cl. 5 IEC 60598-1: 2014 IS 10322 (Part 5/Sec 6): 2013 Cl. 11	Qualitative 1 N to 500 N 0.1 Nm to 6 Nm

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		Provision for Earthing	IEC 60598-2-8 Cl. 8.10 IS 10322 (Part 1/Sec 7): 2014 Cl. 7 IEC 60598 -1: 2014 IS 10322 (Part 5/Sec 6) : 2013 Cl. 9 IEC 60598- 2-8 Cl. 8.8	0.1V to 30 V 1A to 40 A
		Protection against Electric Shock	IS 10322 (Part 5/Sec 8): 2014 Cl. 8 IEC 60598-5-2: 2012 Cl. 12 IS 10322 (Part 5/Sec 6): 2013 IEC 60598-2-8 Cl. 8.11	0.1 V to 50 V
		Insulation Resistance and Electric Strength, Touch Current and Protective Conductor Current - Tripping Current	IS 10322 (Part 1/Sec 10): 2014 Cl. 10 IEC 60598 -1: 2014 Cl. 15 IS 10322 (Part 5/Sec 6): 2013 IEC 60598-2-8 Cl. 8.14	V _{ac} : Up to 600V I _{ac} : Up to 20 A 0.001 W to 5 kW V _{ac} : 0.1 kV to 5 kV V _{dc} : 0.1 kV to 5 kV Up to 100 mA Up to 99 s 1 MΩ TO 100x10 ⁶ MΩ @ 500 V _{dc} 0.01 s to 9000 s
		Creepage Distances and Clearances	IS 10322 (Part 1/Sec 11): 2014 Cl. 11 IEC 60598-1: 2014 Cl. 8 IS 10322(Part 5/Sec 6)2013 IEC 60598-2-8 Cl. 8.7	0.01 mm to 300 mm
		Endurance and Thermal - Climatic Test chamber	IS 10322 (Part 1/Sec 12): 2014 Cl. 12 IEC 60598-1: 2014 Cl. 13 IS 10322(Part 5/Sec 6) 2013 IEC 60598-2-8 Cl. 8.12	V _{ac} : Up to 600V I _{ac} : Up to 20 A 0.001 W to 4 kW 25°C to 200°C 25°C to 250°C

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		Resistance to Heat, Fire and Tracking - Ball Pressure - Environmental chamber - Glow Wire - Comparative tracking index - Needle Flame	IS 10322 (Part 1/Sec 13): 014 Cl.13 IEC 60598-1: 2014 Cl. 16 IS 10322 (Part 5/Sec 6): 2013 IEC 60598-2-8 Cl. 8.15	20 N 0.01 mm to 300 mm 25°C to 180°C 10 % to 97% RH 550°C to 960°C 175 V to 600 V @ 50 Hz Up to 700°C
		Screw Terminal	IS 10322 (Part 1/Sec 14): 2014 Cl. 14 IEC 60598-1: 2014 Cl. 10 IS 10322 (Part 5/Sec 6): 2013 IEC 60598 - 2-8 Cl. 8.9	0.01 mm to 300 mm 1 Nm to 6 Nm 1 N to 500 N
		Screw less Terminals and Electrical Connections	IS 10322 (Part 1/Sec 15): 2014 Cl. 15 IEC 60598-1:2014 IEC 60598 - 2-8	0.1 Nm to 6 Nm 1 N to 500 N
9.	Lamp Control Gear - General Requirements	Verification of Marking	IS 15885-1: 2011 Cl. 7 IEC 61347-1: 2012 Cl. 7	Qualitative
		Terminals	IS 15885-1: 2011 IEC 61347-1: 2012	0.01 mm to 300 mm 0.2 Nm to 6Nm 1 N to 500 N
		Provision for protective earthing	IS 15885-1: 2011 Cl. 9	0.1V to 30 V 1 A to 50 A
		Protection against accidental contact with live parts - Tripping current	IS 15885-1: 2011 IEC 61347-1: 2012 Cl. 10	10 N V _{ac} : 1 V to 50 V V _{ac} : 0.1 kV to 5 kV V _{dc} : 0.1 kV to 5 kV 1 mA to 100 mA 1 ms to 99 s 0.01 s to 9000 s

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		Moisture resistance and insulation	IS 15885-1: 2011 IEC 61347-1: 2012 Cl. 11	V _{ac} : 0.1 kV to 5 kV V _{dc} : 0.1 kV to 5 kV Up to 100 mA Up to 99s 1 MΩ TO 100x10 ⁶ MΩ @ 500 V _{dc} 0.01s to 9000s 25°C to 80°C 20 % to 99% RH
		Electric Strength - Tripping current	IS 15885-1: 2011 IEC 61347-1: 2012 Cl. 12	V _{ac} : 0.1 kV to 5 kV V _{dc} : 0.1 kV to 5 kV Up to 100mA 1 ms to 99 s
		Fault conditions - Tripping current	IS 15885-1: 2011 IEC 61347-1: 2012 Cl. 14	V _{ac} : 0.001V to 600 V I _{ac} : 0.0001 A to 20 A 0.00001 W to 4 kW 25°C to 200°C High Voltage: V _{ac} : 0.1 kV to 5 kV V _{dc} : 0.1 kV to 5 kV 1mA to 100 mA 1s to 99 s 1 MΩ to 100x10 ⁶ MΩ @ 500 V _{dc}
		Verification of Construction	IS 15885-1: 2011 IEC 61347-1:2012 Cl. 15	Qualitative
		Creepage distance and clearance	IS 15885-1: 2011 IEC 61347-1: 2012 Cl. 16	0.01 mm to 300mm
		Screws current-carrying parts and Connections	IS 15885-1: 2011 IEC 61347-1: 2012 Cl. 17	0.01 mm to 300mm 1 Nm to 6 Nm 1 N to 500 N

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		Resistance to heat, fire and Tracking - Ball Pressure - Glow Wire - Comparative Tracking, - Needle Flame Test	IS 15885-1: 2011 IEC 61347-1: 2012 Cl.18 IS 15885-1: 201 IEC 61347-1:2012 Cl.18	20 N 0.01 mm to 300mm 25°C to 80°C 20 % to 99 % RH 550 °C to 960°C 175 V to 600 V @ 50Hz 100 °C to 700 °C
		Resistance to corrosion - Environmental chamber	IS 15885-1: 2011 IEC 61347-1: 2012 Cl. 19	25°C to 180°C 20 % to 96 % RH
10.	Lamp Control gear - Particular Requirements - D.C. or A.C. Supplied Electronic Control gear for LED Modules	Verification of Marking	IS 15885 (Part 2/Sec 13): 2012 IEC 61347-2-13: 2014 Cl.7	Qualitative 0.01 mm to 300 mm
		Protection against accidental contact with live parts - Tripping current	IS 15885 (Part 2/Sec 13): 2012 IEC 61347-2-13: 2014 Cl. 8	10 N V _{ac} : 0.1 V to 50 V V _{ac} : 0.1 kV to 5 kV V _{dc} : 0.1 kV to 5 kV 1 mA to 100 mA 1 s to 99 s
		Terminals	IS 15885 (Part 2/Sec 13): 2012 IEC 61347-2-13: 2014 Cl.9	0.01 mm to 300 mm 1 Nm to 6 Nm 1 N to 500 N
		Provisions for protective earthing	IS 15885 (Part 2/Sec 13): 2012 IEC 61347-2-13: 2014 Cl.10	0.1 V to 30 V 1 A to 50 A
		Moisture resistance and insulation - Tripping current	IS 15885 (Part 2/Sec 13) : 2012 IEC 61347-2-13: 2014 Cl. 11	V _{ac} : 0.1 kV to 5 kV V _{dc} : 0.1 kV to 6 kV Up to 100 mA Up to 99 s 1 MΩ TO 100x10 ⁶ MΩ @ 500 V _{dc} 0.01 s to 9000 s 25 °C to 80 °C 20 % to 99 % RH

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		Electric Strength - Tripping current	IS 15885 (Part 2/Sec 13): 2012 IEC 61347-2-13: 2014 Cl. 12	V _{ac} : 0.1 kV to 5 kV V _{dc} : 0.1 kV to 6 kV Up to 100 mA Up to 99 s
		Fault conditions - Tripping current	IS 15885 (Part 2/Sec 13): 2012 IEC 61347-2-13:2014 Cl. 14	V _{ac} : 0.001V to 600 V I _{ac} : 0.0001 A to 20 A 0.00001 W to 6 kW 25°C to 200°C High Voltage: V _{ac} : 0.1 kV to 5 kV V _{dc} : 0.1 kV to 5 kV 1mA to100 mA 1s to 99 s 1 MΩ to 100x10 ⁶ MΩ @ 500 V _{dc}
		Verification of Construction	IS 15885 (Part 2/Sec 13): 2012 Cl. 16 IEC 61347-2-13: 2014 Cl.17	Qualitative
		Creepage distance and clearance	IS 15885 (Part 2/Sec 13): 2012 IEC 61347-2-13:2014 Cl.18	0.01 mm to 300 mm
		Screws, current-carrying parts and connections	IS 15885 (Part 2/Sec 13) : 2012 Cl. 18 IEC 61347-2-13: 2014 Cl.19	0.01 mm to 300mm 0.2 Nm to 6Nm 1 N to 500 N
		Resistance to heat, fire and Tracking - Ball Pressure - Glow Wire - Comparative Tracking, - Needle Flame Test	IS 15885 (Part 2/Sec 13) : 2012 Cl. 19 IEC 61347-2-13: 2014 Cl.20	20 N 0.01 mm to 300mm 25°C to 180°C 10 % to 97 % RH 550 °C to 960 °C 175 V to 600 V @ 50Hz 100 °C to 700 °C
		Resistance to corrosion - Environmental Chamber	IS 15885 (Part 2/Sec 13) : 2012 Cl. 20 IEC 61347-2-13: 2014 Cl.21	25°C to 180°C

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<u>ELECTRONICS TESTING</u>				
I.	IT EQUIPMENT			
1.	Information Technology equipments	Input Current - AC Current - DC Current	IEC 60950-1:2005 (RA 2013) IS 13252 (Part 1) : 2010 (RA 2015) Cl. 1.6.2	10 mA to 20 A 10 mA to 20 A @ 50 Hz & 60 Hz
		Verification of Marking and Instructions	IEC 60950-1:2005 (RA 2013) IS 13252 (Part 1) : 2010 (RA 2015) Cl. 1.7.2	Qualitative
		Verification of Durability of markings	IEC 60950-1:2005 (RA 2013) IS 13252 (Part 1) : 2010 (RA 2015) Cl. 1.7.11	Qualitative
		Access to energized parts	IEC 60950-1:2005 (RA 2013) IS 13252 (Part 1) : 2010 (RA 2015) Cl. 2.1.1.1, 2.8.2, 2.8.3, 4.2)	Qualitative Up to 75 N
		Access to ELV wiring	IEC 60950-1:2005 (RA 2013) IS 13252 (Part 1) : 2010 (RA 2015) Cl. 2.1.1.3	0.1 mm to 150 mm
		Energy hazard measurement	IEC 60950-1:2005 (RA 2013) IS 13252 (Part 1) : 2010 (RA 2015) Cl. 2.1.1.5, 2.1.2	10 mV _{dc} to 1000V _{dc} 10 mV _{ac} to 1000V _{ac} 10 mA to 10 A 60 s
		Discharge of capacitors in equipments - 1: 100x probe	IEC 60950-1:2005 (RA 2013) IS 13252 (Part 1) : 2010 (RA 2015) Cl. 2.1.1.7	0.1 V to 300 V

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		SELV Circuits measurement	IEC 60950-1:2005 (RA 2013) IS 13252 (Part 1) : 2010 (RA 2015) Cl. 2.2.2, 2.2.3, 2.2.4	10 mV _{dc} to 1000V _{dc} 10 mV _{ac} to 1000V _{ac}
		Limited current circuits	IEC 60950-1:2005 (RA 2013) IS 13252 (Part 1) : 2010 (RA 2015) Cl. 2.4	10 mV _{dc} to 1000V _{dc} 10 mV _{ac} to 1000V _{ac} 10 mA to 10 A
		Limited power sources	IEC 60950-1:2005 (RA 2013) IS 13252 (Part 1) : 2010 (RA 2015) Cl. 2.5	10 mV _{dc} to 1000 V _{dc} 10 mV _{ac} to 1000V _{ac}
		Protective earthing conductors and protective bonding conductors	IEC 60950-1:2005 (RA 2013) IS 13252 (Part 1) : 2010 (RA 2015) Cl. 2.6.3.4	Up to 150 mm Up to 25mm 0.1 mΩ to 100 Ω
		Humidity conditioning	IEC 60950-1:2005 (RA 2013) IS 13252:(Part 1) : 2010 (RA 2015) Cl. 2.9.2	25 °C to 180 °C 25 % to 98% RH
		Clearances	IEC 60950-1:2005 (RA 2013) IS 13252 (Part 1) : 2010 (RA 2015) Cl. 2.10.3 except-2.10.3.9(b)	Up to 150mm
		Creepage distances	IEC 60950-1:2005 (RA 2013) IS 13252 (Part 1) : 2010 (RA 2015) Cl. 2.10.4	Up to 150mm
		Wiring, connections and supplies: Cord anchorage and dimension	IEC 60950-1:2005 (RA 2013) IS 13252 (Part 1) : 2010 (RA 2015) Cl. 3	30N,60N,100N 1 mm to 150mm

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		Stability - Rotating Inclined plane	IEC 60950-1:2005 (RA 2013) IS 13252 (Part 1) : 2010 (RA 2015) Cl. 4.1	1.0° to 30°,
		Steady force	IEC 60950-1:2005 (RA 2013) IS 13252 (Part 1) : 2010 (RA 2015) Cl. 4.2.1, 4.2.2, 4.2.3, 4.2.4	1 N to 800 N. Qualitative
		Impact - Steel Ball weight - Diameter	IEC 60950-1:2005 (RA 2013) IS 13252 (Part 1) : 2010 (RA 2015) Cl. 4.2.5	Qualitative 500 g 50 mm
		Drop - Hardwood mounted - 2 Layer Plywood	IEC 60950-1:2005 (RA 2013) IS 13252 (Part 1) : 2010 (RA 2015) Cl. 4.2.6	Qualitative 13 mm 18 mm
		Stress relief	IEC 60950-1:2005 (RA 2013) IS 13252:(Part 1) (RA 2015) Cl. 4.2.7	25°C to 180 °C, Qualitative
		Force test for Wall or ceiling mounted equipment	IEC 60950-1:2005 (RA 2013) IS 13252 (Part 1) : 2010 (RA 2015) Cl. 4.2.10	1 N to 500N, Qualitative
		Protection against hazardous moving parts	IEC 60950-1:2005 (RA 2013) IS 13252 (Part 1) : 2010 (RA 2015) Cl. 4.4	Qualitative
		Thermal requirements	IEC 60950-1:2005 (RA 2013) IS 13252 (Part 1) : 2010 (RA 2015) Cl. 4.5.4	(-) 45 °C to 180 °C, Qualitative

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		Resistance to abnormal heat	IEC 60950-1:2005 (RA 2013) IS 13252 (Part 1) : 2010 (RA 2015) Cl. 4.5.5	25°C to 180 °C, 20 N
		Openings in enclosures	IEC 60950-1:2005 (RA 2013) IS 13252 (Part 1) : 2010 (RA 2015) Cl. 4.6	1 mm to 150mm
		Touch current and protective conductor current - DC Current - AC Current	IEC 60950-1:2005 (RA 2013) IS 13252 (Part 1) : 2010 (RA 2015) Cl. 5.1	5 µA to 25 mA 40 µA to 75 mA
		Electric strength	IEC 60950-1:2005 (RA 2013) IS 13252 : (Part 1) : 2010 (RA 2015) Cl. 5.2, 2.3.2, 2.3.4, 6.1.2, 6.2.2	0.1kV _{ac} to 5kV _{ac} 0.1kV _{dc} to 6kV _{dc} 0.001mA to 100mA 0.5s to 999s
		Abnormal operating and fault conditions	IEC 60950-1:2005 (RA 2013) IS 13252 (Part 1) : 2010 (RA 2015) Cl. 5.3	(-) 20°C to 100 °C Qualitative
II.	SAFETY TEST FACILITY			
1.	Audio, Video and Similar Electronic Apparatus – Plasma/LCD/LED Televisions	Marking and Instructions And power consumption - N-Hexen	EN/IEC 60065:2005 Cl.5 IS 616:2010 Cl.5	0.1s - 60s Qualitative 0.1 V to 300 V 0.1 A to 20 A 0.1 W to 2000W
Heating under normal operating condition		EN/IEC 60065:2005 Cl.7 IS 616:2010 Cl.7	1 °C to 400°C 1µΩ to 1.999kΩ	
Hygroscopic materials		EN/IEC 60065:2005 Cl.8.3 IS 616:2010 Cl.8.3	42°C 90 to 95% RH	

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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Winding insulation	EN/IEC 60065:2005 Cl.8.8 IS 616:2010 Cl.8.8	0.1 kV to 5 kV 1 s to 60 s
		External forces – windows & covers	EN/IEC 60065:2005 Cl. 8.13, 8.14 IS 616:2010 Cl.8.13, 8.14	1 N to 500N 1 s to 60 s Qualitative
		Internal forces	EN/IEC 60065:2005 Cl. 8.15 IS 616:2010 Cl. 8.15	1 N to 500 N Qualitative
		Determination of hazardous live parts	EN/IEC 60065:2005 Cl.9.1.1.1 IS 616:2010 Cl.9.1.1.1	1 V _{rms} to 300 V _{rms} 0.1mA to 5mA
		Protection against electric shock to Accessibility	EN/IEC 60065:2005, Cl.9, 9.1.1.2, 9.2 IS 616:2010, Cl.9, 9.1.1.2, 9.2	1 to 500N 1 to 500N Qualitative
		Protection against electric shock – Opening in enclosure 4mm x 100mm – Test Probe	EN/IEC 60065:2005 Cl.9.1.3 IS 616:2010 Cl.9.1.3	Qualitative
		Withdrawal of main plug	EN/IEC 60065:2005 Cl.9.1.6 IS 616:2010 Cl.9.1.6	0.1 V _{dc} to 1000V _{dc} 0.1 s to 60 s
		Humidity treatment	EN/IEC 60065:2005 Cl.10.2 IS 616:2010 Cl.10.2	42°C 90 to 95% RH Qualitative
		Insulation resistance	EN/IEC 60065:2005 Cl.10.3 IS 616:2010 Cl.10.3	1 V _{dc} to 500V _{dc} 1 s to 600s 0.5 MΩ to 9999 MΩ
		Dielectric strength		0.1 kV to 5 kV 1 s to 60 s 1 mA to 100mA Qualitative

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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Fault conditions	EN/IEC 60065:2005 Cl.11 IS 616:2010 Cl.11	1 V _{ac} to 400V _{ac} 1 V _{dc} to 120V _{dc} 1 °C to 400 °C
		Mechanical strength - Impact	EN/IEC 60065:2005 Cl.12.1.3 IS 616:2010 Cl.12.1.3	0.2J to 1J 0.1 m to 1m Qualitative
		Drop	EN/IEC 60065:2005 Cl.12.1.4 IS 616:2010 Cl.12.1.4	1 m Qualitative
		Mechanical strength - Stress relief	EN/IEC 60065:2005 Cl.12.1.5 IS 616:2010 Cl.12.1.5	1 °C to 180 °C Qualitative
		Determination of operating voltage	EN/IEC 60065:2005 Cl.13.2 IS 616:2010 Cl.13.2	1 V _{rms} to 1000V _{rms}
		Provisions for protective resistance	EN/IEC 60065:2005 Cl.15.2 IS 616:2010 Cl.15.2	0.001 Ω to 0.3 Ω 5 s to 600 s 0.1 A to 60A
		Strain relief	EN/IEC 60065:2005 Cl.16.5 IS 616:2010 Cl.16.5	1 N to 40N 1 Nm to 25Nm 1 s to 600s Qualitative
		Stability	EN/IEC 60065:2005 Cl.19.1 IS 616:2010 Cl.19.1	1° to 15° angle Qualitative
		Vertical force stability	EN/IEC 60065:2005 Cl.19.2 IS 616:2010 Cl.19.2	1 cm to 75cm 1 N to 100N Qualitative
		Horizontal force stability	EN/IEC 60065:2005 Cl.19.3 IS 616:2010 Cl.19.3	1 N to 500N 0.1 m to 3m Qualitative

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2.	Uninterruptible power System (UPS)	General Conditions for Test	IS 16242 (Part 1): 2014 IEC 62040-1: 2008 Cl. 4.1	Qualitative (Visual Inspection)
		Power Interface	IS 16242 (Part 1): 2014 IEC 62040-1: 2008 Cl. 4.6 1.6/RD	V _{ac} : 0.05 V to 600 V V _{dc} : 0.01 V to 300 V I _{ac} : 0.001 A to 20 A I _{dc} : 0.001 A to 5 A 0.1 W to 2000 W
		Verification of Markings And Instructions - N-hexen	IS 16242 (Part 1): 2014 IEC 62040-1: 2008 Cl. 4.7 1.7/RD	Qualitative
		Protection From Hazards Electric Shock And Energy Hazards - (0.01 kVac to 5 kVac)/dc	IS 16242 (Part 1): 2014 IEC 62040-1: 2008 Cl. 5.1 2.1/RD	40 V to 75 V, Up to 75 N 100 k Ω to 2 GΩ 0.05 mm to 1 mm, 0.01 mm to 200 mm
		SELV Circuits	IS 16242 (Part 1): 2014 IEC 62040-1: 2008 Cl 5.2.1 2.2/RD	0.01 V to 100 V 0.001 A to 10 A
		TNV Circuits - (0.01 kVac to 5 kVac)/dc	IS 16242 (Part 1): 2014 IEC 62040-1: 2008 Cl.5.2.2 2.3/RD	0.01 V to 1000 V 0.001 A to 10 A
		Limited Current Circuits	IS 16242 (Part 1): 2014 IEC 62040-1: 2008 Cl.5.2.3 2.4/RD	0.001 A to 10A
		Limited Power Sources	IS 16242 (Part 1): 2014 IEC 62040-1: 2008 Cl.5.2.5 2.5/RD	0.01 V to 1000 V 0.001 A to 10 A
		Mechanical Strength	IS 16242 (Part 1): 2014 IEC 62040-1: 2008 Cl. 7.3 4.2/RD	1 N to 250 N, 1 N to 1000N
Construction Details	IS 16242 (Part 1): 2014 IEC 62040-1: 2008 Cl. 7.4 4.3/RD	0.01 V to 100V 1 μA to 10 A IP2X 0.01 mm to 200 mm		

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		Protection Against Hazardous Moving Parts	IS 16242 (Part 1): 2014 IEC 62040-1: 2008 Cl. 7.4 4.4/RD	Up to 100 N
		Temperature Rise	IS 16242 (Part 1): 2014 IEC 62040-1: 2008 Cl. 7.7 4.5/RD	Ambient to 199.9 °C Ambient to 400°C 10 mΩ to 1 MΩ
		Resistance To Fire	IS 16242 (Part 1): 2014 IEC 62040-1: 2008 Cl. 7.5 4.7/RD	0.01mm to 300mm 0.01 °C to 180 °C
		Electrical Requirements And Simulated Abnormal Conditions Touch Current And Protective Conductor Current	IS 16242 (Part 1): 2014 IEC 62040-1: 2008 Cl. 8.1 5.1/RD	1µA to 20 mA
		Electric Strength	IS 16242 (Part 1): 2014 IEC 62040-1: 2008 Cl. 8.2 5.2/RD	0.01 kV to 5 kV
		Abnormal Operating And Fault Conditions	IS 16242 (Part 1): 2014 IEC 62040-1: 2008 Cl. 8.3 5.3/RD	0 to 400°C 10 mΩ to 1 MΩ 1 µA to 20 mA
3.	Medical Electrical equipment	Power Input	IS 13450 (Part 1):2008 IEC 60601-1: 2005 Cl. 4.11	1 V to 300V Up to 20 A
		Humidity Preconditioning Treatment	IS 13450 (Part 1):2008 IEC 60601-1: 2005 Cl. 5.7	Ambient to 180°C 10 % to 99 % RH
		Accessibility To live parts	IS 13450 (Part 1):2008 IEC 60601-1: 2005 Cl. 5.9	Qualitative
		Durability of markings	IS 13450 (Part 1):2008 IEC 60601-1: 2005 Cl. 7.1.3	Qualitative

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III. DOMESTIC ELECTRONIC APPLIANCES & ACCESSORIES				
1.	LED Display/TV	ON Mode Power consumption	IEC 62087-1:2015 IEC 62087-3:2015 Cl. 6.4	V _{ac} :0.001V to 600V V _{dc} :0.001V to 600V I _{ac} :0.001A to 20A I _{dc} : 0.001A to 20A 0.001W to 1.5kW
		Standby Mode Power consumption	IEC62301: 2011 Cl. 5.3	V _{ac} :0.001V to 600V V _{dc} :0.001V to 600V I _{ac} :0.001A to 20A I _{dc} : 0.001A to 20A 0.001W to 1.5kW
		Luminance	IEC 62087-1: 2015 IEC 62087-3: 2015 Cl. 6.5	0.1 lux to 2000lux
2.	Laptop Desktop computer/Notebook computer External Power Adapter Battery Charger, Audio Equipment Combination Unit (TV&DVD,VCR& DVD) Office Equipments (Printers scanners Copiers,Fax machines and multifunction devices)	Standby Mode Power consumption	IEC 62301: 2005 IEC 62301: 2011	V _{ac} :0.001V to 600V V _{dc} :0.001V to 600V I _{ac} :0.001A to 20A I _{dc} : 0.001A to 20A 0.001W to 1.5kW
3.	Desktop computer Notebook computer	Power Measurement - off mode - sleep mode - idle state	IEC62301: 2011 IEC62623 :2012	V _{ac} :0.001V to 600V V _{dc} :0.001V to 600V I _{ac} :0.001A to 20A I _{dc} : 0.001A to 20A 0.001W to 1.5kW

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4.	AC to DC DC to DC External Power Adapter	Energy Efficiency	IEC62301 Edition 2: 2011	V _{ac} :0.001V to 600V V _{dc} :0.001V to 600V I _{ac} :0.001A to 20A I _{dc} : 0.001A to 20A 0.001W to 1.5kW
5.	AC to DC DC to DC Power Supply	Energy Efficiency	IEC62301 Edition 2: 2011	V _{ac} :0.001V to 600V V _{dc} :0.001V to 600V I _{ac} :0.001A to 20A I _{dc} : 0.001A to 20A 0.001W to 1.5kW
6.	Office Equipments (Printers scanners Copiers Fax machines and multifunction devices)	Power Measurement in On mode, off mode sleep mode	IEC62301 Edition 2: 2011	V _{ac} :0.001V to 600V V _{dc} :0.001V to 600V I _{ac} :0.001A to 20A I _{dc} : 0.001A to 20A 0.001W to 1.5kW