

# CERTIFICATE OF ACCREDITATION

This is to attest that

#### **UL LLC**

47173 BENICIA STREET FREMONT, CALIFORNIA 94538 U.S.A.

#### **Testing Laboratory TL-414**

has met the requirements of AC89, *IAS Accreditation Criteria for Testing Laboratories* as well as the *FDA ASCA* specifications and has demonstrated compliance with ISO/IEC Standard 17025:2017, *General requirements for the* competence of testing and calibration laboratories. This organization is accredited to provide the services specified in the scope of accreditation.

Effective Date November 14, 2022



President

International Accreditation Service, Inc.

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# UL LLC www.ul.com

**Contact Name** Chris Blazek

**Contact Phone** +1-408-754-6526

Accredited to ISO/IEC 17025:2017 FDA ASCA Program

Effective Date November 14, 2022

#### **FDA ASCA Program Scope**

Basic Safety and Esse	Basic Safety and Essential Performance of Medical Electrical Equipment, Medical Electrical	
Systems and Laborato		
ANSI AAMI ES60601- 1:2005/(R)2012 & A1:2012, C1:2009/(R)2012 & A2:2010/(R)2012 (Cons. Text) [Incl. AMD2:2021] [19-46]	Medical electrical equipment - Part 1: General requirements for basic safety and essential performance (IEC 60601-1:2005, MOD) [Including Amendment 2 (2021)]	
ANSI AAMI HA60601- 1-11:2015 [Including AMD1:2021] [19-47]	Medical Electrical Equipment Part 1-11: General requirements for basic safety and essential performance Collateral Standard: Requirements for medical electrical equipment and medical electrical equipment and medical electrical systems used in the home healthcare environment (IEC 60601-1-11:2015 MOD) [Including Amendment1 (2021)]	
ANSI AAMI IEC 60601-2-2:2017 [6-389]	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	
ANSI AAMI IEC 60601-2-16:2018 [9-121]	Medical electrical equipment - Part 2-16: Particular requirements for basic safety and essential performance of haemodialysis, haemodiafiltration and haemofiltration equipment	
ANSI AAMI IEC 60601-2- 25:2011/(R)2016 [3-105]	Medical electrical equipment - Part 2-25: Particular requirements for the basic safety and essential performance of electrocardiographs	
IEC 60601-1-6 Edition 3.2 2020-07 CONSOLIDATED VERSION [5-132]	Medical electrical equipment - Part 1-6: General requirements for basic safety and essential performance - Collateral standard: Usability	
IEC 60601-1-8 Edition 2.1 2012-11 [5-76]	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 Edition 2.2 2020-07 CONSOLIDATED VERSION	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	





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[5-131]	M " 1 1 () 1 1 1 () 1 1 1 () 1 1 1 1 1 1 1
IEC 60601-1-11	Medical electrical equipment - Part 1-11: General requirements for basic safety
Edition 2.1 2020-07	and essential performance - Collateral Standard: Requirements for medical
CONSOLIDATED	electrical equipment and medical electrical systems used in the home healthcare
VERSION	environment
[19-38]	
IEC 60601-2-2 Edition	Medical electrical equipment - Part 2-2: Particular requirements for the basic
6.0 2017-03	safety and essential performance of high frequency surgical equipment and high
[6-389]	frequency surgical accessories
IEC 60601-2-5: Edition	Medical electrical equipment - Part 2-5: Particular requirements for the basic
3.0 2009-07	safety and essential performance of ultrasonic physiotherapy equipment
[12-205]	
IEC 60601-2-6 Edition	Medical electrical equipment - Part 2-6: Particular requirements for the basic
2.1 2016-04	safety and essential performance of microwave therapy equipment
CONSOLIDATED	and observed performance of milorentate therapy equipment
VERSION	
[6-423]	
IEC 60601-2-8 Edition	Medical electrical equipment - Part 2-8: Particular requirements for the safety of
2.1 b:2015	therapeutic X-ray equipment operating in the range 10 kV to 1 MV
[12-301]	and appeals A ray equipment operating in the range to its to 1 ins
IEC 60601-2-10	Medical electrical equipment - Part 2-10: Particular requirements for the basic
Edition 2.1 2016-04	safety and essential performance of nerve and muscle stimulators
[17-16]	Salety and essential performance of herve and muscle stillidators
IEC 60601-2-11	Medical electrical equipment - Part 2-11: Particular requirements for the basic
Edition 3.0 2013-01	safety and essential performance of gamma beam therapy equipment
	Salety and essential performance of gainina beam therapy equipment
[12-255] IEC 60601-2-16	Madical alastrical applicant. Dort 2.46. Dorticular requirements for the basis
	Medical electrical equipment - Part 2-16: Particular requirements for the basic
Edition 5.0 2018-4	safety and essential performance of haemodialysis, haemodiafiltration and
[9-121]	haemonfiltration equipment
IEC 60601-2-17	Medical electrical equipment - Part 2-17: Particular requirements for the safety of
Edition 3.0 2013-11	automatically-controlled brachytherapy afterloading equipment
[12-272]	Mark at a tartist and a second and the first
IEC 60601-2-18:	Medical electrical equipment - Part 2-18: Particular requirements for the basic
Edition 3.0 2009-08	safety and essential performance of endoscopic equipment
[9-114]	
IEC 60601-2-19	Medical electrical equipment - part 2-19: particular requirements for the basic
Edition 2.1 2016-04	safety and essential performance of infant incubators
[6-385]	M
IEC 60601-2-20	Medical electrical equipment - Part 2-20: Particular requirements for the basic
Edition 2.1 2016-04	safety and essential performance of infant transport incubators [Including:
CONSOLIDATED	Amendment 1 (2016)]
VERSION	
[6-386]	
IEC 60601-2-21	Medical electrical equipment - Part 2-21: Particular requirements for the basic
Edition 2.1 2016-04	safety and essential performance of infant radiant warmers [Including:
CONSOLIDATED	Amendment 1 (2016)]
VERSION	
[6-388]	
IEC 60601-2-22	Medical electrical equipment - Part 2-22: Particular requirements for basic safety
Edition 3.1 2012-10	and essential performance of surgical, cosmetic, therapeutic and diagnostic laser
[12-268]	equipment



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IEC 60601-2-25 Edition 2.0 2011-10	Medical electrical equipment - Part 2-25: Particular requirements for the basic safety and essential performance of electrocardiographs
[3-105]	salety and essential performance of electrocardiographs
IEC 60601-2-28	Medical electrical equipment - Part 2-28: Particular requirements for the basic
Edition 3.0 2017-06	safety and essential performance of X-ray tube assemblies for medical diagnosis
[12-309]	
IEC 60601-2-29	Medical electrical equipment - Part 2-29: Particular requirements for the basic
Edition 3.0 2008-06	safety and essential performance of radiotherapy simulators
[12-211]	
IEC 60601-2-37	Medical electrical equipment - Part 2-37: Particular requirements for the basic
Edition 2.1 2015	safety and essential performance of ultrasonic medical diagnostic and monitoring
[12-293]	equipment
IEC 60601-2-44	Medical electrical equipment - Part 2-44: Particular requirements for the basic
Edition 3.2: 2016	safety and essential performance of x-ray equipment for computed tomography
[12-302]	
IEC 60601-2-52	Medical electrical equipment - Part 2-52: Particular requirements for basic safety
Edition 1.0 2009-12	and essential performance of medical beds [Including: Technical Corrigendum 1
[6-321]	(2010)]
IEC 61010-1 Edition	Safety requirements for electrical equipment for measurement control and
3.1 2017-01	laboratory use – Part 1: General requirements
CONSOLIDATED	
VERSION [19-34]	
IEC 80601-2-60	Medical electrical equipment - Part 2-60: Particular requirements for the basic
Edition 2.0 2019-06	safety and essential performance of dental equipment
[4-262]	Salety and essential performance of dental equipment
ISO 80601-2-61	Medical electrical equipment - Part 2-61: Particular requirements for basic safety
Second edition 2017-	and essential performance of pulse oximeter equipment
12 (Corrected version	and secondary personnance of parents of anything the
2018-02)	
[1-139]	
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#### Regular Scope

Energy Star
Audio/Video
Products with Battery Charging Systems
Computers
Enterprise Servers
Data Center Storage
Digital-to-Analog Converter Boxes
Displays and Monitors
Imaging Equipment
Set-Top Boxes and Cable Boxes
Single Voltage External AC-DC and AC-AC Power Supplies





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Small Network Equipment

Telephony

Televisions

Uninterruptible Power Supplies (UPSs)

Electric Vehicle Supply Equipment

Smart Home Energy Management Systems

Appendix H to Subpart B of Part 430: uniform test method for measuring the power consumption of television sets

Appendix Y to Subpart B of Part 430: uniform test method for measuring the energy consumption of battery chargers

Appendix Z to Subpart B of Part 430: uniform test method for measuring the energy consumption of external power supplies

EN 50563: external AC – DC and AC – AC power supplies determination of no-load power and average efficiency of active modes

EN 50564: electrical and electronic household and office equipment – measurement of low power consumption

IEC 62623: desktop and notebook computers – measurement of energy consumption

IEC/EN 62018: power consumption of information technology equipment – measurement methods

IEC 62087-1: Audio, video, and related equipment – Determination of power consumption – Part 1: General

IEC 62087-2: Audio, video, and related equipment – Determination of power consumption – Part 2: Signals and media

IEC 62087-3: Audio, video, and related equipment – Determination of power consumption – Part 3: Television sets

IEC 62087-4: Audio, video, and related equipment – Determination of power consumption – Part 4: Video recording equipment

IEC 62087-5: Audio, video, and related equipment – Determination of power consumption – Part 5: Set top boxes (STB)

IEC 62087-6: Audio, video, and related equipment – Determination of power consumption – Part 6: Audio equipment

IEC 62087-7: Audio, video, and related equipment – Determination of power consumption – Part 7: Computer monitors

IEC 62301: household electrical appliances - measurement of standby power

Generalized Test Protocol for Calculating the Energy Efficiency of Internal Ac-Dc and Dc-Dc Power Supplies; Generalized Test Protocol for Calculating the Energy Efficiency of Internal Ac-Dc and Dc-Dc Power Supplies

EPS Energy Star test method for external power supplies

#### Electrical/Electronic

ANSI/AAMI ES60601-1

Medical electrical equipment - part 1: general requirements for basic safety and essential performance





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ANSI/AAMI HA60601- 1-11	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
ANSI/AAMI/IEC 60601- 1-8	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
ANSI/AAMI/IEC 60601- 2-16	Medical electrical equipment - part 2-16: particular requirements for basic safety and essential performance of haemodialysis, haemodiafiltration and haemofiltration equipment
ANSI/AAMI/IEC 60601- 2-19	Medical electrical equipment - part 2-19: particular requirements for the basic safety and essential performance of infant incubators
ANSI/AAMI/IEC 60601- 2-20	Medical electrical equipment - part 2-20: particular requirements for the basic safety and essential performance of infant transport incubators
ANSI/AAMI/IEC 60601- 2-21	Medical electrical equipment - Part 2-21: Particular requirements for the basic safety and essential performance of infant radiant warmers
ANSI/AAMI/IEC/UL 60601-2-2	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
ANSI/AAMI/ISO 60601- 2-25	Medical electrical equipment - part 2-25: particular requirements for the basic safety and essential performance of electrocardiographs
ANSI/UL 2594	Electric Vehicle Supply Equipment
ASTM E2072	Standard Spec for Photoluminescent (Phosphorescent) Safety Markings
ASTM E2073	Standard Test Method for Photopic Luminance of Photoluminescent (Phosphorescent) Markings
CSA/ANSI FC 1	Fuel cell technologies — Part 3-100: Stationary fuel cell power systems — Safety (IEC 62282-3-100)
CSA C22.2 No. 62282- 3-100	Fuel cell technologies — Part 3-100: Stationary fuel cell power systems — Safety (IEC 62282-3-100)
IEC 60065	Audio, video and similar electronic apparatus - safety requirements
IEC 60335-1	Household and similar electrical appliances - safety - part 1: general requirements
IEC 60335-2-34	Household and similar electrical appliances - safety - part 2-34: particular requirements for motor-compressors
IEC 60335-2-40	Household and similar electrical appliances - safety - part 2-40: particular requirements for electrical heat pumps, air-conditioners and dehumidifiers
IEC 60335-2-41	Household and similar electrical appliances - safety - part 2-41: particular requirements for pumps
IEC 60335-2-60	Household and similar electrical appliances - safety - part 2-60: particular requirements for whirlpool baths



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IEC 60335-2-82	Household and similar electrical appliances - safety - part 2-82: particular requirements for amusement machines and personal service machines
IEC 60335-2-89	Household and similar electrical appliances - safety - part 2-89: particular requirements for commercial refrigerating appliances with an incorporated or remote refrigerant unit or compressor
IEC 60570	Electrical supply track systems for luminaires
IEC 60598-1	Luminaires - part 1: general requirements and tests
IEC 60598-2-1	Particular requirements – Fixed general purpose luminaires
IEC 60598-2-2	Particular requirements – Recessed luminaires
IEC 60598-2-3	Particular requirements – Luminaires for road and street lighting
IEC 60598-2-4	Particular requirements – Portable general purpose luminaires
IEC 60598-2-5	Particular requirements – Floodlights
IEC 60598-2-8	Particular requirements - Handlamps
IEC 60598-2-13	Particular requirements – Ground recessed luminaires
IEC 60598-2-17	Particular requirements – Luminaires for stage lighting, television and film studios (outdoor and indoor)
IEC 60598-2-22	Particular requirements –Luminaires for emergency lighting
IEC 60601-1	Medical electrical equipment - part 1: general requirements for basic safety and essential performance
IEC 60601-1-3	Medical electrical equipment - part 1-3: general requirements for basic safety and essential performance - collateral standard: radiation protection in diagnostic x-ray equipment
IEC 60601-1-6	Medical electrical equipment - part 1-6: general requirements for basic safety and essential performance - collateral standard: usability
IEC 60601-2-1	Medical electrical equipment - part 2-1: particular requirements for the basic safety and essential performance of electron accelerators in the range 1 MeV to 50 MeV
IEC 60601-2-3	Medical electrical equipment - part 2-3: particular requirements for the basic safety and essential performance of short-wave therapy equipment
IEC 60601-2-4	Medical electrical equipment - part 2-4: particular requirements for the basic safety and essential performance of cardiac defibrillators
IEC 60601-2-5	Medical electrical equipment - part 2-5: particular requirements for the basic safety and essential performance of ultrasonic physiotherapy equipment
IEC 60601-2-6	Medical electrical equipment - part 2-6: particular requirements for the basic safety and essential performance of microwave therapy equipment
IEC 60601-2-8	Medical electrical equipment - part 2-8: particular requirements for basic safety and essential performance of therapeutic X-ray equipment operating in the range 10 kV to 1 MV
IEC 60601-2-10	Medical electrical equipment - Part 2-10: particular requirements for the basic safety and essential performance of nerve and muscle stimulators





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IEC 60601-2-11	Medical electrical equipment - part 2-11: particular requirements for the basic safety and essential performance of gamma beam therapy equipment
IEC 60601-2-17	Medical electrical equipment - part 2-17: particular requirements for the basic safety and essential performance of automatically-controlled brachytherapy afterloading equipment
IEC 60601-2-18	Medical electrical equipment - part 2-18: particular requirements for the basic safety and essential performance of endoscopic equipment
IEC 60601-2-22	Medical electrical equipment - part 2-22: particular requirements for basic safety and essential performance of surgical, cosmetic, therapeutic and diagnostic laser equipment
IEC 60601-2-24	Medical electrical equipment - part 2-24: particular requirements for the basic safety and essential performance of infusion pumps and controllers
IEC 60601-2-25	Medical electrical equipment - part 2-25: Particular for electrocardiographs
IEC 60601-2-28	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 Edition 2.0 2010-03	Medical electrical equipment - Part 2-28: Particular requirements for the basic safety and essential performance of X-ray tube assemblies for medical diagnosis
IEC 60601-2-29	Medical electrical equipment - part 2-29: particular requirements for the basic safety and essential performance of radiotherapy simulators
IEC 60601-2-37	Medical electrical equipment - part 2-37: particular requirements for the basic safety and essential performance of ultrasonic medical diagnostic and monitoring equipment
IEC 60601-2-39	Medical electrical equipment - part 2-39: Particular for peritoneal dialysis equipment
IEC 60601-2-40	Medical electrical equipment - part 2-40: particular requirements for the safety of electromyographs and evoked response equipment
IEC 60601-2-41	Medical electrical equipment - part 2-41: particular requirements for the basic safety and essential performance of surgical luminaires and luminaires for diagnosis
IEC 60601-2-44	Medical electrical equipment - part 2-44: particular requirements for the basic safety and essential performance of X-ray equipment for computed tomography
IEC 60601-2-46	Medical electrical equipment - part 2-46: particular requirements for basic safety and essential performance of operating tables
IEC 60601-2-52	Medical electrical equipment part 2-52: particular requirements for the basic safety and essential performance of medical beds
IEC 60601-2-54	Medical electrical equipment - Part 2-54: particular requirements for the basic safety and essential performance of x-ray equipment for radiography and radioscopy
IEC 60825-1	Safety of laser products - part 1: equipment classification and requirements
IEC 60825-2	Safety of laser products – part 2: safety of optical fiber communication systems



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IEC 61010-1	Safety requirements for electrical equipment for measurement, control, and laboratory use - part 1: general requirements
IEC 61010-1 edition 3.1 2017-01	Safety requirements for electrical equipment for measurement, control, and laboratory use - part 1: general requirements
IEC 61010-2-010	Safety requirements for electrical equipment for measurement, control and laboratory use - part 2-010: particular requirements for laboratory equipment for the heating of materials
IEC 61010-2-020	Safety requirements for electrical equipment for measurement, control, and laboratory use - part 2-020: particular requirements for laboratory centrifuges
IEC 61010-2-030	Safety requirements for electrical equipment for measurement, control and laboratory use – part 2-030: particular requirements for testing and measuring circuits
IEC 61010-2-040	Safety requirements for electrical equipment for measurement, control, and laboratory use - part 2-040: particular requirements for sterilizers and washer-disinfectors used to treat medical materials
IEC 61010-2-081	Safety requirements for electrical equipment for measurement, control and laboratory use - part 2-081: particular requirements for automatic and semi-automatic laboratory equipment for analysis and other purposes
IEC 61010-2-101	Safety requirements for electrical equipment for measurement, control and laboratory use - part 2-101: Particular requirements for in vitro diagnostic (IVD) medical equipment
IEC 61010-2-201	Safety requirements for electrical equipment for measurement, control and laboratory use - part 2-201: Particular Requirements for Control Equipment
IEC 61215-2	Terrestrial photovoltaic (PV) modules – Design qualification and type approval – Part 2: Test procedures (only clauses MQT 01 and MQT 03)
IEC 61347-1	Lamp controlgear - part 1: general and safety requirements
IEC 61347-2-11	Particular requirements for miscellaneous electronic circuits used with luminaires
IEC 61347-2-13	Particular requirements for d.c. or a.c. supplied electronic controlgear for LED modules
IEC 61730-1	Photovoltaic (PV) module safety qualification – Part 1: Requirements for construction
IEC 62031	LED modules for general lighting - safety specifications
IEC 62282-3-100	Fuel Cell Technologies – Part 3-100: Stationary Fuel Cell Power Systems - Safety
IEC 62384	DC or AC supplied electronic control gear for LED modules – Performance requirements
IEC 62560	Self-ballasted LED-lamps for general lighting services by voltage > 50 V - safety specifications
IEC 62790	Junction boxes for photovoltaic modules – Safety requirements and tests (only clauses 5.3.13, 5.3.14, 5.3.20, 5.3.23)
IEC 62841-1	Electric motor-operated hand-held tools, transportable tools and lawn and garden machinery – Safety – Part 1: General requirements
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IEC 62841-2-2	Electric motor-operated hand-held tools, transportable tools and lawn and garden machinery – Safety – Part 2-2: Particular requirements for hand-held screwdrivers and impact wrenches
IEC 62841-2-4	Electric motor-operated hand-held tools, transportable tools and lawn and garden machinery – Safety – Part 2-4: Particular requirements for hand-held sanders and polishers other than disc type
IEC 62841-2-5	Electric motor-operated hand-held tools, transportable tools and lawn and garden machinery – Safety – Part 2-5: Particular requirements for hand-held circular saws
IEC 62841-2-8	Electric motor-operated hand-held tools, transportable tools and lawn and garden machinery – Safety – Part 2-8: Particular requirements for hand-held shears and nibblers
IEC 62841-2-9	Electric motor-operated hand-held tools, transportable tools and lawn and garden machinery – Safety – Part 2-9: Particular requirements for hand-held tappers and threaders
IEC 62841-2-10	Electric motor-operated hand-held tools, transportable tools and lawn and garden machinery – Safety – Part 2-10: Particular requirements for hand-held mixers
IEC 62841-2-11	Electric motor-operated hand-held tools, transportable tools and lawn and garden machinery – Safety – Part 2-11: Particular requirements for hand-held reciprocating saws
IEC 62841-2-14	Electric motor-operated hand-held tools, transportable tools and lawn and garden machinery – Safety – Part 2-14: Particular requirements for hand-held planers
IEC 62841-3-1	Electric motor-operated hand-held tools, transportable tools and lawn and garden machinery – Safety – Part 3-1: Particular requirements for transportable table saws
IEC 62841-3-4	Electric motor-operated hand-held tools, transportable tools and lawn and garden machinery – Safety – Part 3-4: Particular requirements for transportable bench grinders
IEC 62841-3-6	Electric motor-operated hand-held tools, transportable tools and lawn and garden machinery – Safety – Part 3-6: Particular requirements for transportable diamond drills with liquid system
IEC 62841-3-9	Electric motor-operated hand-held tools, transportable tools and lawn and garden machinery – Safety – Part 3-9: Particular requirements for transportable mitre saws
IEC 62841-3-10	Electric motor-operated hand-held tools, transportable tools and lawn and garden machinery – Safety – Part 3-10: Particular requirements for transportable cut-off machines
IEC 62841-3-13	Electric motor-operated hand-held tools, transportable tools and lawn and garden machinery – Safety – Part 3-13: Particular requirements for transportable drills
IEC 80601-2-60	Medical electrical equipment – Part 2-60: Particular requirements for the basic safety and essential performance of dental equipment
IEC 80601-2-61	Medical electrical equipment – Part 2-61: Particular requirements for the basic safety and essential performance of pulse oximeter equipment
IEC/EN 60335-2-29	Household and similar electrical appliances - safety - part 2-29: Particular requirements for battery chargers
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UL 50	Enclosures for electrical equipment, non-environmental considerations
UL 50E	Enclosures for electrical equipment, environmental considerations
UL 73	Standard for motor-operated appliances
UL 122	Standard for photographic equipment
UL 153	Standard for portable electric luminaires
UL 197	Standard for commercial electric cooking appliances
UL 471	Standard for commercial refrigerators and freezers
UL 496	Lampholders
UL 542	Standard for fluorescent lamp starters
UL 763	Standard for motor-operated commercial food preparing machines
UL 796	Standard for printed-wiring boards
UL 796F	Standard for flexible materials interconnect constructions
UL 879	Standard for electric sign components
UL 879A	Standard for LED sign and sign retrofit kits
UL 924	Standard for emergency lighting and power equipment
UL 935	Standard for fluorescent-lamp ballasts
UL 982	Standard for motor-operated household food preparing machines
UL 991	Safety-Related Controls Employing Solid-State Devices
UL 1012	Standard for power units other than class 2
UL 1026	Standard for household electric cooking and food serving appliances
UL 1029	Standard for high-intensity-discharge lamp ballasts
UL 1082	Standard for household electric coffee makers and brewing-type appliances
UL 1236	Standard for battery chargers for charging engine-starter batteries
UL 1310	Standard for class 2 power units
UL 1411	Standard for transformers and motor transformers for use in audio-, radio-, and television-type appliances
UL 1419	Standard for professional video and audio equipment
UL 1564	Industrial Battery Chargers
UL 1598	Luminaires
UL 1598B	Standard for supplemental requirements for luminaire reflector kits for installation on previously installed fluorescent luminaires
UL 1598C	Standard for light-emitting diode (LED) retrofit luminaire conversion kits
UL 1703	Flat-plate photovoltaic modules and panels (only clauses 21, 22, 25, 26, 30, 33)
UL 1741	Inverters, Converters, Controllers and Interconnection System Equipment for Use With Distributed Energy Resources



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UL 1838	Low voltage landscape lighting systems
UL 1993	Self-ballasted lamps and lamp adapters
UL 1994	Standard for luminous egress path marking systems
UL 2108	Standard for low voltage lighting systems
UL 2202	Electric Vehicle (EV) Charging System Equipment
UL 2231-1	Personnel Protection Systems for Electric Vehicle (EV) Supply Circuits; Part 1: General Requirements
UL 2231-2	Personnel Protection Systems for Electric Vehicle (EV) Supply Circuits; Part 2: Particular Requirements for Protection Devices for Use in Charging Systems
UL 2703	Mounting systems, mounting devices, clamping/retention devices, and ground lugs for use with flat-rate photovoltaic modules and panels (only clauses 13, 14, 22)
UL 3703	Solar trackers (only clauses 40, 42, 43, 44.2, 45, 49.2, 49.3)
UL 3730	Photovoltaic junction boxes (except clauses 34, 35)
UL 6703	Connectors for use in photovoltaic systems
UL 8750	Standard for light emitting diode (LED) equipment for use in lighting products
UL 9703	Outline of investigation for distributed generation wiring harnesses (except clauses 31, 32, 34, 37)
UL 60601-1	Medical electrical equipment - part 1: general requirements for safety
UL 60947-4-1	Low voltage switchgear and controlgear – part 4-1: contactors and motor starters - electromechanical contractors and motor-starters
UL 60947-5-1	Low-voltage switchgear and controlgear - part 5-1: control circuit devices and switching elements - electromechanical control circuit devices
UL 60947-5-2	Low-voltage switchgear and controlgear - part 5-2: control circuit devices and switching elements - proximity switches
UL 61010-1	Safety requirements for electrical equipment for measurement, control, and laboratory use - part 1: general requirements
Physical	
UL 94	Standard for tests for flammability of plastic materials for parts in devices and appliances
UL 746A	Standard for polymeric materials - short term property evaluations
UL 746B	Standard for polymeric materials - long term property evaluations
UL 746C	Standard for polymeric materials - use in electrical equipment evaluations
UL 746E	Standard for polymeric materials - industrial laminates, filament wound tubing, vulcanized fibre, and materials used in printed-wiring boards

IEC: International Electrotechnical Commission

EN: European Norms





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UL: Underwriters Lab



