



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

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ELECTRICAL

Valid To: July 31, 2025

Certificate Number: 7054.01

In recognition of the successful completion of the A2LA evaluation process, (including an assessment of the organization's compliance with A2LA's FDA ASCA⁵ and A2LA's EPA Energy STAR⁴® Accreditation Program Requirements), accreditation is granted to this laboratory to perform the following types of tests:

Test(s):

Test Method(s)³:

Generic / Product Specific Standards

Household and Electrical Appliance – Safety – Part 1: General Requirements	IEC 60335-1; EN 60335-1; AS/NZS 60335.1; CAN/CSA-C22.2 No. 60335-1; UL 60335-1
Part 2-2: Particular Requirements for Vacuum Cleaners and Water-Suction Cleaning Appliances	IEC 60335-2; EN 60335-2-2; AS/NZS 60335.2.2
Part 2-3: Particular Requirements for Electric Irons	IEC 60335-2-3; EN 60335-2-3; AS/NZS 60335.2.3; UL 60335-2-3; CAN/CSA C22.2 No. 60335-2-3
Part 2-4: Particular Requirements for Spin Extractors	IEC 60335-2-4; EN 60335-2-4; AS/NZS 60335.2.4
Part 2-5: Particular Requirements for Dishwashers	IEC 60335-2-5; EN 60335-2-5
Part 2-6: Particular Requirements for Stationary Cooking Ranges, Hobs, Ovens and Similar Appliances	IEC 60335-2-6; EN 60335-2-6; AS/NZS 60335.2.6
Part 2-7: Particular Requirements for Washing Machines	IEC 60335-2-7; EN 60335-2-7; AS/NZS 60335.2.7

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Test(s):**Test Method(s) ³:**

Part 2-8: Particular Requirements for Shavers, Hair Clippers and Similar Appliances

IEC 60335-2-8; EN 60335-2-8;
AS/NZS 60335.2.8; UL 60335-2-8;
CAN/CSA-C22.2 No. 60335-2-8

Part 2-9: Particular Requirements for Grills, Toasters and Similar Portable Cooking Appliances

IEC 60335-2-9; EN 60335-2-9;
AS/NZS 60335.2.9;
CAN/CSA C22.2 No. 60335-2-9

Part 2-10: Particular Requirements for Floor Treatment Machines and Wet Scrubbing Machines

IEC 60335-2-10; EN 60335-2-10;
AS/NZS 60335.2.10

Part 2-11: Particular Requirements for Tumble Dryers

IEC 60335-2-11; EN 60335-2-11

Part 2-12: Particular Requirements for Warming Plates and Similar Appliances

IEC 60335-2-12; EN 60335-2-12;
AS/NZS 60335.2.12

Part 2-13: Particular Requirements for Deep Fat Fryers, Frying Pans and Similar Appliances

IEC 60335-2-13; EN 60335-2-13;
AS/NZS 60335.2.13

Part 2-14: Particular Requirements for Kitchen Machines

AS/NZS 60335.2.14; UL 60335-2-14;
CAN/CSA C22.2 No. 60335-2-14;
IEC 60335-2-14; EN 60335-2-14

Part 2-15: Particular Requirements for Appliances for Heating Liquids

IEC 60335-2-15; EN 60335-2-15;
AS/NZS 60335.2.15;
CAN/CSA-C22.2 No. 60335-2-15

Household Cooking and Liquid-Heating Appliances

CAN/CSA C22.2 No. 64

Part 2-21: Particular Requirements for Storage Water Heaters

IEC 60335-2-21; EN 60335-2-21

Part 2-23: Particular Requirements for Appliances for Skin or Hair Care

IEC 60335-2-23;
AS/NZS 60335.2.23;
CAN/CSA C22.2 No. 60335-2-23;
EN 60335-2-23

Part 2-24: Particular Requirements for Refrigerating Appliances Ice-Cream Appliances and Ice-Makers

IEC 60335-2-24; EN 60335-2-24;
AS/NZS 60335.2.24;
CAN/CSA C22.2 No. 60335-2-24;
UL 60335-2-24

Part 2-27: Particular Requirements for Appliances Foreskin Exposure to Ultraviolet and Infrared Radiation

IEC 60335-2-27; EN 60335-2-27; AS/NZS 60335.2.27

Test(s):**Test Method(s)³:**

Part 2-28: Particular Requirements for Sewing Machines

IEC 60335-2-28; EN 60335-2-28

Part 2-29: Particular Requirements for Battery Chargers

IEC 60335-2-29; EN 60335-2-29;
AS/NZS 60335.2.29; UL 60335-2-29;
CAN/CSA C22.2 No. 60335-2-29

Part 2-30: Particular Requirements for Room Heaters

IEC 60335-2-30; EN 60335-2-30;
AS/NZS 60335.2.30

Part 2-31: Particular Requirements for Range Hoods and Other Cooking Fume Extractors

IEC 60335-2-31; EN 60335-2-31;
AS/NZS 60335.2.31

Part 2-32: Particular Requirements for Massage Appliances

AS/NZS 60335.2.32; UL 60335-2-32;
CAN/CSA C22.2 No. 60335-2-32;
IEC 60335-2-32; EN 60335-2-32

Part 2-35: Particular Requirements for Instantaneous Water Heaters

IEC 60335-2-35; EN 60335-2-35;
AS/NZS 60335.2.35

Part 2-36: Particular Requirements for Commercial Electric Cooking Ranges, Ovens, Hobs, and Hob Elements

IEC 60335-2-36; EN 60335-2-36

Part 2-38: Particular Requirements for Commercial Electric Griddles and Griddle Grills

IEC 60335-2-38; EN 60335-2-38

Part 2-41: Particular Requirements for Pumps

IEC 60335-2-41; EN 60335-2-41;
AS/NZS 60335.2.41

Part 2-43: Particular Requirements for Clothes Dryers and Towel Rails

IEC 60335-2-43; EN 60335-2-43;
EN IEC 60335-2-43

Part 2-44: Particular Requirements for Ironers

IEC 60335-2-44; EN 60335-2-44;
AS/NZS 60335.2.44

Part 2-45: Particular Requirements for Portable Heating Tools and Similar Appliances

IEC 60335-2-45; EN 60335-2-45;
AS/NZS 60335.2.45

Part 2-52: Particular Requirements for Oral Hygiene Appliances

IEC 60335-2-52; EN 60335-2-52;
UL 60335-2-52;
CAN/CSA C22.2 NO. 60335-2-52

Part 2-53: Particular Requirements for Sauna Heating Appliances and Infrared Cabins

IEC 60335-2-53; EN 60335-2-53;
AS/NZS 60335.2.53

Part 2-54: Particular Requirements for Surface-Cleaning Appliances for Household Use Employing Liquids or Steam

IEC 60335-2-54; EN 60335-2-54;
AS/NZS 60335.2.54

Test(s):**Test Method(s) ³:**

Part 2- 59: Particular Requirements for Insect Killers

IEC 60335-2-59; EN 60335-2-59;
AS/NZS 60335.2.59

Part 2- 60:
Particular Requirements for Whirlpool Baths and Whirlpool Spas

IEC 60335-2-60; EN 60335-2-60;
AS/NZS 60335.2.60

Part 2-64: Particular Requirements for Commercial Electric Kitchen Machines

IEC 60335-2-64; EN 60335-2-64

Part 2- 65: Particular Requirements for Air-Cleaning Appliances

IEC 60335-2-65; EN 60335-2-65;
AS/NZS 60335.2.65

Part 2-69: Particular Requirements for Wet and Dry Vacuum Cleaners, Including Power Brush, for Commercial Use

IEC 60335-2-69; EN 60335-2-69;
AS/NZS 60335.2.69; UL 60335-2-69;
CAN/CSA C22.2 NO. 60335-2-69

Part 2-75:
Particular Requirements for Commercial Dispensing Appliances and Vending Machines

IEC 60335-2-75; EN 60335-2-75;
AS/NZS 60335.2.75

Part 2- 78:
Particular Requirements for Outdoor Barbecues

IEC 60335-2-78; EN 60335-2-78;
AS/NZS 60335.2.78

Part 2-79: Particular Requirements for High Pressure Cleaners and Steam Cleaners

IEC 60335-2-79; EN 60335-2-79;
AS/NZS 60335.2.79; UL 60335-2-79;
CAN/CSA C22.2 No. 60335-2-79

Part 2- 80: Particular Requirements for Fans

IEC 60335-2-80; EN 60335-2-80;
AS/NZS 60335.2.80

Part 2-82: Particular Requirements for Amusement Machines and Personal Service Machines

IEC 60335-2-82; EN 60335-2-82;
AS/NZS 60335.2.82; UL 60335-2-82;
CAN/CSA C22.2 No. 60335-2-82

Part 2-84: Particular Requirements for Toilet Appliances

IEC 60335-2-84; EN 60335-2-84

Part 2- 85: Particular Requirements for Fabric Steamers

IEC 60335-2-85; EN 60335-2-85;
AS/NZS 60335.2.85

Part 2-89: Particular Requirements for Commercial Refrigerating Appliances and Ice-Makers with an Incorporated or Remote Refrigerant Unit or Motor-Compressor

IEC 60335-2-89; EN 60335-2-89;
UL 60335-2-89;
CAN/CSA C22.2 No. 60335-2-89

Part 2-91: Particular Requirements for Walk-Behind and Hand-Held Lawn Trimmers and Lawn Edge Trimmers

IEC 60335-2-91; EN 50636-2-91;
AS/NZS 60335.2.91

Test(s):

Test Method(s) ³:

Part 2-94: Particular Requirements for Scissors Type Grass Shears	IEC 60335-2-94; EN 50636-2-94
Part 2-97: Particular Requirements for Drives for Shutters, Awnings, Blinds and Similar Equipment	IEC 60335-2-97; EN 60335-2-97
Part 2-98: Particular Requirements for Humidifiers	IEC 60335-2-98; EN 60335-2-98; AS/NZS 60335.2.98
Part 2-100: Particular Requirements for Hand-Held Mains Operated Garden Blowers, Vacuums and Blower Vacuums	IEC 60335-2-100; EN 50636-2-100; AS/NZS 60335.2.100
Part 2-101: Particular Requirements for Vaporizers	IEC 60335-2-101; EN 60335-2-101; AS/NZS 60335.2.101
Part 2-113: Particular Requirements for Cosmetic and Beauty Care Appliances Incorporating Lasers and Intense Light Sources	IEC 60335-2-113; EN 60335-2-113; UL 60335-2-113; CAN/CSA C22.2 No. 60335-2-113
Electric Motor-Operated Appliances	UL 73
Electric Gardening Appliances	UL 82
Electric Heating Pads	UL 130
Household Refrigerators and Freezers	UL 250
Refrigerated Medical Equipment	UL 416
Waste Disposers	UL 430
Commercial Refrigerators and Freezers	UL 471
Electric Heating Appliances	UL 499
Electric Fans	UL 507
Refrigerated Vending Machines	UL 541
Ice Makers	UL 563
Vending Machines	UL 751
Motor-Operated commercial Food Preparing Machines	UL 763
Motor-Operated Water Pumps	UL 778



<u>Test(s):</u>	<u>Test Method(s) ³:</u>
Electrostatic Air Cleaners	UL 867
Personal Grooming Appliances	UL 859
Electric Hobby and Sports Equipment	UL 961
Household and Commercial Furnishings	UL 962
Motor-Operated Household Food Preparing Machines	UL 982
Stationary and Fixed Electric Tools	UL 987
Humidifiers	UL 998
Rotating Electrical Machines	UL 1004-1
Vacuum Cleaning Machines and Blower Cleaners	UL1017
Electric Household Cooking and Food Serving Appliances	UL 1026
Hair Clipping and Shaving Appliances	UL 1028
Swimming Pool Pumps, Filters, and Chlorinators	UL 1081
Household Electric Coffee Makers and Brewing-Type Appliances	UL 1082
Household Electric Skillets and Frying-Type Appliances	UL 1083
Movable and Wall or Ceiling Hung Electric Room Heaters	UL 1278
Personal Hygiene and Health Care Appliances	UL 1431
Motor-Operated Air Compressors, Vacuum Pumps, and Painting Equipment	UL 1450
Motor-Operated Massage and Exercise Machines	UL 1647
High-Pressure Cleaning Machines	UL 1776
Vacuum Cleaners for Household-Use Part 1: Dry Vacuum Cleaner-Method for Measuring the Performance	IEC 60312-1; IEC 62885-2; EN 60312-1; EU 666

<u>Test(s):</u>	<u>Test Method(s)</u>³:
Household refrigerating appliances – Characteristics and test methods – Part 1: General requirements	IEC 62552-1
Part 2: Performance requirements	IEC 62552-2
Part 3: Energy Consumption and Volume	IEC 62552-3
Household Refrigerating Appliances — Characteristics and Test Methods	EN 62552
Performance of Household Electrical Appliances – Refrigerating Appliances – Part 1: Energy Consumption and Performance	AS/NZS 4474.1
Part 2: Energy Labelling and Minimum Energy Performance Standard Requirements	AS/NZS 4474.2
Energy Performance and Capacity and Labeling of Household Refrigerators, Refrigerator Freezers, and Freezers	SASO 2664
Refrigerators, Refrigerator- Freezers and Freezers -Energy Performance, Testing and Labeling Requirements	SASO 2892
Households Refrigerating Appliances- Characteristics and Test Method	SASO IEC 62552; IEC 62552; SANS 1691
EU Eco-Design Regulation for Household Refrigerating Appliances	(EC) No 643/2009
Performance of household electrical appliances - Clothes washing machines - Methods for measuring performance, energy and water consumption	AS/NZS 2040.1
Energy Efficiency Labelling Requirements	AS/NZS 2040.2
Performance Evaluation Procedure for Household Washers	10 CFR 430 Subpart B Appendix J1 and Appendix J2; AHAM HLW-1
EU Eco-Design Regulation for Household Washing Machines	(EU) No 1015/2010
Clothes Washing Machines for Household Use - Methods for Measuring the Performance	IEC 60456; EN 60456; SANS 1695

<u>Test(s):</u>	<u>Test Method(s) ³:</u>
Clothes Washing Machines for Household Use – Performance Requirements	SASO 2693
Clothes Washing Machines for Household Use – Methods for Measuring the Performance	SASO 2683
Electrical Clothes Washing Machines – Energy and Water Performance Requirements and Labeling	SASO 2885
Household Electrical Appliances-Measurement Standby Power	IEC 62301; EN 50564
Test Method for Measuring the Energy Consumption of Refrigerators, Refrigerator-Freezers, and Miscellaneous Refrigeration Products	10 CFR Sections 430.23(a) (2008) and 430.23(b) (2008); 10 CFR 430, Subpart B
Energy and Internal Volume of Refrigerating Appliances	AHAM HRF-1
Energy Performance and Capacity of Household Refrigerators, Refrigerator- Freezers, Freezers and Wine Chillers	CAN/CSA-C300-15
ENERGY STAR ® Program Requirements	Product Specification for Residential Refrigerators and Freezers Eligibility Criteria Version 5.1
Energy Performance, Water Consumption and Capacity of Household Clothes Washers	CAN/CSA-C360-13
ENERGY STAR ® Program Requirements	Product Specification for Clothes Washers Eligibility Criteria Version 8.1
Energy Efficiency Regulations	SOR/2016-311 (Subdivision B, E and F)
Lighting - Electrical Appliance	
Energy Efficiency, Functionality and Labelling Requirements for Lighting Products – Part 1	SASO 2870
Energy Efficiency, Functionality and Labelling Requirements for Lighting Products – Part 2	SASO 2902
Energy Efficiency, Functionality and Labeling Requirements for Lighting Products – Part 3	SASO 2927

Test(s):**Test Method(s) ³:**

Uniform Test Method for Measuring the Energy Consumption of Fluorescent Lamp Ballasts	10 CFR 430 Subpart B Appendix Q
Uniform Test Method for Measuring Electrical and Photometric Characteristics of General Service Fluorescent Lamps, Incandescent Reflector Lamps, and General Service Incandescent Lamps	10 CFR 430 Subpart B Appendix R
Uniform Test Method for Measuring the Energy Consumption of Compact Fluorescent Lamps	10 CFR 430 Subpart B Appendix W
Uniform Test Method for Measuring the Input Power, Lumen Output, Lamp Efficacy, Correlated Color Temperature (CCT), Color Rendering Index (CRI), Power Factor, Time to Failure, and Standby Mode Power of Integrated Light-Emitting Diode (LED) Lamps	10 CFR 430 Subpart B Appendix BB
Uniform Test Method for Measuring the Energy Consumption and Energy Efficiency of General Service Lamps that are not General Service Incandescent Lamps, Compact Fluorescent Lamps, or Integrated LED Lamps	10 CFR 430 Subpart B Appendix DD
Self-Ballasted LED Lamps for General Lighting Services with Supply Voltages > 50 V – Performance Requirements	IEC 62612; EN 62612
Self-Ballasted LED Lamps for General Lighting Services by Voltage >50 V – Safety Specification	IEC 62560; GB 24906; EN 62560; AS/NZS 62560; UL 1993; INMETRO No. 144 of 03.13; IS 16102 (PART 2)
Double-capped LED Lamps Designed to Retrofit Linear Fluorescent Lamps – Safety Specifications	IEC 62776; EN 62776
Photobiological Safety of Lamps and Lamp Systems	GB/T 20145; IEC 62471; EN 62471; AS/NZS IEC 62471; IS 16108
Photobiological Safety of Lamps and Lamp Systems	DIN EN 62471
Method of Measuring and Specifying Colour Rendering Properties of Light Source	CIE 13.3
Colorimetry	CIE 15
The Measurement of Luminous Flux	CIE 84

Test(s):**Test Method(s) ³:**

Guide on the Maintenance of Indoor Electric Lighting Systems	CIE 97
Light and Lighting - Measurement and Presentation of Photometric Data of Lamps and Luminaires - Part 1: Measurement and File Format	EN 13032-1; DIN EN 13032-1
Photometry - Part 1: Methods of Measurement	DIN 5032-1
Operation Of Electric Lamps and Measurement of the Respective Quantities	DIN 5032-2
Part 4: Measurement of Luminaires	DIN 5032- 4
Part 6: Photometers; Concepts, Characteristics and Their Designation	DIN 5032-6
Ballasts for Tubular Fluorescent Lamps – Performance Requirements	IEC 60921; EN 60921
Double-Capped Fluorescent Lamps - Performance Specifications	IEC 60081
Single-Capped Fluorescent Lamps - Performance Specifications	IEC 60901
LED Modules for General Lighting - Performance Requirements	IEC 62717
Standard Method of Measuring the Pinch Temperature of Quartz-Tungsten-Halogen Lamps	IEC 60682; SASO IEC 60682
Tungsten Halogen Lamps (Non-Vehicle) - Performance Specifications	IEC 60357; EN 60357
High-Pressure Sodium Vapour Lamps - Performance Specifications	IEC 60662; EN 60662
Metal Halide Lamps - Performance Specification	IEC 61167; EN 61167
Electrical and Photometric Measurements of Single-Based Fluorescent Lamps	IES LM-66
Projecting Long-Term Luminous Flux Maintenance of LED Lamps and Luminaries	IES TM-28

<u>Test(s):</u>	<u>Test Method(s) ³:</u>
Electric Lamps – Specifications for the Chromaticity of Solid-State Lighting Products	ANSI C78.377
In-SITU Temperature Measurement Testing	ISTMT
Method of Measurement of Centre Beam Intensity and Beam Angle(s) of Reflector Lamps	IEC/TR 61341; EN 61341; SASO IEC/TR 61341
Tungsten Filament Lamps for Domestic and Similar General Lighting Purposes - Performance Requirements	IEC 60064
Photometry - The CIE System of Physical Photometry	CIE S 010; ISO 23539
Discharge Lamps (Excluding Fluorescent Lamps) - Safety Specifications	IEC 62035; EN 62035
The Maintenance of Outdoor Lighting Systems	CIE 154
Energy Performance of Lamp Control Gear - Part 1: Control Gear for Fluorescent Lamps - Method of Measurement to Determine the Total Input Power of Control Gear Circuits and the Efficiency of Control Gear	IEC 62442-1; EN 62442-1
Part 3: Control Gear for Halogen Lamps and LED Modules - Method of Measurement to Determine the Efficiency of the Control Gear	IEC 62442-3; EN 62442-3
Measurement Method of Total Input Power of Ballast-Lamp Circuits	EN 50294
Non-ballasted LED Lamps – Performance Requirements	IEC 62663-1
LED-Binning - Part 1: General Requirements and White Colour Grid Intended for Automotive Applications Intended for Automotive Applications	IEC 62707-1
DC or AC Supplied Electronic Control Gear for LED Modules - Performance Requirements	IEC 62384
Self-Ballasted Compact Fluorescent Lamps for General Lighting Services - Performance Requirements	GB/T 17263; IEC 60969; EN 60969; AS/NZS 60969; SASO IEC 60969; GSO IEC 60969

<u>Test(s):</u>	<u>Test Method(s)</u>³:
Self-Ballasted Lamps for General Lighting Services - Test Methods - Energy Performance	AS/NZS 4847.1
Minimum Energy Performance Standards (MEPS) Requirements	AS/NZS 4847.2
Luminaire performance - Part 2-1: Particular Requirements for LED Luminaires	GB/T 31897.1; IEC 62722-1; EN 62722-1; GB/T 31897.201; IEC 62722-2-1; EN 62722-2-1
Radiance and Luminance	CIE18.2
Measurement of Colour Quantities	EN 13032-4; SASO EN 13032-4
The Spectroradiometric Measurement of Light Sources	CIE 63
Method of Measurement of Centre Beam Intensity and Beam Angle(s) of Reflector Lamps	IEC/TR 61341
Cone Luminous Flux	L2(AP)005
Electrical and Photometric Measurements of Fluorescent Lamps	IES LM-9
Photometric Testing of Indoor Fluorescent Luminaires	IES LM-41
Photometric Testing of Outdoor Fluorescent Luminaires	IES LM-10
Measuring Luminous Flux and Color Maintenance of LED Lamps, Light Engines, and Luminaires	IES LM-84
Self-Ballasted Lamps for General Lighting Services - Safety Requirements	GB 16844; IEC 60968; EN 60968; AS/NZS 60968
LED Modules for General Lighting – Safety Specification	GB 24819; IEC 62031; EN 62031
Luminaires – Part 1: General Requirements and Tests	IEC 60598- 1; EN 60598-1; EN IEC 60598-1; AS/NZS 60598.1; UL 1598; CSA-C22.2 No. 250.0
Part 2-1: Particular Requirements – Fixed General Purpose Luminaires	IEC 60598-2-1; EN 60598-2-1; AS/NZS 60598.2.1; UL 1598; CSA-C22.2 No. 250.0

Test(s):**Test Method(s) ³:**

Part 2-2: Particular Requirements – Recessed Luminaires	IEC 60598-2-2; EN 60598-2-2; AS/NZS 60598.2.2
Part 2-3: Particular Requirements – Luminaires for Road and Street Lighting	IEC 60598-2-3; EN 60598-2-3; AS/NZS 60598.2.3; Inmetro No. 020, 02.15
Part 2-4: Particular Requirements – Portable General Purpose Luminaires	IEC 60598-2-4; EN 60598-2-4; AS 60598.2.4; UL 153; CSA C22.2 No. 12
Part 2-5: Particular Requirements – Floodlights	IEC 60598-2-5; EN 60598-2-5; AS/NZS 60598.2.5
Part 2-8: Particular Requirements – Handlamps	IEC 60598-2-8; EN 60598-2-8; AS/NZS 60598.2.8
Part 2-10: Particular Requirements – Portable Luminaires for Children	IEC 60598-2-10; EN 60598-2-10; AS/NZS 60598.2.10
Part 2-12: Particular Requirements – Main Socket Outlet Mounted Nightlights	IEC 60598-2-12; EN 60598-2-12; AS/NZS 60598.2.12; UL 1786; CSA-C22.2 No. 256
Part 2-13: Particular Requirements – Ground Recessed Luminaires	IEC 60598-2-13; EN 60598-2-13
Part 2-17: Particular Requirements – Luminaires for Stage Lighting, Television and Film Studios (Outdoor and Indoor)	IEC 60598-2-17; EN 60598-2-17; AS/NZS 60598.2.17
Part 2-20: Particular Requirements - Lighting Chains	IEC 60598-2-20; EN 60598-2-20; AS/NZS 60598.2.20; UL 588; CSA-C22.2 No. 37
Part 2-21: Particular Requirements – Rope Lights	IEC 60598-2-21; EN 60598-2-21; AS/NZS 60598.2.21; UL 2388; CSA-C22.2 No. 9
Part 2-22: Particular Requirements – Emergency Luminaires	IEC 60598-2-22; EN 60598-2-22; AS/NZS 60598.2.22; UL 924; CSA-C22.2 No. 141
Lamp Control Gear –Part 1: General and Safety Requirements	IEC 61347-1; EN 61347-1; AS/NZS 61347.1
Part 2-2: Particular Requirements for D.C. or A.C. Supplied Electronic Step-Down Convertors for Filament Lamps	IEC 61347-2-2; EN 61347-2-2; AS/NZS 61347.2.2

Test(s):**Test Method(s)³:**

Part 2-3: Particular Requirements for A.C. and/or D.C. Supplied Electronic Control Gear for Fluorescent Lamps

IEC 61347-2-3; EN 61347-2-3;
AS/NZS 61347.2.3; UL 935

Part 2-11:
Particular Requirements for Miscellaneous Electronic Circuits Used with Luminaires

IEC 61347-2-11; EN 61347-2-11;
AS/NZS 61347.2.11

Part 2-13:
Particular Requirements for D.C. or A.C. Supplied Electronic Control Gear for LED Modules

IEC 61347-2-13; EN 61347-2-13;
AS/NZS 61347.2.13; UL 8750

Energy Labelling of Electrical Lamps and Luminaires

(EU) No 874

Eco Design Requirements for Non-Directional Household Lamps

(EC) No 244 2009;
(EU) 2015/1428

Eco Design Requirements for Fluorescent Lamps Without Integrated Ballast, for High Intensity Discharge Lamps, and for Ballasts and Luminaires Able to Operate Such Lamps

(EC) No 245;
(EU) 2015/1428

Eco Design Requirements for Directional Lamps, Light Emitting Diode Lamps and Related Equipment

(EU) No 1194;
(EU) 2015/1428

Application of IEC 62471 for the Assessment of Blue Light Hazard to Light Sources and Luminaires

IEC TR 62778

Energy Labelling of Light Sources and Repealing Commission Delegated Regulation

(EU) 2019/2015

Eco Design Requirements for Light Sources and Separate Control Gears Pursuant to Directive 2009/125/EC of the European Parliament and of the Council and Repealing Commission Regulations

(EU) 2019/2020

Characterization of LED Light Engines and LED Lamps for Electrical and Photometric Properties as a Function of Temperature

IES LM-82

Energy Conservation Program: Test Procedures for Integrated Light-Emitting Diode Lamps

US DOE 81 FR 43403

Test(s):**Test Method(s) ³:**

Harmonic Emission Limits - Related Power
Quality Requirements for Lighting Equipment
Requirements

ANSI C82.77

Optical and Electrical Measurement of Solid-State
Lighting Products

IES LM-79

Photometry of Reflector Type Lamps

IES LM-20

Measuring Luminous Flux and Color
Maintenance of LED Packages, Arrays and
Modules

IES LM-80

Spectroradiometric Measurement Methods for
Lighting Sources

IES LM-58; IES TM-21

The Electrical and Photometric Measurement of
General Service Incandescent Filament Lamps

IES LM-45

Practical Guide to Colorimetry of Light Sources

IES LM-16

Colorimetry

CIE Pub. 15

IEEE Recommended Practice on Characterization
of Surges in Low-Voltage (1000V and Less)
AC Power Circuits

ANSI C62.41.2

Temporal Light Artifacts: Test Methods and
Guidance for Accepted Criteria

NEMA 77

Quality Technical Regulation applicable to
Luminaires for Public Road Illumination

IN METRO-Ordinance No. 20

Technical Quality Regulation for Luminaires for
Public Street Lighting

IN METRO-Ordinance No. 62

Amendment on Technical Regulation for LED
Lamps (Light-Emitting Diode) with Integrated
Device to the Base

IN METRO-Ordinance No.143

Conformity Assessment Requirements for LED
Lamps with Integrated Device to the Base

IN METRO-Ordinance No.144

Technical Regulation of Quality for LED Lamps
with Device Integrated into the Base

IN METRO-Regulation 69

Test(s):

LED Lamps with Integrated Control Device, Consists of a Single Non-Detachable Unit, Operating on AC Power Distribution Network of 60Hz, for Nominal Voltage of 127 V and/or 220 V

Test Method(s) ³:

IN METRO-Regulation 389

Laser Products

Safety of Laser Products - Part 1: Equipment Classification and Requirements

GB 7247.1; IEC 60825-1; EN 60825-1; EN 50689

Electrical Accessories

Approval and Test Specification - Plugs and Socket-Outlets

AS/NZS 3112

Flat Non-Wirable Two-Pole Plugs, 2,5 A 250 V, with Cord for the Connection of Class II-Equipment for Household and Similar Purposes

EN 50075

13 A Plugs, Socket-Outlets, Adaptors and Connection Units Part 1: Specification for Re-Wirable and Non-Re-Wirable 13 A Fused Plugs

BS 1363-1

Tools

Safety of Motor-Operated Hand-Held, Transportable Electric Tools and Lawn and Garden Tools-Part 1:General Requirements

IEC 62841-1; EN 62841-1; AS/NZS 62841.1; UL 62841-1; CSA C22.2 NO 62841-1

Safety of Hand-Held Motor-Operated Electric Tools -Part 1: General Requirements

IEC 60745-1; EN 60745-1; AS/NZS 60745.1; UL 60745-1; CSA C22.2 NO 60745-1

Hand-Held Motor-Operated Electric Tools – Safety –Part 2-1: Particular Requirements for Drills and Impact Drills

IEC 60745-2-1; AS/NZS 60745.2.1; UL 60745-2-1; CSA C22.2 NO 60745-2-1

Part 2-2: Particular Requirements for Screwdrivers and Impact Wrenches

IEC 60745-2-2; UL 60745-2-2; CSA C22.2 NO 60745-2-2

Part 2-3: Particular Requirements for Grinders, Polishers and Disk-Type Sanders

IEC 60745-2-3; EN 60745-2-3; AS/NZS 60745.2.3; UL 60745-2-3; CSA C22.2 NO 60745-2-3

Part 2-4: Particular Requirements for Sanders and Polishers other than Disk Type

IEC 60745-2-4; AS/NZS 60745.2.4; UL 60745-2-4; CSA C22.2 NO 60745-2-4

Part 2-5: Particular Requirements for Circular Saws

IEC 60745-2-5; AS/NZS 60745.2.5; UL 60745-2-5; CSA C22.2 NO 60745-2-5

Test(s):

Test Method(s)³:

Part 2-6: Particular Requirements for Hammers	IEC 60745-2-6; EN 60745-2-6; AS/NZS 60745.2.6; UL 60745-2-6; CSA C22.2 NO 60745-2-6
Part 2-9: Particular Requirements for Tappers	IEC 60745-2-9; AS/NZS 60745.2.9; UL 60745-2-9
Part 2-11: Particular Requirements for Reciprocating Saws (Jig and Sabre Saws)	IEC 60745-2-11; AS/NZS 60745.2.11; UL 60745-2-11; CSA C22.2 NO 60745-2-11
Part 2-14: Particular Requirements for Planers	IEC 60745-2-14; AS/NZS 60745.2.14
Part 2-15: Particular Requirements for Hedge Trimmers	IEC 60745-2-15; AS/NZS 60745.2.15; UL 60745-2-15
Part 2-17: Particular Requirements for Routers and Trimmers	IEC 60745-2-17; AS/NZS 60745.2.17; UL 60745-2-17; CSA C22.2 NO 60745-2-17
Part 2-19: Particular Requirements for Jointers	IEC 60745-2-19; EN 60745-2-19; AS/NZS 60745.2.19; UL 60745-2-19; CSA C22.2 NO 60745-2-19
Part 2-20: Particular Requirements for Band Saws	IEC 60745-2-20; EN 60745-2-20; AS/NZS 60745.2.20; UL 60745-2-20
Part 2-21: Particular Requirements for Drain Cleaners	IEC 60745-2-21; EN 62841-2-21; UL 60745-2-21; CSA C22.2 NO 60745-2-21
Part 2-22: Particular Requirements for Cut-Off Machines	IEC 60745-2-22; AS/NZS 60745.2.22; EN 60745-2-22; UL 60745-2-22; CSA C22.2 NO 60745-2-22
Part 2-23: Particular Requirements for Die Grinders and Small Rotary Tools	IEC 60745-2-23; AS/NZS 60745.2.23; EN 60745-2-23; UL 60745-2-23
Electric Motor-Operated Hand-Held Tools, Transportable Tools and Lawn and Garden Machinery – Safety –Part 2-1: Particular Requirements for Hand-Held Drills and Impact Drills	IEC 62841-2-1; AS/NZS 62841.2.1; EN 62841-2-1; UL 62841-2-1; CSA C22.2 NO 62841-2-1
Part 2-2: Particular Requirements for Hand-Held Screwdrivers and Impact Wrenches	IEC 62841-2-2; AS/NZS 62841.2.2; EN 62841-2-2; AS/NZS 60745.2.2; UL 62841-2-2; CSA C22.2 NO 62841-2-2
Part 2-3: Particular Requirements for Hand-Held Grinders, Disc-Type Polishers and Disc-Type Sanders	IEC 62841-2-3; EN IEC 62841-2-3; AS/NZS 62841.2.3; UL 62841-2-3; CSA C22.2 NO 62841-2-3

Test(s):

Test Method(s)³:

Part 2-4: Particular Requirements for Hand-Held Sanders and Polishers other than Disc Type

IEC 62841-2-4; AS/NZS 62841.2.4;
EN 62841-2-4; UL 62841-2-4;
CSA C22.2 NO 62841-2-4

Part 2-5: Particular Requirements for Hand-Held Circular Saws

IEC 62841-2-5; AS/NZS 62841.2.5;
EN 62841-2-5; UL 62841-2-5;
CSA C22.2 NO 62841-2-5

Part 2-6: Particular Requirements for Hand-Held Hammers

IEC 62841-2-6; AS/NZS 62841.2.6;
EN IEC 62841-2-6; UL 62841-2-6;
CSA C22.2 NO 62841-2-6

Part 2-8: Particular Requirements for Hand-Held Shears and Nibblers

IEC 62841-2-8; AS/NZS 62841.2.8;
EN 62841-2-8; UL 62841-2-8;
CSA C22.2 NO 62841-2-8

Part 2-9: Particular Requirements for Hand-Held Tappers and Threaders

IEC 62841-2-9; AS/NZS 62841.2.9;
EN 62841-2-9; UL 62841-2-9;
CSA C22.2 NO 62841-2-9

Part 2-10: Particular Requirements for Hand-Held Mixers

IEC 62841-2-10; AS/NZS 62841.2.10;
EN 62841-2-10; UL 62841-2-10;
CSA C22.2 NO 62841-2-10

Part 2-11: Particular Requirements for Hand-Held Reciprocating Saws

IEC 62841-2-11; AS/NZS 62841.2.11;
EN 62841-2-11; UL 62841-2-11;
CSA C22.2 NO 62841-2-11

Part 2-14: Particular Requirements for Hand-Held Planers

IEC 62841-2-14; AS/NZS 62841.2.14;
EN 62841-2-14; UL 62841-2-14;
CSA C22.2 NO 62841-2-14

Part 4-2: Particular Requirements for Hedge Trimmers

IEC 62841-4-2; AS/NZS 62841.4.2;
EN 62841-4-2; UL 62841-4-2;
CSA C22.2 NO 62841-4-2

Part 2-17: Particular Requirements for Hand-Held Routers

IEC 62841-2-17; AS/NZS 62841.2.17;
EN 62841-2-17; UL 62841-2-17;
CSA C22.2 NO 62841-2-17

Part 3-1: Particular Requirements for Transportable Table Saws

IEC 62841-3-1; EN 62841-3-1; UL 62841-3-1;
CSA C22.2 NO 62841-3-1

Part 3-4: Particular Requirements for Transportable Bench Grinders

IEC 62841-3-4; EN 62841-3-4; UL 62841-3-4;
CSA C22.2 NO 62841-3-4

Part 3-9: Particular Requirements for Transportable Mitre Saws

IEC 62841-3-9; EN IEC 62841-3-9;
UL 62841-3-9; CSA C22.2 NO 62841-3-9

Test(s):**Test Method(s) ³:**

Part 3-10: Particular Requirements for Transportable Cut-Off Machines

IEC 62841-3-10; EN 62841-3-10;
UL 62841-3-10; CSA C22.2 NO 62841-3-10

Part 4-1: Particular Requirements for Chain Saws

IEC 62841-4-1; EN IEC 62841-4-1

Part 4-3: Particular Requirements for Pedestrian Controlled Walk-Behind Lawnmowers

IEC 62841-4-3; EN IEC 62841-4-3

Part 4-4: Particular Requirements for Lawn Trimmers, Lawn Edge Trimmers, Grass Trimmers, Brush Cutters and Brush Saws

IEC 62841-4-4; EN IEC 62841-4-4;
UL 62841-4-4; CSA C22.2 NO 62841-4-4

Part 4-5: Particular Requirements for Grass Shears

IEC 62841-4-5; EN IEC 62841-4-5;
UL 62841-4-5

Part 4-6: Particular Requirements for Garden Blowers, Garden Vacuums and Garden Blower/Vacuums

IEC 62841-4-6

Part 4-7: Particular Requirements for Pedestrian Controlled Walk-Behind Lawn Scarifiers and Aerators

IEC 62841-4-7; EN IEC 62841-4-7

Safety of Transportable Motor-Operated Electric Tools – Part 1: General Requirements

IEC 61029-1; EN 61029-1

Part 2-1: Particular Requirements for Circular Saw

IEC 61029-2-1; EN 61029-2-1

Part 2-4: Particular Requirements for Bench Grinders

IEC 61029-2-4; EN 61029-2-4

Part 2-9: Particular Requirements for Mitre Saws

IEC 61029-2-9

Part 2-10: Particular Requirements for Cutting-Off Grinders

IEC 61029-2-10; EN 61029-2-10

Lithium-Ion Batteries and Charging Systems - Safety

IEC 63370

Transformer

Safety of Power Transformers, Power Supplies, Reactors and Similar Products -- Part 1: General Requirements and Tests

IEC 61558-1; EN 61558-1; AS/NZS 61558.1

Test(s):**Test Method(s)³:**

Part 2-1: Particular Requirements and Tests for Separating Transformers and Power Supplies Incorporating Separating Transformers for General Applications

IEC 61558-2-1; EN 61558-2-1;
AS/NZS 61558.2.1

Part 2-7: Particular Requirements and Tests for Transformers and Power Supplies for Toys

IEC 61558-2-7; EN 61558-2-7;
AS/NZS 61558.2.7

Safety of Transformers, Reactors, Power Supply Units and Combinations Thereof - Part 1: General Requirements and Tests

IEC 61558-1; EN IEC 61558-1;
AS/NZS 61558.1

Safety of Transformers, Reactors, Power Supply Units and Similar Products for Supply Voltages Up to 1 100 V - Part 2-4: Particular Requirements and Tests for Isolating Transformers and Power Supply Units Incorporating Isolating Transformers

IEC 61558-2-4; EN 61558-2-4;
AS/NZS 61558.2.4

Part 2-6: Particular Requirements and Tests for Safety Isolating Transformers and Power Supply Units Incorporating Safety Isolating Transformers

IEC 61558-2-6; EN 61558-2-6;
AS/NZS 61558.2.6

Part 2-13: Particular Requirements and Tests for Auto Transformers and Power Supply Units Incorporating Auto Transformers

IEC 61558-2-13; EN 61558-2-13;
AS/NZS 61558.2.13

Part 2-16: Particular Requirements and Tests for Switch Mode Power Supply Units and Transformers for Switch Mode Power Supply Units

IEC 61558-2-16; EN 61558-2-16;
AZ/NZS 61558.2.16

Safety of Portable Inverters

AS/NZS 4763

Power Supplies

Eco-Design Requirements for External Power Supplies Pursuant

EU 2019/1782

Performance of External Power Supplies - Test Method and Energy Performance Mark

AS/NZS 4665.1

Minimum Allowable Values of Energy Efficiency and Evaluating Values of Energy Conservation for Single Voltage External AC-DC and AC-AC Power Supplies

GB 20943

Test(s):

Test Method(s) ³:

California Code of Regulations, Title 20: Division 2, Chapter 4, Article 4, Sections 1601-1609: Appliance Efficiency

CEC-400-2017-002

Energy Conservation Program for Consumer Products Department of Energy

Department of Energy 10 CFR Part 430

Uniform Test Method for Measuring the Energy Consumption of Battery Chargers

10 CFR Appendix Y to Subpart B of Part 430

Uniform Test Method for Measuring the Energy Consumption of External Power Supplies

10 CFR Appendix Z to Subpart B of Part 430

Test Method for Calculating the Energy Efficiency

CSA C381.1;

Information Technology Equipment and Office Equipment

Electrical and Electronic Household and Office Equipment Measurement of Low Power Consumption

EN 50564

Information Technology Equipment-Energy Performance of Computer Monitors; Part 1: Methods of Measurement of Energy Performance

AS/NZS 5815.1

Part 2: Minimum Energy Performance Standards (MEPS) and Energy Rating Labels

AS/NZS 5815.2

Information Technology Equipment-Safety-Part 1:General requirements

IEC 60950-1; EN 60950-1; AS/NZS 60950.1; UL 60950; CSA C22.2 NO. 60950

Audio and Video Equipment

Audio, Video and Similar Electronic Apparatus-Safety Requirements

IEC 60065; EN 60065; AS/NZS 60065; UL 60065; CSA C22.2 No. 60065

Audio/Video, Information and Communication Technology Equipment – Part 1: Safety Requirements

IEC 62368-1; EN 62368-1; AS/NZS 62368.1; EN IEC 62368-1; UL 62368-1; CSA C22.2 No. 62368-1

Part 3: Safety Aspects for DC Power Transfer Through Communication Cables and Ports

IEC 62368-3; EN IEC 62368-3

Test(s):

Safety Requirements for Radio Transmitting Equipment – General Requirements and Terminology

Test Method(s) ³:

IEC 60215

Battery

Batteries Containing Alkaline or Other Nonacid Electrolytes - Safety Requirements for Portable Sealed Secondary Cells, and for Batteries Made from Them, for Use in Portable Applications

IEC 62133; EN 62133; UL 62133

Secondary Cells and Batteries Containing Alkaline or Other Nonacid Electrolytes - Safety Requirements for Portable Sealed Secondary Cells, and for Batteries Made from Them, for use in Portable Applications
Part 1: Nickel Systems

IEC 62133-1; EN 62133-1

Secondary Cells and Batteries Containing Alkaline or Other Nonacid Electrolytes - Safety Requirements for Portable Sealed Secondary Cells, and for Batteries Made from Them, for Use in Portable Applications
Part 2: Lithium Systems

IEC 62133-2; EN 62133-2

Recommendations on the Transport of Dangerous Goods Manual of Tests and Criteria Lithium Batteries

ST/SG/AC.10/11/Rev.7/Amend.1 38.3.4.1

Primary Batteries - Part 1: General

IEC 60086-1; EN 60086-1

Primary Batteries - Part 2: Physical and Electrical Specifications

IEC 60086-2; EN 60086-2

Primary Batteries - Part 4: Safety of Lithium Batteries

IEC 60086-4; EN 60086-4

Primary Batteries - Part 5: Safety of Batteries with Aqueous Electrolyte

IEC 60086-5; EN 60086-5

Secondary Cells and Batteries Containing Alkaline or Other Nonacid Electrolytes – Safety Requirements for Secondary Lithium Cells and Batteries, for Use in Industrial Applications

IEC 62619; EN 62619

Test(s):

Test Method(s) ³:

Secondary Cells and Batteries Containing Alkaline or Other Nonacid Electrolytes - Secondary Lithium Cells and Batteries for Use in Industrial Applications

IEC 62620; EN 62620

Standard for General Requirements for Battery-Powered Appliance

UL 2595

Lithium Batteries

UL 1642

Household and Commercial Batteries

UL 2054

ANSI/CAN/UL Batteries for Use in Stationary and Motive Auxiliary Power Applications

UL 1973

Electrical Equipment for Measurement, Control, and Laboratory Use

Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use – Part 1: General Requirements

IEC 61010-1; EN 61010-1; UL 61010-1; CAN/CSA-C22.2 NO. 61010-1-12

Part 2-010: Particular Requirements for Laboratory Equipment for the Heating of Materials

IEC 61010-2-010; EN 61010-2-010; EN IEC 61010-2-010; UL 61010-2-010; CSA C22.2 NO. 61010-2-010

Part 2-011: Particular Requirements for Refrigerating Equipment

IEC 61010-2-011; EN 61010-2-011; EN IEC 61010-2-011; UL 61010-2-011; CSA C22.2 No. 61010-2-011

Part 2-020: Particular Requirements for Laboratory Centrifuges

IEC 61010-2-020; EN 61010-2-020; CSA C22.2 NO. 61010-2-020

Part 2-051: Particular Requirements for Laboratory Equipment for Mixing and Stirring

IEC 61010-2-051; EN 61010-2-051; UL 61010-2-051; CSA C22.2 NO. 61010-2-051

Part 2-081: Particular Requirements for Automatic and Semi-Automatic Laboratory Equipment for Analysis and Other Purposes

IEC 61010-2-081; EN 61010-2-081; EN IEC 61010-2-081; UL 61010-2-081; CSA C22.2 NO. 61010-2-081

Part 2-040: Particular Requirements for Sterilizers and Washer-Disinfectors Used to Treat Medical Materials

IEC 61010-2-040; EN 61010-2-040; UL 61010-2-040; CSA C22.2 NO. 61010-2-040

Test(s):

Part 2-101: Particular Requirements for
in Vitro Diagnostic (IVD) Medical Equipment

Test Method(s)³:

IEC 61010-2-101; EN 61010-2-101;
UL 61010-2-101;
CSA C22.2 NO. 61010-2-101

Explosive Equipment

Explosive Atmospheres

IEC 60079-0; EN IEC 60079-0;
UL 60079-0; CAN/CSA-C22.2 No. 60079-0

Part 1: Equipment Protection by
Flameproof Enclosures "d"

IEC 60079-1; EN 60079-1; UL 60079-1;
CAN/CSA-C22.2 No. 60079-1

Part 7: Equipment Protection by
Increased Safety "e"

IEC 60079-7; EN IEC 60079-7; UL 60079-7;
CAN/CSA-C22.2 No. 60079-7

Part 11: Equipment Protection by
Intrinsic Safety "i"

IEC 60079-11; EN 60079-11; UL 60079-11;
CAN/CSA-C22.2 No. 60079-11

Part 18: Equipment Protection by
Encapsulation "m"

IEC 60079-18; EN 60079-18; UL 60079-18;
CAN/CSA-C22.2 No. 60079-18

Part 28: Protection of Equipment and
Transmission Systems Using Optical Radiation

IEC 60079-28; EN 60079-28; UL 60079-28;
CAN/CSA-C22.2 No. 60079-28

Part 31: Equipment Dust Ignition
Protection by Enclosure "t"

IEC 60079-31; EN 60079-31; UL 60079-31;
CAN/CSA-C22.2 No. 60079-31

Medical Devices (Excluding EMC)

Part 2-46: Particular Requirements
for the Basic Safety and Essential Performance of
Operating Tables

IEC 60601-2-46; EN IEC 60601-2-46;
CSA-C22.2 No. 60601-2-46

Part 2-52: Particular Requirements
for the Basic Safety and Essential Performance of
Medical Beds

IEC 60601-2-52; EN 60601-2-52;
CAN/CSA-C22.2 No. 60601-2-52

Part 2-57: Particular Requirements
for the Basic Safety and Essential Performance of
Non-Laser Light Source Equipment Intended for
Therapeutic, Diagnostic, Monitoring and
Cosmetic/Aesthetic Use

IEC 60601-2-57; EN 60601-2-57;
CAN/CSA-C22.2 No. 60601-2-57

Part 2-30: Particular Requirements
for the Basic Safety and Essential Performance of
Automated Noninvasive Sphygmomanometers

IEC 80601-2-30; EN IEC 80601-2-30;
ANSI AAMI IEC 80601-2-30;
CAN/CSA C22.2 NO. 80601-2-30

Test(s):

Test Method(s) ³:

Part 2-56: Particular Requirements for Basic Safety and Essential Performance of Clinical Thermometers for Body Temperature Measurement

ISO 80601-2-56; EN ISO 80601-2-56;
CSA-C22.2 No. 80601-2-56

Part 2-61: Particular Requirements for Basic Safety and Essential Performance of Pulse Oximeter Equipment

ISO 80601-2-61; EN ISO 80601-2-61;
CAN/CSA-C22.2 No. 80601-2-61

Medical Electrical Equipment –Part 1: General Requirements for Basic Safety and Essential Performance

IEC 60601-1; EN 60601-1;
ANSI/AAMI ES60601-1;
CAN/CSA-C22.2 NO. 60601-1

Medical Electrical Equipment - Part 1-6: General Requirements for Basic Safety and Essential Performance - Collateral Standard: Usability

IEC 60601-1-6; EN 60601-1-6;
CAN/CSA-C22.2 NO. 60601-1-6

Medical Electrical Equipment - Part 1-8: General Requirements for Basic Safety and Essential Performance - Collateral Standard: General Requirements, Tests and Guidance for Alarm Systems in Medical Electrical Equipment and Medical Electrical Systems

IEC 60601-1-8; EN 60601-1-8;
ANSI/AAMI/IEC 60601-1-8;
CAN/CSA-C22.2 NO. 60601-1-8A

Medical Electrical Equipment - Part 1-9: General Requirements for Basic Safety and Essential Performance - Collateral Standard: Requirements for Environmentally Conscious Design

IEC 60601-1-9; EN 60601-1-9;
CAN/CSA-C22.2 NO. 60601-1-9

Medical Electrical Equipment –Part 1-11: General Requirements for Basic Safety and Essential Performance – Collateral Standard: Requirements for Medical Electrical Equipment and Medical Electrical Systems Used in the Home Healthcare Environment

IEC 60601-1-11; EN 60601-1-11;
ANSI AAMI HA60601-1-11;
CSA C22.2 No. 60601-1-11

Medical Electrical Equipment –Part 1-12: General Requirements for Basic Safety and Essential Performance – Collateral Standard: Requirements for Medical Electrical Equipment and Medical Electrical Systems Intended for Use in the Emergency Medical Services Environment

IEC 60601-1-12; EN 60601-1-12;
ANSI AAMI IEC 60601-1-12;
CSA-C22.2 No. 60601-1-12

Medical Electrical Equipment –Part 2-10: Particular Requirements for the Basic Safety and Essential Performance of Nerve and Muscle Stimulators

IEC 60601-2-10;
EN 60601-2-10;
CSA-C22.2 NO. 60601-2-10

Test(s):

Test Method(s)³:

Medical Electrical Equipment - Part 2-18:
Particular Requirements for the Basic Safety and
Essential Performance of Endoscopic
Equipment

IEC 60601-2-18; EN 60601-2-18;
CSA-C22.2 No. 60601-2-18

Medical electrical equipment – Part 2-19:
Particular Requirements for the Basic Safety and
Essential Performance of Infant Incubators

IEC 60601-2-19; EN IEC 60601-2-19;
ANSI AAMI IEC 60601-2-19;
CSA C22.2 No. 60601-2-19

Medical Electrical Equipment - Part 2-20:
Requirements for the Basic Safety and Essential
Performance of Infant Transport Incubators

IEC 60601-2-20; EN IEC 60601-2-20;
AAMI 60601-2-20;
CSA C22.2 NO. 60601-2-20

Medical Electrical Equipment - Part 2-21:
Particular Requirements for the Basic Safety and
Essential Performance of Infant Radiant Warmers

IEC 60601-2-21; EN IEC 60601-2-21;
ANSI AAMI IEC 60601-2-21;
CSA C22.2 NO. 60601-2-21

Medical electrical equipment –Part 2-22:
Particular Requirements for Basic Safety and
Essential Performance of Surgical, Cosmetic,
Therapeutic and Diagnostic Laser Equipment

IEC 60601-2-22; EN IEC 60601-2-22;
CSA-C22.2 NO. 60601-2-22

Medical Electrical Equipment – Part 2-24:
Particular Requirements for the Basic Safety and
Essential Performance of Infusion Pumps and
Controllers

IEC 60601-2-24; EN 60601-2-24;
CSA C22.2 NO. 60601-2-24

Medical Electrical Equipment - Part 2-37:
Particular Requirements for the Basic Safety and
Essential Performance of Ultrasonic
Medical Diagnostic and Monitoring Equipment

IEC 60601-2-37; EN 60601-2-37;
CSA-C22.2 No. 60601-2-37

Medical Electrical Equipment –Part 2-41:
Particular Requirements for the Basic Safety and
Essential Performance of Surgical
Luminaires and Luminaires for Diagnosis

IEC 60601-2-41; EN 60601-2-41;
CSA-C22.2 NO. 60601-2-41

Medical Electrical Equipment - Part 2-25:
Particular Requirements for the Basic Safety and
Essential Performance of Electrocardiographs

IEC 60601-2-25; EN 60601-2-25;
CSA C22.2 NO. 60601-2-25;
ANSI AAMI IEC 60601-2-25

Medical Electrical Equipment – Part 2-26:
Particular Requirements for the Basic Safety and
Essential Performance of Electroencephalographs
Medical Electrical Equipment - Part 2-27:
Particular Requirements for the Basic Safety and
Essential Performance of Electrocardiographic
Monitoring Equipment

IEC 60601-2-26; EN 60601-2-26;
ANSI AAMI IEC 60601-2-26;
CSA C22.2 No. 60601-2-26
IEC 60601-2-27; EN 60601-2-27;
ANSI AAMI IEC 60601-2-27



Test(s):

Test Method(s)³:

Medical Electrical Equipment – Part 2-28:
Particular Requirements for the Basic Safety and
Essential Performance of X-ray Tube Assemblies
for Medical Diagnosis

IEC 60601-2-28; EN IEC 60601-2-28;
CSA C22.2 NO. 60601-2-28

Medical Electrical Equipment – Part 2-34:
Particular Requirements for the Basic Safety and
Essential Performance of Invasive Blood Pressure
Monitoring Equipment

IEC 60601-2-34; EN 60601-2-34;
CSA C22.2 NO. 60601-2-34

Medical Electrical Equipment - Part 2-44:
Particular Requirements for the Basic Safety and
Essential Performance of X-Ray Equipment for
Computed Tomography

IEC 60601-2-44; EN 60601-2-44;
CSA C22.2 NO. 60601-2-44

Medical Electrical Equipment – Part 2-45:
Particular Requirements for the Basic Safety and
Essential Performance of Mammographic X-ray
Equipment and Mammographic Stereotactic
Devices

IEC 60601-2-45; EN 60601-2-45;
CSA C22.2 NO. 60601-2-45

Medical Electrical Equipment – Part 2-54:
Particular Requirements for the Basic Safety and
Essential Performance of X-ray Equipment for
Radiography and Radioscopy

IEC 60601-2-54; EN 60601-2-54;
CSA C22.2 NO. 60601-2-54

Medical Electrical Equipment – Part 2-63:
Particular Requirements for the Basic Safety and
Essential Performance of Dental Extra-Oral X-
Ray Equipment

IEC 60601-2-63; EN 60601-2-63;
CSA C22.2 NO. 60601-2-63

Medical Electrical Equipment – Part 2-65:
Particular Requirements for the Basic Safety and
Essential Performance of Dental Intra-Oral X-Ray
Equipment

IEC 60601-2-65; EN 60601-2-65;
CSA C22.2 NO. 60601-2-65

Medical Electrical Equipment - Part 2-47:
Particular Requirements for the Basic Safety and
Essential Performance of Ambulatory
Electrocardiographic Systems

IEC 60601-2-47; EN 60601-2-47;
ANSI AAMI IEC 60601-2-47;
CSA C22.2 NO. 60601-2-47

Medical Electrical Equipment - Part 2-49:
Particular Requirements for the Basic Safety and
Essential Performance of Multifunction Patient
Monitors

IEC 60601-2-49; EN 60601-2-49;
CSA C22.2 NO. 60601-2-49

Test(s):

Medical Electrical Equipment - Part 2-50:
Particular Requirements for the Basic Safety and
Essential Performance of Infant Phototherapy
Equipment

Medical Electrical Equipment – Part 2-49:
Particular Requirements for the Basic Safety and
Essential Performance of Multifunction Patient
Monitors

Medical Electrical Equipment – Part 2-60:
Requirements for the Basic Safety and Essential
Performance of Dental Equipment

Medical Electrical Equipment — Part 2-12:
Particular Requirements for Basic Safety and
Essential Performance of Critical Care Ventilators

Medical Electrical Equipment - Part 2-55:
Particular Requirements for the Basic Safety and
Essential Performance of Respiratory Gas
Monitors

Medical Electrical Equipment — Part 2-74:
Particular Requirements for Basic Safety and
Essential Performance of Respiratory
Humidifying Equipment

Medical Electrical Equipment — Part 2-66:
Particular Requirements for the Basic Safety and
Essential Performance of Hearing Aids and
Hearing Aid Systems

Medical Electrical Equipment — Part 2-69:
Particular Requirements for the Basic Safety and
Essential Performance of Oxygen Concentrator
Equipment

Medical Electrical Equipment – Part 2-83:
Particular Requirements for the Basic Safety and
Essential Performance of Home Light Therapy
Equipment

Medical Electrical Equipment - Part 2-2:
Particular Requirements for the Basic Safety and
Essential Performance of High Frequency
Surgical Equipment and High Frequency Surgical
Accessories

Test Method(s) ³:

IEC 60601-2-50; EN 60601-2-50;
ANSI AAMI IEC 60601-2-50;
CSA C22.2 NO. 60601-2-50

IEC 80601-2-49;
EN IEC 80601-2-49;
CSA C22.2 NO. 80601-2-49

IEC 80601-2-60; EN IEC 80601-2-60;
CSA C22.2 NO. 80601-2-60

ISO 80601-2-12; EN ISO 80601-2-12;
CSA C22.2 NO. 80601-2-12

ISO 80601-2-55; EN ISO 80601-2-55;
CSA C22.2 NO. 80601-2-55

ISO 80601-2-74; EN ISO 80601-2-74;
CSA C22.2 NO. 80601-2-74

IEC 60601-2-66; EN IEC 60601-2-66;
CSA C22.2 NO. 60601-2-66

ISO 80601-2-69; EN ISO 80601-2-69;
CSA C22.2 NO. 80601-2-69

IEC 60601-2-83; EN IEC 60601-2-83

IEC 60601-2-2; EN IEC 60601-2-2;
ANSI AAMI IEC 60601-2-2;
CSA C22.2 NO. 60601-2-2:19

Test(s):

Medical Electrical Equipment - Part 2-26:
Particular Requirements for the Basic Safety and
Essential Performance of Electroencephalographs

Medical Device Software – Software Life Cycle
Processes

Test Method(s) ³:

IEC 80601-2-26; EN IEC 80601-2-26;
CSA C22.2 NO 60601-2-26

IEC 62304; EN 62304; ANSI AAMI IEC 62304;
CSA IEC 62304

Electromagnetic Compatibility

Emissions (Conducted Emissions Only)

CFR 47 FCC Part 18;
EN 55011; EN 55014-1; EN IEC 55014;
EN 55032; EN IEC 55015; IEC/EN 61326-1;
CISPR 11; CISPR 15; CISPR 32; CISPR 14-1;
CISPRJ 15; CISPRJ 32; AS/NZS CISPR 14.1;
AS/NZS CISPR 32; AS/NZS CISPR 15;
ICES-001; ICES-003; ICES-005; J55014-1;
IEC/EN 61000-6-3; EN IEC 61000-6-3;
AS/NZS 61000.6.3; IEC/EN 61000-6-4;
EN IEC 61000-6-4; AS/NZS 6100.4;
IEC/EN 60601-1-2; GB/T 18268.1; GB/T 17743;
BM 4343.1; GB/T 9254.1; SANS 2332;
SANS 214-1; SANS 215

Current Harmonics

IEC 61000-3-2; EN 61000-3-2;
EN IEC 61000-3-2

Voltage Fluctuations & Flicker

IEC 61000-3-3; EN 61000-3-3

Immunity

Electrostatic Discharge (ESD)

IEC/EN 61000-4-2; GB/T 17626.2

Electrical Fast Transient/Burst

IEC/EN 61000-4-4; GB/T 17626.4

Surge

IEC/EN 61000-4-5; GB/T 17626.5

Conducted Immunity

IEC/EN 61000-4-6; GB/T 17626.6

Power Frequency Magnetic Field

IEC/EN 61000-4-8; GB/T 17626.8

Voltage Dips, Short Interruptions
Line Voltage Variations
Generic Standards

IEC/EN 61000-4-11; EN IEC 61000-4-11;
GB/T 17626.11
IEC/EN 61000-6-1; EN IEC 61000-6-1;
IEC/EN 61000-6-2; EN IEC 61000-6-2;
IEC/EN 61000-6-3; EN IEC 61000-6-3;
IEC/EN 6100-6-4; EN IEC 61000-6-4

Product Family Standards and Industry Standards

CISPR 35; EN 55035; GB/T9254.2;
IEC/EN 61547; GB/T 18595;

Test(s):

Test Method(s)³:

	CISPR 14-2; EN 55014-2; GB/T 4343.2; IEC EN 55014-2; IEC/EN 60601-1-2; ANSI/AAMI/IEC 60601-1-2; YY9706.102; IEC/EN 61326-1; GB/T 18268.1; IEC/EN 61326-2-2; GB/T 18268.22; IEC/EN 61326-2-6; GB/T 18268.26; EN 50130-4; IEC 61204-3; EN IEC 61204-3; EN 50121-1; EN 50121-3-2; EN 50121-4; EN 50121-5; SANS 2335; SANS 214-2; SANS 61547
Induced Current Density	IEC/EN 62493
Telecommunication Standards	ETSI EN 301 489-1; ETSI EN 301 489-3; ETSI EN 301 489-17;
Environment and Reliability Tests	
Dust Proof Test	IEC 60529
Waterproof Test	IEC 60529
Vibration Test	IEC 60068-2-6; IEC 60068-2-27; IEC 60068-2-64
Safety of Machinery — General Principles for Design — Risk Assessment and Risk Reduction	ISO 12100
Safety of Machinery – Part 1: General Requirements	IEC 60204-1

On the following product(s)/product types/materials:

¹ When the date, edition, version, etc. is not identified in the scope of accreditation, laboratories may use the version that immediately precedes the current version for a period of one year from the date of publication of the standard measurement method, per part C., Section 1 of A2LA R101 - *General Requirements- Accreditation of ISO-IEC 17025 Laboratories*.

² A2LA provides accreditation to the U.S. EPA’s Conditions and Criteria for Recognition of Laboratories for the ENERGY STAR Program by verifying an organization’s compliance to A2LA document R222 - Specific Requirements - EPA ENERGY STAR Accreditation Program and to the related test methods listed above.

Accreditation by A2LA does not infer Recognition by the EPA for ENERGY STAR® testing. Please verify this organization’s recognition status by using the EPA’s searchable database listed below:



<http://www.energystar.gov/cms/default/index.cfm/news-and-announcements/hidden-articles/eparecognized-bodies-for-lighting-products/epa-recognized-bodies-for-lighting-products>

Testing Activities performed under the scope of the U.S FDA ASCA Pilot Program Specifications: <i>Basic Safety and Essential Performance of Medical Electrical Equipment, Medical Electrical Systems, and Laboratory Medical Equipment – Standards Specific Information for the Accreditation Scheme for Conformity Assessment (ASCA) Pilot Program</i> published on September 25th, 2020, and in accordance with all requirements of A2LA R256 <i>Specific Requirements- FDA ASCA Program</i> ³	
Standards	ASCA Doc Number
IEC 61010-1 Edition 3.1 2017-01 CONSOLIDATED VERSION	19-34
IEC 60601-1 Edition 3.2 2020-08 CONSOLIDATED VERSION	19-49
ANSI UL 61010-1 3rd Ed, dated May 12, 2012, with revision through July 19, 2019	19-41
ISO 80601-2-61 Second edition 2017-12 (Corrected version 2018-02)	1-139
ISO 80601-2-69 First edition 2014-07-15	1-102
IAO 80601-2-12 Second edition 2020-02	1-146
IEC 60601-1-6 Edition 3.2 2020-07 CONSOLIDATED VERSION	5-132
IEC 60601-2-20 Edition 3.0 2020-09	6-462
IEC 60601-2-50 Edition 2.1 2016-04	6-387
IEC 60601-2-65 Edition 1.1 2017-05 CONSOLIDATED VERSION	12-311
ANSI AAMI ES60601-1:2005/(R)2012 & A1:2012 C1:2009/(R)2012 & A2:2010/(R)2012 (Cons. Text) [Incl. AMD2:2021]	19-46
IEC 61326-2-6 Edition 3.0 2020-10	19-43
IEC 60601-2-54 Edition 1.2 2018-06 CONSOLIDATED VERSION	12-317
IEC 60601-2-54 Edition 2.0 2022-09	12-348
IEC 61326-1 Edition 3.0 2020-10	19-42
ANSI AAMI HA60601-1-11:2015 [Including AMD1:2021]	19-47
ANSI AAMI HA60601-1-11:2015	19-16
ANSI AAMI ES60601-1:2005/(R)2012 and A1:2012 C1:2009/(R)2012 and A2:2010/(R)2012 (Consolidated Text)	19-4
IEC 60601-2-19 Edition 2.1 2016-04	6-385
IEC 60601-1-11 Edition 2.0 2015-01	19-14
IEC 60601-2-20 Edition 2.1 2016-04	6-386
IEC 60601-1-12 Edition 1.1 2020-07 CONSOLIDATED VERSION	19-39
IEC 60601-1-12 Edition 1.0 2014-06	19-15
IEC 60601-2-52 Edition 1.0 2009-12	6-321
IEC 60601-1-11 Edition 2.1 2020-07 CONSOLIDATED VERSION	19-38
IEC 60601-1-6 Edition 3.1 2013-10	5-89
IEC 60601-1-8 Edition 2.2 2020-07 CONSOLIDATED VERSION	5-131
IEC 60601-1-8 Edition 2.1 2012-11	5-76
IEC 60601-2-2 Edition 6.0 2017-03	6-389
IEC 60601-2-19 Edition 3.0 2020-09	6-461
IEC 60601-2-21 Edition 2.1 2016-04	6-388
IEC 60601-2-21 Edition 3.0 2020-09	6-463
ISO 80601-2-69 Second edition 2020-11	1-148
IEC 60601-2-18: Edition 3.0 2009-08	9-114
IEC 60601-2-47 Edition 2.0 2012-02	3-155
ISO 80601-2-74 First edition 2017-05	1-138
IEC 60601-2-63 Edition 1.2 2021-05 CONSOLIDATED VERSION	12-339

IEC 60601-2-50 Edition 3.0 2020-09	6-450
ISO 80601-2-12 First edition 2011-04-15	1-98
IEC 60601-2-27 Edition 3.0 2011-03	3-126
ISO 80601-2-56 Second edition 2017-03	6-421
IEC 60601-2-63 Edition 1.1 2017-07 CONSOLIDATED VERSION	12-310
IEC 80601-2-30: Edition 2.0 2018-03	3-123
IEC 60601-2-28 Edition 3.0 2017-06	12-309
IEC 80601-2-60 Edition 2.0 2019-06	4-262
IEC 60601-2-25 Edition 2.0 2011-10	3-105
IEC 60601-2-45 Edition 3.1 2015	12-294
IEC 60601-2-44 Edition 3.2: 2016	12-302
IEC 60601-2-37 Edition 2.1 2015	12-293
ISO 80601-2-55 Second edition 2018-02	1-140
IEC 60601-2-65 Edition 1.2 2021-05 CONSOLIDATED VERSION	12-340
IEC 60601-2-10 Edition 2.1 2016-04	17-16
IEC 60601-2-57 Edition 1.0 2011-01	12-242
IEC 60601-2-22 Edition 3.1 2012-10	12-268
IEC 60601-2-34 Edition 3.0 2011-05	3-115
ISO 80601-2-12 Second edition 2020-02	1-146
ANSI AAMI IEC 80601-2-30:2018	3-123

⁴ These methods have been assessed by A2LA according to A2LA’s FDA ASCA Program requirements. Accreditation by A2LA does not imply FDA ASCA-Accreditation. All ASCA-accreditation decisions for testing laboratory applications are made solely by the FDA, a list of approved laboratories can be found at FDA.gov.

Exclusions Tables

Standard	Clause/Description
IEC/EN 60335-1	19.11.4.2/ Radiated fields test
	19.11.4.7/ Mains signals test
IEC/EN 60335-1	Annex F/Capacitor
IEC/EN 60335-2-24	Cl.21/Vibration
IEC/EN 60335-2-29	Cl.21/Vibration
IEC/EN 60598-1	Cl.4.20/Vibration
IEC/EN 60065	Cl.6.1/Ionizing radiation
IEC/EN 60950	Cl.4.3.13.2/Ionizing radiation
IEC/EN 60065	Cl.6.2/Laser radiation
IEC/EN 60950	Cl.4.3.13.5/Laser radiation
IEC/EN 60065	Cl.7/Softening temperature

IEC/EN 60065	Cl.8.18/Endurance test for wound components
IEC/EN 60065	Cl.14.1/Resistors
IEC/EN 60065	Cl.14.2/Capacitors and RC-units
IEC/EN 60950	Cl.3.2.5.1/External flexible cord
IEC/EN 60065	Cl.16.3b/External flexible cord
IEC/EN 60065	Cl.18/Mechanical strength of picture tubes and protection against effects of implosion
IEC/EN 60950	Cl.4.2.8/Mechanical strength of picture tubes and protection against effects of implosion
IEC/EN 60065	Cl.21.3/Pre-conditioning of printed circuit boards
IEC/EN 60065	Annex H/Insulating winding wires
IEC/EN 60950	Cl.4.3.13.3/Effect of UV radiation on materials
IEC/EN 60950	Cl.4.3.13.4/Human exposure to UV radiation
IEC/EN 60065	Cl.12.1/Vibration
IEC/EN 60335-2-65/Cl.32 IEC/EN 60335-1& IEC/EN 60335-2-xx/Cl.32	Cl.32/Ozone concentration
IEC/EN 60335-2-2/Cl.21; IEC/EN 60335-2-54/Cl.21; IEC/EN 60335-2-69/Cl.21	Cl.21/test of current carrying hose
IEC/EN 60335-2-75	Annex AA/Aging test for elastomeric parts
IEC/EN 60335-2-7	Annex BB/Aging test for elastomeric parts
IEC/EN 60745-1& IEC/EN 60745-2-xx	Cl.6.1/Noise
IEC/EN 60745-1& IEC/EN 60745-2-xx	Cl.6.2/Vibration
IEC/EN 60335-1& IEC/EN 60335-2-xx	Annex xx/Emission of acoustical noise
IEC/EN 60335-1& IEC/EN 60335-2-xx/ Annex xx	Annex xx/Emission of vibration
IEC/EN 60745-2-5	Annex AA and annex BB/Mechanical hazards(harness measurement, ruptures measurement)
IEC/EN 60335-1	19.11.4.2/ Radiated fields test
IEC/EN 60335-1	19.11.4.7/ Mains signals test

IEC/EN 62368-1	5.4.1.10/Thermoplastic parts on which conductive metallic parts are directly mounted
	10.5/X-radiation
	10.6/Effect of UV radiation on materials
	Annex C/UV radiation
	Annex G.5.3.4/Transformers using fully insulated winding wire (FIW)
	Annex G.7/Mains supply cords
	Annex G.9/Integrated circuit (IC) current limiters
	Annex G.10/ Test for resistor serving as safeguard Test sequence
	Annex G.13.6.2/Test method and compliance criteria
	Annex G.15.2.1/Hydrostatic pressure
	Annex G.15.2.3/Tubing and fittings compatibility test
	Annex J/Insulated winding wires for use without interleaved insulation
	Annex M.7/Concentration of hydrogen gas
	Annex M.8.2/Protection against internal ignition from external spark sources – Spark Test
	Annex P.4/Metallized coatings and adhesives securing parts
Annex S.3.2/Tests for resistance to heat and fire	
IEC/EN 62841-1	Cl.21.12/ Rubber aging test
	Cl.26.2/ Quick-connect terminals
	Cl.26.4/ Measure the thickness of the coating
IEC/EN 62841-1	Cl.18.5.2/ Armature open-circuits test
IEC/EN 62841-3-1	Cl.19.103/ Riving knife
IEC/EN 62841-2-5	AA.19.104/ Flanges
IEC/EN 60065	Cl.6.1/Ionizing radiation
IEC/EN 60950	Cl.4.3.13.2/Ionizing radiation

IEC/EN 60065	Cl.7/Three phase voltage supply system
IEC/EN 60065	Cl.8.18/Endurance test for wound components
IEC/EN 60065	Cl.14.2/Resistors
IEC/EN 60065	Cl.14.3/Capacitors and RC-units
IEC/EN 60950	Cl.3.2.5.1/AC Power Supply Cords
IEC/EN 60065	Cl.16.3b/External Flexible Cord
IEC/EN 60065	20.1.3/Pre-conditioning of printed circuit boards
IEC/EN 60065	Annex H/Insulating winding wires
IEC/EN 60950	Cl.4.3.13.3/Effect of UV radiation on materials
IEC/EN 60950	Cl.4.3.13.4/Human exposure to UV radiation
IEC/EN 61558-1	Cl.19.9/19.9 Insulating material separating input and output windings
IEC/EN 60335-2-2	Cl.21/ Current-carrying hoses test
IEC/EN 60335-2-54	Cl.21/ Current-carrying hoses test
IEC/EN 60335-2-69	Cl.21/ Current-carrying hoses test
IEC/EN 60335-2-65	Cl.32/ Ozone concentration test
IEC/EN 60335-2-75	Annex AA/ Aging test for elastomeric parts
IEC/EN 60335-2-79	Cl.11/ Carbon monoxide detector
IEC 60335-2-79	Annex DD/ Vibration test
IEC 60335-2-79	Annex CC/ Noise test
IEC/EN 60335-1&IEC/EN 60335-2-XX	Annex R/ Software evaluation
IEC/EN 60335-1&IEC/EN 60335-2-2	Cl.22.201/ Software evaluation
	Annex R/ Software evaluation
IEC/EN 60335-1&IEC/EN 60335-2-4	Cl.20.103/ Software evaluation
IEC/EN 60335-1&IEC/EN 60335-2-4	Cl.20.104/ Software evaluation
IEC/EN 60335-1&IEC/EN 60335-2-6	Cl.22.123/ Software evaluation
	Annex R/ Software evaluation
IEC/EN 60335-1&IEC/EN 60335-2-7	Cl.20.104/ Software evaluation

	Cl.20.105/ Software evaluation
	Cl.22.101/ Software evaluation
	Annex R/ Software evaluation
IEC/EN 60335-1&IEC/EN 60335-2-11	Cl.20.104/ Software evaluation
	Annex R/ Software evaluation
IEC/EN 60335-1&IEC/EN 60335-2-14	Cl.20.101/ Software evaluation
	Annex R/ Software evaluation
IEC/EN 60335-1&IEC/EN 60335-2-16	Cl.20.101/ Software evaluation
	Annex R/ Software evaluation
IEC/EN 60335-1&IEC/EN 60335-2-21	Cl.24.102.1/ Software evaluation
	Annex R/ Software evaluation
IEC/EN 60335-1&IEC/EN 60335-2-35	Cl.22.105/ Software evaluation
	Cl.22.108/ Software evaluation
	Annex R/ Software evaluation
IEC/EN 60335-1	Cl.19.11.4/ Radiated fields test & Mains signals test
	cl.7.3.9/Design evaluation – Forced internal short circuit (cells)
IEC/EN 60335-1	Clause 7.5 of Annex T/ Flexural strength test and Charpy impact test
IEC 60601-1	9.6.2.1 / Audible acoustic energy
EN 60601-1	8.8.4.2 Resistance to environmental stress
	10.1.1 ME EQUIPMENT not intended to produce diagnostic or therapeutic X-radiation
	10.3 / Microwave radiation
	11.2.2.1 RISK of fire in an OXYGEN RICH ENVIRONMENT
	11.6.7 / Sterilization

ANSI/AAMI ES60601-1 CAN/CSA-C22.2 NO. 60601-1	12.4.5.2 Diagnostic X-ray equipment
	15.4.2 / Temperature and overload control devices
	Annex G Protection against HAZARDS of ignition of flammable anaesthetic mixtures
	Annex L / Insulated winding wires for use without interleaved insulation
IEC 60601-2-46 EN 60601-2-46 CSA-C22.2 No. 60601-2-46	203 / Radiation protection in diagnostic X-ray equipment
IEC 60601-2-52 EN 60601-2-52 CAN/CSA-C22.2 No. 60601-2-52	201.11.6.6.101 / Machine washable medical bed
IEC 60601-2-19 EN IEC 60601-2-19 AAMI 60601-2-19 CSA C22.2 NO. 60601-2-19	201.12.1.109 / Accuracy of indication of relative humidity
	201.12.1.110 / Oxygen control
	201.12.1.111 / Air velocity
	201.12.4.2.101 / CO2-concentration
IEC 60601-2-20 EN IEC 60601-2-20 AAMI 60601-2-20 CSA C22.2 NO. 60601-2-20	201.12.1.109 / Accuracy of indication of relative humidity
	201.12.1.110 / Oxygen control
	201.12.1.111 / Air velocity
	201.12.1.113 / Provision of oxygen
	201.12.4.2.101 / CO2 concentration
IEC 60601-2-21 EN IEC 60601-2-21 AAMI 60601-2-21 CSA C22.2 NO. 60601-2-21	201.12.1.104 / Oxygen control
	201.12.4.2.101 / CO2 concentration
IEC 60601-2-24	201.12.1 / Accuracy of controls and instruments

EN 60601-2-24 AAMI 60601-2-24 CSA C22.2 NO. 60601-2-24	201.12.4.4.104 / Protection against UNINTENDED BOLUS volumes and by occlusion
IEC 60601-2-28 EN 60601-2-28 CSA C22.2 NO. 60601-2-28	201.8.8.3 / Dielectric strength 201.12.4.5.2 / Diagnostic X-RAY EQUIPMENT 203 / RADIATION protection in diagnostic X-RAY EQUIPMENT
IEC 60601-2-34 EN 60601-2-34 CSA C22.2 NO. 60601-2-34	201.12.1.101 / Accuracy of pressure measurements 208.6.6.2.101 / Physiological ALARM CONDITIONS, ALARM LIMITS and delay time of physiological ALARM SIGNALS
IEC 60601-2-44 EN 60601-2-44 CSA C22.2 NO. 60601-2-44	201.8.8.3 / Dielectric strength 203 / General requirements for RADIATION protection in diagnostic X-ray equipment
IEC 60601-2-45 EN 60601-2-45 CSA C22.2 NO. 60601-2-45	201.8.5.4.101 / Stator and stator circuit dielectric strength testing 201.8.8.3 / Dielectric strength 201.9.2.101 / Three dimensional localization and interventional mammographic guidance 203 / Radiation protection in diagnostic X-ray equipment
IEC 60601-2-54 EN 60601-2-54 CSA C22.2 NO. 60601-2-54	201.8.5.4.101 / Stator and stator circuit dielectric strength testing 201.8.8.3 / Dielectric strength 203 / Radiation protection in diagnostic X-ray equipment
IEC 60601-2-63 EN 60601-2-63 CSA C22.2 NO. 60601-2-63	201.8.5.4.101 / Stator and stator circuit dielectric strength testing 201.8.8.3 / Dielectric strength 203 / Radiation protection in diagnostic X-ray equipment

IEC 60601-2-65	201.8.8.3 * Dielectric strength
EN 60601-2-65	203 Radiation protection in diagnostic X-ray equipment
CSA C22.2 NO. 60601-2-65	
ISO 80601-2-74	201.12.1.101 / Humidification output
EN ISO 80601-2-74	201.12.1.105 / Dynamic temperature stability
CSA C22.2 NO. 80601-2-74	
ISO 80601-2-55	201.12 / Accuracy of controls and instruments and protection against hazardous outputs
EN ISO 80601-2-55	
CSA C22.2 NO. 80601-2-55	
ISO 80601-2-12	201.9.101 / Additional requirements for suction procedures
	201.12.1.101 / Volume-control inflation-type
	201.12.1.102 / Pressure-control inflation-type
	201.12.1.105 / Response of the ventilator to an increase in set O2 concentration
IEC 61010-1	9.5 / flammable liquid
	10.5.3(2) / Vi cat softening test
	12.2./ Ionizing radiation test
	12.4 / Microwave radiation test
	12.5 / Sonic and ultrasonic pressure
	13.2.3 / Implosion of cathode ray tubes
IEC 60079-0	26.5.3 Small component ignition test
IEC60079-0	
EN IEC 60079-0	26.10 Resistance to UV light
UL 60079-0	26.11 Resistance to chemical agents for Group I equipment
CAN/CSA-C22.2 No. 60079-0	26.17 Transferred charge test
IEC 60079-1	15.2.2 Determination of explosion pressure (reference pressure) 15.3 Test for non-transmission of an internal ignition 15.4 Tests of flameproof enclosures with breathing and draining devices
EN 60079-1	
UL 60079-1	
CAN/CSA-C22.2 No. 60079-1	



	Annex B Additional requirements for elements, with non-measurable paths of breathing and draining devices
IEC 60079-7:2015+A1:2017 EN IEC 60079-7:2015+A1:2018 UL 60079-7 CAN/CSA-C22.2 No. 60079-7	6.2 rotating electric machines 6.3.3 Mechanical tests for screw lamp holders other than E10 6.3.4 Abnormal operation of luminaires 6.3.5 Sulphur dioxide test for level of protection "eb" for the connection of bi-pin lamp caps to lamp holders 6.6.4 Test for Level of Protection "eb" ventilation of battery container 6.7.4 Test for ventilation of Level of Protection "ec" battery container Annex B.1 resistance heating devices subjected to mechanical stresses
IEC 60079-11 EN 60079-11 UL 60079-11 CAN/CSA-C22.2 No. 60079-11	10.1 Spark ignition test.
IEC 60079-15 EN 60079-15 EN 60079-15 UL 60079-15 CAN/CSA-C22.2 No. 60079-15	11.1 Test for incendive components.
IEC 60079-28:2015 EN 60079-28:2015 UL 60079-28 CAN/CSA-C22.2 No. 60079-28	5.2.4 ignition test 5.3 Requirements for protected optical radiation "op pr" 5.4 Optical system with interlock "op sh"
EC/EN 61000-6-1; EN IEC 61000-6-1; IEC/EN 61000-6-2; EN IEC 61000-6-2	Radiated, radio-frequency electromagnetic field immunity test
CISPR 35; EN 55035; GB/T 9254.2; SANS 2335	Radiated, radio-frequency electromagnetic field immunity test
IEC/EN 61547; GB/T 18595; SANS 61547	Radiated, radio-frequency electromagnetic field immunity test
CISPR 14-2; EN 55014-2; IEC EN 55014-2; GB/T 4343.2; SANS 214-2	Radiated, radio-frequency electromagnetic field immunity test

IEC/EN 61326-1; GB/T 18268.1; IEC/EN 61326-2-2; GB/T 18268.22; IEC/EN 61326-2-6; GB/T 18268.26	Radiated, radio-frequency electromagnetic field immunity test
EN 50130-4	Radiated, radio-frequency electromagnetic field immunity test
IEC 61204-3; EN IEC 61204-3	Radiated, radio-frequency electromagnetic field immunity test
ETSI EN 301 489-1; ETSI EN 301 489-3; ETSI EN 301 489-17	Radiated, radio-frequency electromagnetic field immunity test; 9.6 Vehicular transients and surges
IEC/EN 60601-1-2; YY0505; YY9706.102	Radiated RF EM fields test; 8.10 Proximity fields from RF wireless communications equipment 8.11 Proximity magnetic fields



Accredited Laboratory

A2LA has accredited

EUROFINS ELECTRICAL TESTING SERVICE (SHANGHAI) CO., LTD.

Shanghai, People's Republic of China

for technical competence in the field of

Electrical Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 *General requirements for the competence of testing and calibration laboratories*. This laboratory also meets the requirements of any additional program requirements in the Electrical field. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated April 2017).



Presented this 8th day of August 2023.

A blue ink signature of Trace McInturff, written in a cursive style.

Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 7054.01
Valid to July 31, 2025

For the tests to which this accreditation applies, please refer to the laboratory's Electrical Scope of Accreditation.