

Standard Information

Standard Number: UL 1993

Standard Name: Self-Ballasted Lamps and Lamp Adapters

Standard Edition and Issue Date: 5th Edition Dated January 27, 2017

Date of Previous Revision of Standard: 4th Edition Revised December 4, 2012

Effective Date of New/Revised Requirements

Effective Date: **April 15, 2018** (*New or revised products*)

Impact, Overview, and Action Required

Impact Statement:

- Existing certifications to UL 1993 4th edition will be allowed to continue to be certified after April 15, 2018, provided there are no changes to the design that require a certification decision or until a new/revised requirement in the Standard is determined as “Action Required” to require a file review in the future.
- New or revised products submitted for certification on or after April 15, 2018 will be required to be investigated to UL 1993 5th edition

Overview of Changes:

The 5th edition of UL 1993 was issued substantially to include the following requirements:

- Added a test value for the Limited short circuit test for fusing resistors
- Revised the marked current for dimmable CFL and LED lamps
- Added requirements to address dimmable lamps that do not function on traditional dimmers
- Revised the double insulation requirements for LED lamps
- Added requirements for interlock switches in double-ended tubular led lamps
- Added requirements for solid-state lamps containing silicone fluid
- Added requirements for evaluating tubular LED lamps as direct replacements for specific fluorescent lamps

Specific details of new/revised requirements are found in table below.

If the applicable requirements noted in the table are not described in your report(s), these requirements will need to be confirmed as met and added to your report(s) such as markings, instructions, test results, etc. (as required).

Client Action Required:

Information – To assist our Engineer with review of your Listing Reports, please submit technical information in response to the new/revised paragraphs noted in the attached or explain why these new/revised requirements do not apply to your product (s).

Current Listings Not Active? – Please immediately identify any current Listing Reports or products that are no longer active and should be removed from our records. We will do this at no charge as long as Intertek is notified in writing prior to the review of your reports.

Description of New/Revised Technical Requirements

Clause	Verdict	Comment
4.5.2	Info	Risk of fire
4.5.2.3		<i>Additions to existing requirements are <u>underlined</u> below.</i> Throughout this standard, an energy level of 15 VA is considered to be a sufficient level to support a fire. A circuit having <u>less than 15 VA of available power, as determined by the test method described in Clause 8.19</u> is considered <u>not</u> to be a fire-hazardous circuit.
5.3	Info	Polymeric materials
5.3.3		<i>Additions to existing requirements are <u>underlined</u> below.</i> A polymeric material used as an enclosure shall have a flammability rating of 5-VA, 5-VB, or V-0 in accordance with UL 94 or CAN/CSA-C22.2 No. 0.17. <u>Polymeric materials used solely to enclose electrical parts that are not part of a fire-hazardous circuit may have a minimum flammability rating of 94-HB.</u>
6.4	Info	Ballasts and LED drivers
6.4.5		<i>Additions to existing requirements are <u>underlined</u> below.</i> A fusing resistor used for thermal protection shall comply with UL 1412 or the requirements of CAN/CSA-C22.2 No. 60065-03 (R2008) or the requirements of NMX-J-578-ANCE. Testing shall include the Limited Short Circuit test while installed in the application, unless the test was previously conducted in accordance with UL 1412 or CSA C22.2 No. 256, <u>using a 20 A test circuit with a 200 A short circuit capacity.</u> If a clearance to combustible materials was used during the Overload Test, as permitted in UL 1412, the clearance shall be maintained or, the Overload Test shall be conducted while the resistor is installed in the application.
8.2	Info	Input measurements
8.2.2		<i>New clause added;</i> For devices intended for use on a dimmer circuit, the input current measured during the test of Clause 8.12.2.1 shall not be more than 110 percent of the marked rating.

Clause	Verdict	Comment
8.19		<i>New section added;</i> 15-VA available power measurement test
8.12	Info	Tests of dimmer circuits
8.12.1.3		<i>New clause added;</i> A dimmable device that is not intended to operate on a standard dimmer (e.g.: wireless control) shall be subjected to the abnormal temperature test of Clause 8.12.3 with its integral dimming control set for full brightness. These devices shall be marked in accordance with Table 10.1, Item 14 and provided with the instructions specified in Clause 10.4.5.
10.4.5		<i>New clause added;</i> The instructions for a device marked in accordance with Table 10.1, Item 14, shall include the following or equivalent statement: "Only use the control provided with or specified by these instructions to control this lamp. This lamp will not operate properly when connected to a standard (incandescent) dimmer or dimming control."
SUPPLEMENT SA	Info	SUPPLEMENTAL REQUIREMENTS FOR LIGHT-EMITTING DIODES (LED)
SA6.15		New section added; Double insulation This new section includes additional construction requirements for double insulated devices for LED lamps (see standard for section details).
SA8.19	Info	Risk of electric shock – relamping
SA8.19.4		<i>New clause added;</i> During the measurement, any mechanical interlock mechanism intended to prevent current from flowing through the lamp during its insertion or removal shall be defeated. However, an interlock mechanism located on the free end of the lamp under test is allowed to operate normally if it meets all the following criteria: <ul style="list-style-type: none"> a) Actuators shall be located only on the face of the lamp bases and have a normally-open, momentary-type action so that they automatically engage and disengage when the lamp is inserted or removed from the luminaire, respectively; b) Actuators shall require a force of no more than 4.45 N (1 lbf) to recess completely into the lamp base so that they are flush with the lamp base surface; c) The actuator shall be made from or externally encapsulated by an insulating material that complies with the requirements for at least basic insulation;

Clause	Verdict	Comment
		<p>d) The actuator shall be shaped and located to reduce the likelihood of accidental engagement by an end user during lamp insertion into or removal from an energized luminaire. The actuator is considered to comply with this requirement if it cannot be engaged by a 50.8 mm (2 inch) diameter rigid sphere regardless of how it contacts the lamp, see Figure SA8.2; and</p> <p>e) The interlock mechanism shall endure 500 actuation cycles under its intended electrical load without resulting in mechanical or electrical damage to the lamp or mechanism.</p>
SUPPLEMENT SB		<p><i>New section added;</i></p> <p>ADDITIONAL REQUIREMENTS FOR SOLID-STATE LAMPS CONTAINING SILICONE FLUID</p> <p>This new section includes additional construction requirements, test requirements, and markings for solid-state lamps containing silicone fluid (see standard for section details).</p>
SUPPLEMENT SC		<p><i>New section added;</i></p> <p>ADDITIONAL REQUIREMENTS FOR LED LAMPS AND FLUORESCENT LAMP ADAPTERS INTENDED AS DIRECT REPLACEMENTS FOR FLUORESCENT LAMPS</p> <p>This new section includes additional construction requirements, test requirements, markings, and instructions for LED lamps and fluorescent lamp adapters intended as direct replacements for fluorescent lamps (see standard for section details).</p>
		<p>CUSTOMERS PLEASE NOTE: This Table and column "Verdict" can be used in determining how your current or future production is or will be in compliance with new/revised requirements.</p>