Laboratory	**Electronics Regional Test Laboratory (East), Block-DN, Sector-V, Salt Lake City, Kolkata, West Bengal**		
Accreditation Standard	**ISO/IEC 17025: 2005**		
Certificate Number	**TC-5637** ***(in lieu of*** **T-0002 & T-1397)**	**Page 1 of 31**	
Validity	**14.03.2018 to 13.03.2020**	**Last Amended on 13.04.2018**	

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection

ELECTRICAL TESTING

I.	**ELECTRICAL APPARATUS FOR EXPLOSIVE ATMOSPHERES (GAS GROUP I, IIA, IIB, IIC)**			
1.	**Electrical Apparatus in Explosive Gas Atmospheres**	Compliance of prototype or sample with documents	IS/IEC 60079-0: 2004 Cl. No 25, IS/IEC 60079-0: 2007 Cl. 25, IEC 60079-0: 2011 Edition 6.0, Cl. 25	Qualitative
		Resistance to Impact Test	IS/IEC 60079-0: 2004 Cl. No 26.4.2 and A 3.4, IS/IEC 60079-0: 2007 Cl. No 26.4.2 and A 3.3, IEC 60079-0: 2011 Edition 6.0, Cl. 26.4.2	1 J to 20 J
		Drop Test	IS/IEC 60079-0: 2004 Cl. 26.4.3, IS/IEC 60079-0: 2007 Cl. 26.4.3, IEC 60079-0: 2011 Edition 6.0 , Cl. 26.4.3	1 Meter
		IP test for degree of protection for non rotating machines	IS/IEC 60079-0: 2004 Cl. 26.4.5 , IS/IEC 60079-0: 2007 Cl. 26.4.5, IS/IEC 60529:2001, IEC 60079-0: 2011 Edition 6.0 , Cl. 26.4.5	IP 1X to 6X & IP X1 to X7/ X8
		IP test for degree of protection for rotating machines	IS/IEC 60079-0: 2004 Cl. 26.4.5 , IS/IEC 60079-0: 2007 Cl. 26.4.5 IS/IEC 60034-5:2000,	IP 1 to 6X & IP X1 to X7/ X8

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
			IEC 60079-0: 2011 Edition 6.0, Cl. 26.4.5	
		Temperature Measurement	IS/IEC 60079-0: 2004 Cl. 26.5.1 , IS/IEC 60079-0: 2007 Cl. 26.5.1, IEC 60079-0: 2011 Edition 6.0, Cl. 26.5.1	Amb to 450 ºC
		Thermal Shock Test for Glass parts	IS/IEC 60079-0: 2004 Cl. 26.5.2 , IS/IEC 60079-0: 2007 Cl. 26.5.2, & IS 13346: 2004 Cl. 26.4.6.2, IEC 60079-0: 2011 Edition 6.0, Cl. 26.5.2	1mm Jet of water at 10 ± 5 ºC
		Torque Test for bushings	IS/IEC 60079-0: 2004 Cl. 26.6, IS/IEC 60079-0: 2007 Cl. 26.6, IEC 60079-0: 2011 Edition 6.0, Cl. 26.6	1 Nm to 60 Nm
		Thermal Endurance to heat (non metallic)	IS/IEC 60079-0: 2004 Cl. 26.8 IS/IEC 60079-0: 2007 Cl. 26.8 IEC 60079-0: 2011 Edition 6.0, Cl. 26.8	95 ºC 90±5 %RH
		Thermal Endurance to cold (Non metallic)	IS/IEC 60079-0: 2004 Cl. 26.9 , IS/IEC 60079-0: 2007 Cl. 26.9, IEC 60079-0: 2011 Edition 6.0, Cl. 26.9	(-)20 ºC & above

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Resistance to Chemicals agents for Group I electrical apparatus	IS/IEC 60079-0: 2004 Cl. 26.11 IS/IEC 60079-0: 2007 Cl. 26.11 IEC 60079-0: 2011 Edition 6.0 , Cl. 26.11	Oil No.2 & fire resistance Hydraulic fluid. Oven for temperature from Amb to 200 ºC
		Surface resistance test of non-metallic materials (Resistance measurement after conditioning)	IS/IEC 60079-0: 2004 Cl. 26.13 IS/IEC 60079-0: 2007 Cl. 26.13 IEC 60079-0: 2011 Edition 6.0, Cl. 26.13	5 GΩ at (500±10)V dc
		Charging Test (measurement of capacitance)	IS/IEC 60079-0 : 2004 Cl. 26.14 IS/IEC 60079-0 : 2007 Cl. 26.14 IEC 60079-0: 2011 Edition 6.0, Cl. 26.14	100 ηF to 1000 µF
2.	**Explosive Atmospheres - Equipment Protection by Flameproof Enclosures "d"**	Pressure Determination Test	IS/IEC 60079-1: 2007 Cl. 15.1.2 and IEC 60079-1: 2014 Edition 7.0 Cl. 15.2.2	0.1 bar to 20 bar Methane: 9.8%(v/v), Propen: 4.6%(v/v), Ethylene:8%(v/v), Acctelyne:14%(v/v), Hydrogen:31%(v/v), H2/CH4(85/15):24±1(v/v)
		Over Pressure Test – 1.5 X Ref Pressure	IS/IEC 60079-1: 2007 Cl. 15.1.3.1 and IEC 60079-1: 2014 Edition 7.0 Cl. 15.2.3.2	0.1 bar to 28 bar
		Over Pressure Test - 4 X Ref Pressure	IS/IEC 60079-1: 2007 Cl. 15.1.3.1 and IEC 60079-1: 2014 Edition 7.0 Cl. 15.2.3.2	0.1 bar to 28 bar

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Over Pressure Test - 3 X Ref Pressure	IEC 60079-1: 2014 Edition 7.0 Cl. 15.2.3.2	0.1 bar to 28 bar
		Flame Non Transmission Test	IS/IEC 60079-1: 2007 Cl. 15.2 and IEC 60079-1: 2014 Edition 7.0 Cl. 15.3	Hydrogen: 55%(v/v), Hydrogen: 37%(v/v), Hydrogen: 27.5%(v/v), Acetylene: 7.5%(v/v), CH4-H2:12.5%(v/v) [58±1%CH4&42±1%H2]
		Tests for flameproofness including ability to withstand pressure Flame Erosion and Non Transmission Test	IS/IEC 60079-1: 2007 Cl. 19.3.1 and IIEC 60079-1: 2014 Edition 7.0 Cl. 19.3 Cl. 19.4	Same as Pressure determination test, Over pressure test and Flame non-transmission test above
		Flammability Test – Non Metallic Parts	IS/IEC 60079-1: 2007 Cl.19.3.2 and IEC 60695-11-10and	Qualitative
		Torque Test for Ex stopping plugs/Blanking elements	IS/IEC 60079-1: 2007 Cl. C 3.3.1 and IS/IEC 60529:2001 IEC 60079-1: 2014 Edition 7.0 Cl. C 3.3.1	1 Nm to 60 Nm
		Over Pressure Test for Ex stopping plugs/Blanking elements	IS/IEC 60079-1: 2007 Cl. C 3.3.2 and IEC 60079-1: 2014 Edition 7.0 Cl. C 3.3.2	0.1 bar to 28 bar
		Torque Test for Ex thread adapters (Torque test)	IS/IEC 60079-1: 2007 Cl. C 3.4.1 and IEC 60079-1: 2014 Edition 7.0 Cl. C 3.3.2	1 Nm to 60 Nm

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Impact Test for Ex thread adapters	IS/IEC 60079-1: 2007 Cl. C 3.4.2 and IEC 60079-1: 2014 Edition 7.0 Cl. C 3.4.2	1 to 20 Joules
		Over pressure test for Ex thread adaptors	IS/IEC 60079-1: 2007 Cl. C 3.4.3 and IEC 60079-1: 2014 Edition 7.0 Cl. C 3.4.3	0.1 bar to 28 bar (5 MPa)
		Pressure Determination with Obstruction Plate	IS/IEC 60079-1: 2007 Cl. D.3.6 and IEC 60079-1: 2014 Edition 7.0 Cl. C 3.4.3	0.1 bar to 20 bar (5 MPa)
		Over Pressure Test for Ex-component Enclosures	IS/IEC 60079-1: 2007 Cl. D.3.7 and IEC 60079-1: 2014 Edition 7.0 Cl. C 3.4.3	0.1 bar to 28 bar (5 MPa)
3.	**Explosive Atmospheres-Equipment Protection by Increased Safety "e"**	Creepage distance	IS/IEC 60079-7: 2006 Cl. 4, IEC 60079-7:2015, Edition 5.0, Cl. 4	200 mm
		Clearance	IS/IEC 60079-7: 2006 Cl. 4, IEC 60079-7:2015, Edition 5.0, Cl. 4	100 mm
		Conductor dimension	IS/IEC 60079-7: 2006 Cl. 4, IEC 60079-7:2015, Edition 5.0, Cl. 4	0.25mm to 50 mm (outside diameter)
		Supplementary requirements	IS/IEC 60079-7: 2006 Cl. 5, IEC 60079-7:2015, Edition 5.0, Cl. 5	Qualitative

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Dielectric Strength Test	IS/IEC 60079-7: 2006 Cl. 6.1, IEC 60079-7:2015, Edition 5.0, Cl. 6.1	0.5 kV to 25 kV a.c. 3 Amps
		Determination of starting current ratio	IS/IEC 60079-7: 2006 Cl. 6.2.1, & Annexure A IEC 60079-7:2015,Edition.5.0, Cl. 6.2.1 Annexure A	0.1 A to 50 A @ 440 V a.c.
		Cage rotor construction	IS/IEC 60079-7: 2006 Cl. 6.2.3.2, IEC 60079-7:2015,Edition.5.0, Cl. 6.2.3.2	0.5 kV to 415 V a.c. @ 50 Amps
		General Purpose connection and junction boxes measurement of temperature and power dissipated	IS/IEC 60079-7: 2006 Cl. 6.7, IEC 60079-7:2015, Edition.5.0, Cl. 6.8	Amb to 450 ºC ,
		Determination of Time tE	IS/IEC 60079-7: 2006 Annexure A IEC 60079-7:2015, Edition.5.0, Annexure A	Supply: 0 to 415 Volts / 50 Amps, Amb to 450 ºC
4.	**Explosive Atmosphere-Equipment Protection by Type of Protection 'nA' & 'nR'**	Creepage distance	IS/IEC 60079-15: 2005 Clause 6.7; IS/IEC 60079-15: 2010 Clause 6.4	200mm
		Clearance	IS/IEC 60079-15: 2005 Clause 6.7; IS/IEC 60079-15: 2010 Clause 6.4	100 mm

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Electric Strength Test	IS/ IEC 60079-15: 2005 Clause 6.8; EN/IEC 60079-15: 2010 Clause.6.5	Qualitative
		Comparative tracking Index (CTI)	Table 3 of IS/ IEC 60079-15: 2005 Table 3 of IS/ IEC 60079-15: 2010	600
		Test for restricted Breathing enclosure	IS/IEC 60079-15:2005 Cl. 33.7 IEC 60079-15:2010,Edition.4.0, Cl. 22.6	Below atmosphere to 500 mm water column
		Thermal Endurance to Heat	IS/IEC 60079-15:2005 Cl. 33.3.2.1 IEC 60079-15:2010,Edition.4.0, Cl. 22.3.1.1	95 ºC (90±5) % RH
		Surface Temperature	IS/IEC 60079-0: 2004 Cl. 26.5.1 , IS/IEC 60079-0: 2007 Cl. 26.5.1, IEC 60079-0: 2011 Edition 6.0Cl. 26.5.1	Ambient to 450 ºC
		Radial Air Gap	IS/ IEC 60079-15: 2005 Clause 17; EN/IEC 60079-15: 2010 Clause.8	3.5mm
5.	**Explosive Atmosphere-Equipment Protection by Intrinsic Safety 'i',**	Creepage distances	IS/IEC 60079-11:2006 Cl. 6.2.1, IEC 60079-11: Edition 6.0 2011-06 Cl. 6.2.1	50 mm

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Clearance	IS/IEC 60079-11:2006 Cl. 6.3, IEC 60079-11: Edition 6.0 2011-06 Cl. 6.3	70 mm
		DC Voltage	IS/IEC 60079-11:2006 Cl. 7.4.3, IEC 60079-11: Edition 6.0 2011-06 Cl. 7.4.4	1 kV
		DC Current	IS/IEC 60079-11:2006 Cl. 10.1.5, IEC 60079-11: Edition 6.0 2011-06 Cl. 10.1.5	2 A
		AC Voltage	IS/IEC 60079-11:2006 Cl. 10.10, IEC 60079-11: Edition 6.0 2011-06 Cl. 10.10	1500 Vrms
		AC Current	IS/IEC 60079-11:2006 Cl. 10.10, IEC 60079-11: Edition 6.0 2011-06 Cl. 10.10	1 A
		Spark Test	IS/IEC 60079-11:2006 Cl.10.1, IEC 60079-11: Edition 6.0 2011-06 Cl. 10.1	Qualitative
		DC Current	IS/IEC 60079-11	3A

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Gas Mixture (Vol%)	IS/IEC 60079-11	Oxygen-Hydrogen mixture i) Group I: Hydrogen/Oxygen: (85/15) ii) Group IIA: Hydrogen/Oxygen: (81/19) iii) Group IIB: Hydrogen/Oxygen: (75/25) iv) Group IIC: Hydrogen/Oxygen: (60/40)
		Time	IS/IEC 60079-11	300 Sec
		Dielectric Withstanding Voltage (HV Test)	IS/IEC 60079-11:2006 Cl.10.3, IEC 60079-11: Edition6.0 2011-06 Cl. 10.3	5 kVac
		Force	IS/IEC 60079-11:2006 Cl.10.6.1, IEC 60079-11: Edition 6.0 2011-06 Cl. 10.6.1	30 N, 99.9 N
		Comparative tracking index (CTI)	IS/IEC 60079-11:2006 Cl. 6.3,8 IEC 60079-11: Edition 6.0 2011-06 Cl. 6.3.9	275
		Temperature rise test of battery	IS/IEC 60079-11:2006 Cl. 10.5.3, IEC 60079-11: Edition6.0 2011-06 Cl. 10.5.3	450 ºC w.r.t max. ambient

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Marking	IS/IEC 60079-11:2006 Cl. 12, IEC 60079-11: Edition6.0 2011-06 Cl. 12	Qualitative
II.	**ENVIRONMENTAL TEST FACILITY**			
1.	**Electrical Apparatus Including Sub-Assembles, Accessories and Components**	Low Temp.	IS 9000 (Part 2) IS 9000 (Part 14) IEC 60068-2-1 IEC 60068-2-14 QM 333:2010	Upto 60 ºC
		High Temp.	IS 9000 (Part 3) IS 9000 (Part 14) IEC 60068-2-2 IEC 60068-2-14 QM 333:2010	Ambient to (+)150 ºC
		Damp Heat	IS 9000 (Part 4) IS 9000 (Part 5) IEC 60068-2-78 IEC 60068-2-30 QM333	20 ºC to 85 ºC, 15 % R.H to 95 % R.H
		Salt Spray	IS 9000 (Part 11) IEC 68-2-11 IEC 68-2-52	Upto (+) 45 ºC Upto R.H: 95 %
		Ingress Protection (1st Numeral 1 to 6)	IS/IEC 60947-1 IEC 60529 IEC60034-5	Ambient to 40 ºC
		Water Spray / Splash & Ingress Protection	IS/IEC 60947-1 IEC 60529	Upto I Bar
		Tensile & Compressive Force	IS 9000 (Part 19) IS 1608 IS 13780	Upto 5 kN

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Bump	IS 9000 (Part 7/ Sec II): IEC 60068-2-27 QM 333	Peak accl. 40 g Load : 250lbs(max.) No of bumps : 2 to 4 bumps/sec Pulse duration : 6ms
		Shock	IS 9000 (Part 7/Sec I) IEC 60068-2-27 QM 333	Half Sine : 15 to 1500 g 40g /18msec Max load: 55 kg
		Drop & Topple	IS 9000 (Part 7/Sec 3) QM 333	Height : 25,50,100 mm
		Fall	IS 9000 (Part 7/Sec 4) QM 333	Height of Fall 25,50,100,250,500,1000 mm
		Vibration: Sine & Random	Sine: IS 9000 (Part 8) IEC 60068-2-6 JSS 55555 JSS 50101 Random: IEC 60068-2-64 IEC 61373	Upto 2000 kgf.(peak sine) Upto 2000 kgf (RMS random) 5 Hz to 2.5 kHz sine & random Max Displacement : 15 mm (pk-pk). Max. Accl: 14 g (Peak) Bare table, Velocity: 1200 m/s (max), PSD: 20 g RMS.
III.	**LAMPS, LUMINARIES AND ACCESSORIES**			
1.	**Photo Voltaic Lighting System (CFL & LED)**	Luminous Flux Illuminance Pv Module Characteristics All Electrical Tests On Electronics	MNRE Specifications on Solar Systems 2016 – 17 (Home Lighting System, Street Lighting System, Power Pack, Solar Study Lamp, Solar lantern, etc) OP/OPT(T)/01, OP/OPT/06, OP/OPT/10 OP/OPT/11	1 lumen to 1500 lumen 1 lx to 10000 lx Irradiance at STC upto 400 W

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
2.	**Solar PV Module**	Visual Examination	IEC 61215	1000 lx
		Maximum Power Determination	IEC 61215	400 W/ 200 to 1100 W/m^2
		Insulation Test	IEC 61215	1000 VDC/ 1000 MΩ
		Measurement of Temperature Co-efficient	IEC 61215	100^O C / 400 W/ 1 m/s
		Measurement of Nominal Module Operating Temperature	IEC 61215	100^O C / Angle 45^O/1 m/s
		Performance at STC & NMOT	IEC 61215	1000 W/m^2 / 100 ºC
		Performance at Low Irradiance	IEC 61215	200 W/m^2
		Outdoor Exposure Test	IEC 61215	60 kWh//m^2
		Hot Spot Endurance Test	IEC 61215	100^O C
		Thermal Cycling Test	IEC 61215	(-40 to 100) ºC/ 200 Cycles, 1 ºC/min
		Humidity Freeze Test	IEC 61215	(-40 to 100) ºC/ 95% RH
		Damp Heat Test	IEC 61215	85 °C/ 85% RH/ 1000 hrs
		Robustness of Termination Test	IEC 61215	50 kg (5 kN)
		Wet Leakage Current Test	IEC 61215	1000 VDC/ 1000 MΩ
		Mechanical Load Test	IEC 61215	5400 Pa
		Hail Test	IEC 61215	Ice Ball : 25 mm (Dia)/ 7.53 g (Mass)/ 23 m/s (Vel)
		Bypass Diode thermal Test	IEC 61215	Temperature : 100 ºC, Current : 1.25 I_{sc} at STC
		Stabilization	IEC 61215	20 kWh//m^2

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
IV.	**BATTERIES**			
1.	**Battery**	Verification of Dimensions	IS 1651 IS 1652 IS 13369 IS 15549 RDSO IRS : S : 88/ 2004 (As Applicable)	Upto 2000 Ah
		Capacity		
		Ah Efficiency, Wh Efficiency		
		Test for Loss of Capacity on Storage (Retention of Charge)		
		Endurance/ Life/ Endurance Life Cycle Test		
		Test for Suitability of Floating Battery Operation		
		Water Loss Test		
		Equilibrium Float Current Test		
		Acid Retention Capacity Test on Separators		
		Air Pressure Test & Sulphation Test		
V.	**POWER STABILISERS AND UPS**			
1.	**UPS (Semiconductor Converters):- Upto 10 kVA**	Output Voltage	IEC 60146-2 Clause. 7.3.12	Upto 500 V
		Confirmation of Output Frequency Adjustable Range	IEC 60146-2 Clause. 7.3.15	Upto 50 Hz
		THD (Voltage)	IEC 60146-2 Clause. 7.3.10	Upto 10 %
		THD (Current)	IEC 60146-2/ Clause. 7.3.10	Upto 40 %
		Checking of Automatic Control	IEC 60146-2 Clause. 7.3.17	Upto 20 V

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
2.	**UPS (Semiconductor Converters) Upto 10 kVA**	UPS Efficiency Test	IEC 62040-3 Clause. 6.4.1.6	Upto 10 kW
		Rated Stored Energy Time	IEC 62040-3 Clause. 6.4.4.1	Qualitative
		Harmonic Distortion of Input Current	IEC 62040-3 Clause. 6.4.1.4	Upto 21th harmonics
		Overload -Normal Mode	IEC 62040-3 Clause. 6.4.2.10.1	Upto 10 kW
		Transfer to Bypass	IEC 62040-3 Clause. 6.2.2.9	Upto 5.0 nS
		Power Factor	IEC 62040-3 Clause. 6.4.1.5	Upto 1
VI.	**MEASURING INSTRUMENTS- ELECTRICAL AND ELECTRONIC (STATIC) ENERGY METERS**			
1.	**AC Static Watt Hour Meters Class 1 and 2 (Single and 3 phase)**	Impulse Voltage Test	IS 13779 Cl. No. 12.7.6.2	500 V to 12 kV
		AC High Voltage Test	IS 13779 Cl. No. 12.7.6.3	0.5 kV to 6 kVac
		Insulation Test	IS 13779 Cl. No. 12.7.6.4	1 MΩ to 3TΩ
		Test On Limits of Error	IS 13779 Cl. No. 11.11	1 V to 240 V,3 Ø 0.1 A to 120 A PF : 1, (-)0.5 to (+)0.5
		Interpretation of Test Results	IS 13779 Cl. No. 12.16	1 V to 240 V, 3 Ø 0.1 A to 120 A PF : 1, (-)0.5 to (+)0.5
		Test of Meter Constant	IS 13779 Cl. No. 12.15	1 V to 240 V, 3 Ø 0.1 A to 120 A PF : 1, (-)0.5 to (+)0.5
		Test of Starting Condition	IS 13779 Cl. No. 12.14	1 V to 240 V, 3 Ø 0.1 A to 120 A PF : 1, (-)0.5 to (+)0.5

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Test of No-Load Condition	IS 13779 Cl. No. 12.13	1 V to 240 V, 3 Ø 0.1 A to 120 A PF : 1, (-)0.5 to (+)0.5
		Test of Ambient Temp. Influence	IS 13779 Cl. No. 12.12	1 V to 240 V,3 Ø 0.1 A to 120 A PF : 1, (-)0.5 to (+)0.5
		Test of Repeatability of Error	IS 13779 Cl. No. 12.17	1 V to 240 V, 3 Ø 0.1 A to 120 A PF : 1, (-)0.5 to (+)0.5
		Test of Influence Quantities	IS 13779 Cl. No. 12.11	1 V to 240 V, 3 Ø 0.1 A to 120 A PF : 1, (-)0.5 to (+)0.5
		Test of Power consumption	IS 13779 Cl. No. 12.7.1	12 W to 9.6 kW
		Influence of Supply Voltage	IS 13779 Cl. No. 12.7.2	1 V to 240 V,3 Ø 0.1 A to 120 A PF : 1, (-)0.5 to (+)0.5
		Influence of Short Time Over Currents	IS 13779 Cl. No. 12.7.3	Upto 2400 A
		Test of Influence of Self Heating	IS 13779 Cl. No. 12.7.4	1 V to 240 V,3 Ø 0.1 A to 120 A PF :1, (-)0.5 to (+)0.5 Amb to 200 °C
		Test of Influence of Heating	IS 13779 Cl. No. 12.7.5	1 V to 240 V,3 Ø 0.1 A to 120 A PF :1, (-)0.5 to (+)0.5 Amb to 200 °C
		Test of Influence of Immunity to Earth Fault	IS 13779 Cl. No. 12.17	1 V to 240 V,3 Ø 0.1 A to 120 A PF : 1, (-)0.5 to (+)0.5
		Radio Interference Measurements	IS 13779 Cl. No. 12.9.5	150 kHz to30 MHz 30 MHz to 300 MHz
		Fast Transient Bust Test	IS 13779 Cl. No. 12.9.4	Upto 4 kV

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Test of Immunity to Electrostatic Discharge	IS 13779 Cl. No. 12.9.2	Upto 25 kV
		Test of Immunity to Electromagnetic HF Field	IS 13779 Cl. No. 12.9.3	0.08 GHz to 1 GHz Upto 10 V/m
		Dry Heat Test	IS 13779 Cl. No. 12.6.1	Upto 18 0 ºC
		Cold Test	IS 13779 Cl. No. 12.6.2	Upto (-) 40 ºC
		Damp Heat Test	IS 13779 Cl. No. 12.6.3	Upto 40 ºC Upto 95 %
		Vibration Test (Sine)	IS 13779 Cl. No. 12.3.2	10 Hz to 150 Hz to 10 Hz Accel.: 2 g 10 sweep per axis 75 min
		Shock Test	IS 13779 Cl. No. 12.3.1	Accel.: 40 g max Pulse Width : 18 mS Pulse Shape: Half Sine
		Spring Hammer Test	IS 13779 Cl. No. 12.3.3	Force: 0.22 Nm max
		Protection Against Penetration of Dust And Water	IS 13779 Cl. No. 12.5	Amb to 40 ºC Dust: 75 micron max
		Test of Resistance to Heat & Fire	IS 13779 Cl. No. 12.4	Temp.: Upto 950 ºC
2.	**AC Static Transformer Operated Watt - Hour And Var-Hour Meters , Class 0.2 S , 0.5 S And 1.0 S (Single & 3 Phase)**	Impulse Voltage Test	IS 14697 Cl. No. 12.7.6.2	500 V to 12 kV
		AC High Voltage Test	IS 14697 Cl. No. 12.7.6.3	0.5 kV to 6 kVac
		Insulation Test	IS 14697 Cl. No. 12.7.6.4	1 MΩ to 3 TΩ
		Test On Limits of Error	IS 14697 Cl. No. 11.1	1 V to 240 V 0.1 A to 120 A PF: 1, (-) 0.5 to (+)0.5

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Interpretation of Test Results	IS 14697 Cl. No. 12.15	1 V to 240 V 0.1 A to 120 A PF: 1, (-) 0.5 to (+)0.5
		Test of Meter Constant	IS 14697 Cl. No. 12.14	1 V to 240 V 0.1 A to 120 A PF: 1, (-) 0.5 to (+)0.5
		Test of Starting Condition	IS 14697 Cl. No. 12.13	1 V to 240 V 0.1 A to 120 A PF: 1, (-) 0.5 to (+)0.5
		Test of No-Load Condition	IS 14697 Cl. No. 12.12	1 V to 240 V 0.1 A to 120 A PF: 1, (-) 0.5 to (+)0.5
		Test of Ambient Temp. Influence	IS 14697 Cl. No. 12.11	1 V to 240 V 0.1 A to 120 A PF: 1, (-) 0.5 to (+)0.5
		Test of Repeatability of Error	IS 14697 Cl. No. 12.16	1 V to 240 V 0.1 A to 120 A PF: 1, (-) 0.5 to (+)0.5
		Test of Influence Quantities	IS 14697 Cl. No. 12.10	1 V to 240 V 0.1 A to 120 A PF: 1, (-) 0.5 to (+)0.5
		Test of Power Consumption	IS 14697 Cl. No. 12.7.1	Min. 10 mW
		Influence of Supply Voltage	IS 14697 Cl. No. 12.7.2	1 V to 240 V,3 Ø 0.1 A to 120 A PF : 1, (-)0.5 to (+)0.5
		Influence of Short Time Over Currents	IS 14697 Cl. No. 12.7.3	Upto 2400 A
		Test of Influence of Self Heating	IS 14697 Cl. No. 12.7.4	1 V to 240 V,3 Ø 0.1 A to 120 A PF: 1, (-)0.5 to (+)0.5 Amb to 200 °C
		Test of Influence of Heating	IS 14697 Cl. No. 12.7.5	

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Test of Influence of Immunity to Earth Fault	IS 14697 Cl. No. 12.17	1V to 240V,3Ø 0.1A to 120A PF : 1, (-)0.5 to (+)0.5
		Radio Interference Measurements	IS 14697 Cl. No. 12.8.5	150 kHz to30 MHz 30 MHz to 300 MHz Amplitude 127 dBuV
		Fast Transient Bust Test	IS 14697 Cl. No. 12.8.4	Upto 4 kV
		Test of Immunity to Electrostatic Discharge	IS 14697 Cl. No. 12.8.2	Upto 25 kV
		Test of Immunity to Electromagnetic HF Field	IS 14697 Cl. No. 12.8.3	0.08 GHz to 1 GHz Upto 10 V/m
		Dry Heat Test	IS 14697 Cl. No. 12.6.1	Upto 180 ºC
		Cold Test	IS 14697 Cl. No. 12.6.2	(-) 40 ºC
		Damp Heat Test	IS 14697 Cl. No. 12.6.3	Upto 40 ºC Upto 95 %
		Vibration Test	IS 14697 Cl. No. 12.3.2	10 Hz to 150 Hz to 10Hz Accel.: 2 g 10 sweep per axis 75 min
		Shock Test	IS 14697 Cl. No. 12.3.1	Accel.: 40 g max Pulse Width :18 mS Pulse Shape: Half Sine
		Spring Hammer Test	IS 14697 Cl. No. 12.3.3	Upto 0.22 Nm max
		Protection Against Penetration of Dust And Water	IS 14697 Cl. No. 12.5	Amb to 40 ºC
		Test of Resistance to Heat & Fire	IS 14697 Cl. No. 12.4	Upto 950 ºC

ELECTRONICS TESTING

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
I.	**SAFETY TESTING**			
1.	**Audio, Video And Similar Electronic Apparatus – Safety Requirements Products like Amplifiers/ Optical Disc Players with built in amplifiers** **Power adapter for Audio, Video & similar Electronic apparatus.** **Loud speakers / Head phones Microphones, Others** **Electronic games (video)/ plasma/LCD/LED Television, Visual Display/Video Monitors/Optical Disc Player with built in amplifier / Amplifier**	Marking	IEC 60065 IS 616 Cl. No. 5	Qualitative
		Hazardous radiation	IEC 60065 IS 616 Cl. No. 6.1	0 to 5mR/H
		Heating under normal operating conditions	IEC 60065 IS 616 Cl. No. 7	25 ºC to 300 ºC
		Constructional requirements with regard to the protection against electric shock	IEC 60065 IS 616 Cl. No. 8	0.01 mm to 150 mm 1 N to 100 N
		Electric shock hazard under normal operating conditions	IEC 60065 IS 616 Cl. No. 9	1 mA to 200 mA 1N to 100N
		Insulation requirements	IEC 60065 IS 616 Cl. No. 10	1 MΩ to 1000MΩ
		Fault conditions	IEC 60065 IS 616 Cl. No. 11	25 ºC to 300 ºC
		Mechanical strength	IEC 60065 IS 616 Cl. No. 12	1 N to 100 N
		Clearance and Creepage distances	IEC 60065 IS 616 Cl. No. 13	0.01 mm to 150 mm
		Components	IEC 60065 IS 616 Cl. No. 14	Qualitative
		Terminals	IEC 60065 IS 616 Cl. No. 15	1 A to 25 A
		External Flexible Cords	IEC 60065 IS 616 Cl. No. 16	0.01 mm to 150 mm
		Electrical connections and mechanical fixings	IEC 60065 IS 616 Cl. No. 17	0.1 Nm to 5 Nm

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Electronic Musical System	Mechanical strength of picture tube and protection against the effects of implosion	IEC 60065 IS 616 Cl. No. 18	0.01 N to 5N
		Stability and mechanical Hazards	IEC 60065 IS 616 Cl. No. 19	1 º to 10 º
		Resistance to fire	IEC 60065 IS 616 Cl. No. 20	100 ºC to 950 ºC
2.	**Electrical/ Electronic Safety System**	Fail Safety/Fault Conditioning	CL.B 3.1 of EN50129: CL 7.4.3.11 of IEC 61508-2	0.1V to 600V
3.	**Safety of Lamp Control gear: DC or AC supplied Electronic Control Gear for LED Modules**	Marking	IEC 61347-2-13 IS15885 (Part 2/Sec 13) Cl. No. 7	Qualitative
		Protection against accidental contact with live parts	IEC 61347-2-13 IS15885 (Part 2/Sec 13) Cl. No. 8	1V to1000 V/ 0.1 mA to 200 mA
		Terminal	IEC 61347-2-13 IS15885 (Part 2/Sec 13) Cl. No. 9	0.01mm to 150 mm 0.1N to 5 Nm
		Provision for Earthing	IEC 61347-2-13 IS15885 (Part 2/Sec 13) Cl. No. 10	1 A to 25 A
		Moisture Resistance & Insulation Resistance	IEC 61347-2-13 IS15885(Part 2/Sec 13) Cl. No. 11	0 to 40 ºC / 95% RH 0 to 1000 Meg ohm
		Electric Strength	IEC 61347-2-13:2014-09 IS15885 (Part 2/Sec 13): Cl. No. 12	1KV to30 KV
		Fault Condition	IEC 61347-2-13 IS 15885(Part 2/Sec 13) Cl. No. 14	1 ºC to 1100 ºC

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Transformer heating	IEC 61347-2-13 IS15885 (Part 2/Sec 13) Cl. No. 15	1VAC to 750 VAC
		Creepage & clearance	IEC 61347-2-13 IS15885 (Part 2/Sec 13) Cl. No. 17	0.01mm to 150 mm
		Screws , current carrying parts & connectors	IEC 61347-2-13 IS 15885 (Part 2/Sec 13) Cl. No. 18	0.01 mm to 150 mm 1A to 16 A
		Resistance to heat & fire	IEC 61347-2-13 IS 15885(Part 2/Sec 13) Cl. No. 19	50 ºC to 200 ºC 100 ºC to 950 ºC
		Resistance to corrosion	IEC 61347-2-13 IS 15885 (Part 2/Sec 13) Cl. No. 20	1 ºC to 200ºC,
ii)	**Self Ballasted LED Lamps for general Lighting Services**	Marking	IS 16102 (Part 1) Cl. No. 5	General observation
		Interchangeability	IS 16102 (Part 1) Cl. No. 6	General observation
		Protection against Electric Shock	IS 16102 (Part 1) Cl. No. 7	1 mA to 200mA 1 N to 100N
		Insulation resistance and electric strength after humidity treatment	IS 16102 (Part 1) Cl. No. 8.1.1, 8.2	0 to 40 ºC/ 95% RH 0.1 TΩ to 10 TΩ 25kV(AC)
		Mechanical Strength	IS 16102 (Part 1) Cl. No. 9	0.1 Nm to 6 Nm
		Cap temperature	IS 16102 (Part 1) Cl. No. 10	25 ºC to 300 ºC
		Resistance to heat	IS 16102 (Part 1) Cl. No. 11	25 ºC to 300 ºC 0.1 N to 20 N
		Resistance to flame and ignition	IS 16102 (Part 1) Cl. No. 12	100 ºC to 650 ºC
		Fault Condition	IS 16102 (Part 1) Cl. No. 13	25 ºC to 300 ºC

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Creepage distances and clearances	IS 16102 (Part 1) Cl. No. 14	0.01mm to 150mm 1V to 1000V/ 0.1 kV to 5kV
iii)	**General Requirements: Fixed General Purpose LED Luminaries**	Marking	IEC 60598-1 IS 10322 -1 IEC 60598-2-1 IEC 60598-2-3 IEC 60598-2-5 IS 10322 (Part 5/ Sec-1) Cl. No. 06	General observation
		Construction	IEC 60598-1 IS 10322 -1 IEC 60598-2-1 IEC 60598-2-3 IEC 60598-2-5 IS 10322 (Part 5/ Sec-1) Cl. No. 07	Voltage: 5000V 0.01mm to 150mm 0.1N to 100N
		Creepage Distances & Clearances	IEC 60598-1 IS 10322 -1 IEC 60598-2-1 IEC 60598-2-3 IEC 60598-2-5 IS 10322 (Part 5/ Sec-1) Cl. No. 08	0.01mm to 150mm 1V to 1000V/ 0.1 kV to 5kV
		Provision for Earthing	IEC 60598-1 IS 10322 -1 IEC 60598-2-1 IEC 60598-2-3 IEC 60598-2-5 IS 10322 (Part 5/ Sec-1) Cl. No. 09	0.01mm to 150mm Upto 25A; 0.1N to 100N
		Terminals	IEC 60598-1 IS 10322 -1 IEC 60598-2-1 IEC 60598-2-3	0.01mm to 150mm 0.1N to 100N

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
			IEC 60598-2-5 IS 10322 (Part 5/ Sec-1) Cl. No. 10	
		External and Internal wiring	IEC 60598-1 IS 10322 -1 IEC 60598-2-1 IEC 60598-2-3 IEC 60598-2-5 IS 10322 (Part 5/ Sec-1) Cl. No. 11	0.1 Nm to 6 Nm 0.1N to 100N
		Protection against electric shock	IEC 60598-1 IS 10322 -1 IEC 60598-2-1 IEC 60598-2-3 IEC 60598-2-5 IS 10322 (Part 5/ Sec-1) Cl. No. 12	0.1 to 100N ; 1 to 1000V
		Endurance tests and Thermal tests	IEC 60598-1 IS 10322 -1 IEC 60598-2-1 IEC 60598-2-3 IEC 60598-2-5 IS 10322 (Part 5/ Sec-1) Cl. No. 13	1 to 200 ºC 1VAC to 500VAC
		Resistance Dust and Moisture	IEC 60598-1 IS 10322 -1 IEC 60598-2-1 IEC 60598-2-3 IEC 60598-2-5 IS 10322 (Part 5/ Sec-1) Cl. No. 14	Resistance to ingress of liquid IPX1,IPX2,IPX3,IPX4,IPX5,IPX6,IPX7IPX8 Resistance to ingress of solid objects and dust IP1X,IP2X,IP3X,IP4X,IP5X,IP6X,IP7X,IP8X

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Insulation resistance and electric strength	IEC 60598-1 IS 10322 -1 IEC 60598-2-1 IEC 60598-2-3 IEC 60598-2-5 IS 10322 (Part 5/ Sec-1) Cl. No. 15	1 º -40 ºC / 95% RH 0 to 1000 Meg ohm 1kV to 25 kV(AC)
		Resistance to heat, fire & tracking	IEC 60598-1 IS 10322 -1 IEC 60598-2-1 IEC 60598-2-3 IEC 60598-2-5 IS 10322 (Part 5/ Sec-1) Cl. No. 16	25 ºC to 300 ºC 100 ºC to 950 ºC
		Screw terminals	IEC 60598-1 IS 10322 -1 IEC 60598-2-1 IEC 60598-2-3 IEC 60598-2-5 IS 10322 (Part 5/ Sec-1)	0.01 mm to 150 mm
		Screw less terminal and Electrical connections	IEC 60598-1/IS 10322 -1 IEC 60598-2-1 IEC 60598-2-3 IEC 60598-2-5 IS 10322 (Part 5/ Sec-1) Cl. No. 15	0.01 mm to 150 mm
4.	**UPS**	Marking	IS 16242 (Part 1) Cl. No. 4.7	General observation
		Protection against electric shock and electrical hazard	IS 16242 (Part 1) Cl. No. 5.1	1 V to 1000 V 1 mA to 200 mA
		Requirement of auxiliary circuits	IS 16242 (Part 1) Cl. No. 5.2	1 V to 1000 V 1 mA to 200 mA
		Protective Earthing and bonding	IS 16242 (Part 1) Cl. No. 5.3.2, 5.3.3	100 mV to 100 V

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Over current and earth fault condition	IS 16242 (Part 1) Cl. No. 5.5	1 V to 1000 V 1 mA to 200 mA
		Safety interlock	IS 16242 (Part 1) Cl. No. 5.6	1 ºC to 40 ºC / 95% RH 0 to 1000 MΩ
		Wiring, connections and supply	IS 16242 (Part 1) Cl. No. 6	0.01 mm to 150 mm 1 V to 1000 V/1 A to 25A 0.1 kV to 5 kV
		Physical requirements	IS 16242 (Part 1) Cl. No. 7	1 N to 100 N; 1 ºC to 1100 ºC; CTI/PTI 0 to 600 V
		Electrical requirements and simulated abnormal conditions	IS 16242 (Part 1) Cl. No. 8	1 mA to 200 mA, temp Upto 1100 ºC
		Connection to telecommunication networks	IS 16242 (Part 1) Cl. No. 9	1 kV to 5 kV; HV Upto 30kV; IR 1000 MΩ
5.	**Microwave Oven, Electronic clock, Power Adapter and others**	Marking and Instructions	IEC 60335-1 IEC60335-2-25 IEC60335-2-26 IS 302-2-26 IS 302-2-25 IS 302-1/Cl. No. 7	Qualitative
		Protection against access to live parts	IEC 60335-1 IEC60335-2-25 IEC60335-2-26 IS 302-2-26 IS 302-2-25 IS 302-1/Cl. No. 8	Qualitative
		Starting of motor operated appliances	IEC 60335-1 IEC60335-2-25 IEC60335-2-26 IS 302-2-26 IS 302-2-25 IS 302-1 Cl. No. 9	Qualitative

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Power input and current	IEC 60335-1 IEC60335-2-25 IEC60335-2-26 IS 302-2-26 IS 302-2-25 IS 302-1 Cl. No. 10	1 kW to 5 kW 1 A to 20 A
		Heating	IEC 60335-1 IEC60335-2-25 IEC60335-2-26 IS 302-2-26 IS 302-2-25 IS 302-1 Cl. No. 11	1 to 1100 ºC
		Leakage current and electric strength at operating temperature	IEC 60335-1 IEC60335-2-25 IEC60335-2-26 IS 302-2-26 IS 302-2-25 IS 302-1 Cl. No. 13	1 to 200mA; 1 to 30kV
		Transient Over Voltages	IEC 60335-1 IEC60335-2-25 IEC60335-2-26 IS 302-2-26 IS 302-2-25 IS 302-1/Cl. No. 14	1 kV to 5 kV
		Moisture resistance	IEC 60335-1 IEC60335-2-25 IEC60335-2-26 IS 302-2-26 IS 302-2-25 IS 302-1 Cl. No. 15	Resistance to ingress of Liquid IPX1,IPX2,IPX3, IPX4,IPX5,IPX6,IPX7 IPX8,Resistance to ingress of solid objects & dust IP1X,IP2X,IP3X, IP4X,IP5X,IP6X Upto 150 mm

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Leakage current and electric strength	IEC 60335-1 IEC60335-2-25 IEC60335-2-26 IS 302-2-26 IS 302-2-25 IS 302-1/Cl. No. 16	1 to 200mA; 1 to 30kV
		Overload protection of transformers and associated circuits	IEC 60335-1 IEC60335-2-25 IEC60335-2-26 IS 302-2-26 IS 302-2-25 IS 302-1 Cl. No. 17	1 ºC to 1100 ºC
		Endurance	IEC 60335-1 IEC60335-2-25 IEC60335-2-26 IS 302-2-26 IS 302-2-25 IS 302-1 Cl. No. 18	Not applicable
		Abnormal operation	IEC 60335-1 IEC60335-2-25 IEC60335-2-26 IS 302-2-26 IS 302-2-25 IS 302-1 Cl. No. 19	25 ºC to 300 ºC
		Stability and mechanical hazards	IEC 60335-1 IEC60335-2-25 IEC60335-2-26 IS 302-2-26 IS 302-2-25 IS 302-1 Cl. No. 20	1 to 10 º and General observation

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Mechanical strength	IEC 60335-1 IEC60335-2-25 IEC60335-2-26 IS 302-2-26 IS 302-2-25 IS 302-1 Cl. No. 21	1 to 100N
		Constructions	IEC 60335-1 IEC60335-2-25 IEC60335-2-26 IS 302-2-26 IS 302-2-25 IS 302-1 Cl. No. 22	General observation
		Internal wiring	IEC 60335-1 IEC60335-2-25 IEC60335-2-26 IS 302-2-26 IS 302-2-25 IS 302-1 Cl. No. 23	General observation, 01kV to 5kV
		Components	IEC 60335-1 IEC60335-2-25 IEC60335-2-26 IS 302-2-26 IS 302-2-25 IS 302-1 Cl. No. 24	General observation
		Supply connections and external flexible cords	IEC 60335-1 IEC60335-2-25 IEC60335-2-26 IS 302-2-26 IS 302-2-25 IS 302-1 Cl. No. 25	General observation

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Terminals for external conductors	IEC 60335-1 IEC60335-2-25 IEC60335-2-26 IS 302-2-26 IS 302-2-25 IS 302-1 Cl. No. 26	General observation
		Provision for earthing	IEC 60335-1 IEC60335-2-25 IEC60335-2-26 IS 302-2-26 IS 302-2-25 IS 302-1 Cl. No. 27	1 A to 25 A
		Screws and connection	IEC 60335-1 IEC60335-2-25 IEC60335-2-26 IS 302-2-26 IS 302-2-25 IS 302-1 Cl. No. 28	0.1 Nm to 5 Nm
		Clearances, Creepage distances and solid Insulation	IEC 60335-1 IEC60335-2-25 IEC60335-2-26 IS 302-2-26 IS 302-2-25 IS 302-1 Cl. No. 29	1 mm to 150 mm
		Resistance to heat and fire	IEC 60335-1 IEC60335-2-25 IEC60335-2-26 IS 302-2-26 IS 302-2-25 IS 302-1 Cl. No. 30	25 ºC to 200 ºC 100 ºC to 950 ºC

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Resistance to rusting	IEC 60335-1 IEC60335-2-25 IEC60335-2-26 IS 302-2-26 IS 302-2-25 IS 302-1 Cl. No. 31	1 ºC to 200 ºC
		Radiation, Toxicity and similar Hazards	IEC 60335-1 IEC60335-2-25 IEC60335-2-26 IS 302-2-26 IS 302-2-25 IS 302-1 Cl. No.32	1 mR/h to 20 mR/h
6.	**Printers/Plotter Visual Display unit/Video Monitor, Scanners Wireless Key board Telephone answering Machines Set Top Box Automatic Data Processing Machines. Power adapter for IT equipment. Mobile Phones Cash Register Point of Sale Terminal Copying Machines Smart card Reader**	Marking and instruction	IEC 60950-1 Edition 2.2 IS 13252 (Part 1) Cl. No. 1.7.11	General observation
		Input current	IEC 60950-1 Edition 2.2 IS 13252 (Part 1) Cl. No. 1.6.2	1 V to 1000 V 0.01 A to 10 A
		Protection from hazards	IEC 60950-1 Edition 2.2 IS 13252 (Part 1) Cl. No. 2	1 V to 1000 V 0.01 mm to 150 mm 1 N to 100 N
		Wiring , connections and supply	IEC 60950-1 Edition 2.2 IS 13252 (Part 1) Cl. No. 3	0.01 mm to 150 mm 1 V to 1000 V/1 A to 25 A 0.1 kV to 5 kV
		Physical requirements	IEC 60950-1 Edition 2.2 IS 13252 (Part 1) Cl. No. 4	1 N to 100 N; temp Upto 1 ºC to 1100 ºC; CTI/PTI Upto 600 V

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Mail Processing / Postage/Franking Machines Passport Reader Power Banks for use in portable Applications CPU, Monitor, Key board Laptop/ Notebook/Tablets, CCTV Cameras/ Equipment, Bar Code Readers, Optical Finger Print Scanners, Smart Watch	Electrical requirements and simulated abnormal conditions	IEC 60950-1 Edition 2.2 IS 13252 (Part 1) Cl. No. 5	0.1 mA Upto 200 mA, 1 °C to 1100 °C
		Connection to telecommunication networks	IEC 60950-1 Edition 2.2 IS 13252 (Part 1) Cl. No. 6	.1 kV to 5 kV; 1 kV 30 kV 1 MΩ to 1000MΩ
		Connection to cable distribution system	IEC 60950-1 Edition 2.2 IS 13252 (Part 1) Cl. No. 7	1 kV to 5 kV; Impulse Upto 1 kV to 5 kV
7.	**GLS Lamp**	Marking	IEC 60432+A1 Cl. No. 2.2	1 s to 20 s
		Protection against accidental contact	IEC 60432+A1 Cl. No. 2.3	0.01 mm to 150 mm
		Lamp cap temperature	IEC 60432+A1 Cl. No. 2.4	25 ºC to 300 ºC
		Resistance to Torque	IEC 60432+A1 Cl. No. 2.5	0.1 Nm to 5Nm
		Insulation Resistance	IEC 60432+A1 Cl. No. 2.6	0 to 1000 Meg ohm
		Accidentally Live parts Cl	IEC 60432+A1 Cl. No. 2.7	0.01 mm to 150 mm
		Creepage distance	IEC 60432+A1 Cl. No. 2.7	0.01 mm to 150 mm
		Safety at end of live	IEC 60432+A1 Cl. No. 2.9	1 kV to 5 kV
		Interchangeability	IEC 60432+A1 Cl. No. 2.10	0.01 mm to 1x50 mm 0.01 mm to 150 mm