

Standard Information

Standard Name: Self-Ballasted lamps and Lamp Adapters

Standard Number: UL 1993 and CSA C22.2 No. 1993

Standard Edition and Issue Date: UL 1993: 4th Ed.; CSA C22.2 No 1993: 2nd Ed.

Date of Revisions: December 4, 2012

Date of Previous Revisions to Standard: UL 1993: 3rd, CSA C22.2 No 1993: 1st Edition Revised 8/28/2009

Effective Date of New/Revised Requirements

Effective Date (see Schedule below): **December 4, 2015**

Impact, Overview, Fees and Action Required

Impact Statement: A review of all Listing Reports is necessary to determine which products comply with new/revised requirements and which products will require re-evaluation. **NOTE:** Effective immediately, this revised standard will be exclusively used for evaluation of new products unless the Applicant requests in writing that current requirements be used along with their understanding that their listings will be withdrawn on Effective Date noted above, unless the product is found to comply with new/revised requirements.

Overview of Changes (Specific details of new/revised requirements are found in table below):

- Add requirements for metal of lampholder screwshell device bases
- Change of material requirement to end product requirement
- Addition of higher temperature requirements for small coil assemblies (less than 250 gm) for inductor thermal measurement method in temperature test
- Addition of Supplement SA – Supplemental Requirements for Light Emitting Diodes (LED)

Schedule: So that shipping of products with Listing Marks will not be interrupted, an **approximate** schedule has been established to ensure Listing Reports are found compliant by Effective Date:

- April 10, 2015 = 8 Month Report Review – Intertek will review all Reports. Update if compliance is verified or issue Findings Letter/Quote for any re-evaluations needed
- June 8, 2015 = 6 Month Quote Cut-off – Quotes returned for necessary re-evaluations
- November 6, 2015 = 30 Day Warning – Client advised of all non-compliant Reports to be Suspended
- **December 4, 2015** = Effective Date – ATM Suspended for all non-compliant Reports

Fees: An initial review of Listing Report (s) will be covered by a direct billing project and will be invoiced at not more than \$1000 per report.

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	NC#
-	-	NOTE: Additions to existing requirements are <u>underlined</u> and deletions are <u>shown lined out below</u> .	
1.3		<p><i>New clause added (All LED type products identified in Section 1.3 will need to be evaluated to Supplement SA);</i></p> <p><u>These requirements also include Supplemental Requirements for Light-Emitting Diodes (LED), Supplement SA, for:</u></p> <p><u>a) Self-contained LED lamps, rated 120 to 347 V AC nominal for connection to screw-, pinbase, and recessed single contact (RSC or R7) lampholders,</u></p> <p><u>b) Lamps for replacement of an ANSI standardized fluorescent lamp, and consisting of lightemitting- diode (LED) lamp technologies, with control circuitry, and a driver or power supply. The LED driver and control circuitry will be either integral with the lamp or remote from the lamp.and</u></p> <p><u>c) Component LED lamps, with or without control circuitry, an ANSI base other than bases mentioned in (a), for connection to LED driver having a low voltage output, such as replacement for tungsten-halogen, MR11 and MR16 shaped lamps.</u></p>	
2.1	Info	Updated standard references	
Table 5.1	Info	Changed "Die Cast" to "Cast"	
5.3.1	Info	Clarify use of polymeric materials – standard split up UL, CSA and MEX requirements	
5.3.4	Info	<p><i>Change of end product requirement to material requirement "material used as an enclosure"</i></p> <p>A polymeric material used as an enclosure of a device marked for wet location use shall comply with the ultraviolet light exposure test specified in UL 746C or CAN/CSA-C22.2 No. 0.17.</p>	
5.3.6	Info	<p><i>Change of material requirement to end product requirement</i></p> <p>A polymeric material device shall comply with the mold-stress relief distortion test of Clause 8.9.</p>	
8.9.2	Info	<p><i>Change of material requirement to end product requirement</i></p> <p>For a family or grouping of enclosures, such as different sizes for a range of lamp wattages, representative samples of the largest and the small enclosures shall be tested. For additional polymeric materials, each generic type of material (ABS, PBT, PC, PBT/PVC blends, etc) shall be tested. <u>Enclosures made of additional polymeric materials of the same generic type need not be tested (see Appendix A of UL 746C for a discussion of alternate material considerations).</u></p>	
5.4.1	Info	Removed "size" requirements	

Standards Update Notice (SUN)

Issued: March 30, 2015

Clause	Verdict	Comment	NC#
6.1.2		<p><i>New clause added;</i></p> <p><u>A screwshell metal of a device base shall be made from:</u></p> <ul style="list-style-type: none"> <u>a) Copper alloy with a minimum of 80 percent copper,</u> <u>b) Nickel alloy,</u> <u>c) Stainless steel, or</u> <u>d) Aluminum or copper alloy electroplated with nickel alloy covering all surfaces (after forming and trimming).</u> <p><u>Unplated aluminum is acceptable as a screwbase metal only for devices intended for dry and damp locations.</u></p>	
6.4.5	Info	Clarification fusing resistors used for thermal protection	
6.4.6		<p><i>New clause added;</i></p> <p><u>A printed wiring board trace intended to open as a result of an abnormal condition is not permitted.</u></p>	
6.4.7		<p><i>Clarification of insulation system requirement</i></p> <p>In Canada, a ballast <u>magnetic coil</u> have an insulation system complying with the General Requirements – Canadian Electrical Code, Part II, CAN/CSA-C22.2 No. 0.</p> <p>In the United States, a <u>magnetic coil</u> ballast operating above Class 105 temperature limits shall have an insulation system complying with UL 1446. A ballast completely enclosed in a polymeric enclosure complying with Clause 5.3, and with no accessible <u>current-carrying (such as low voltage circuitry) or non-current-carrying (such as a ferrite core)</u> metal parts that are capable of being energized is not required to comply with UL 1446. <u>However, the respective electrical Relative Thermal Index (RTI) of the individual materials shall be greater than the operating temperature determined during the temperature test in Clause 8.5.</u></p> <p>In Mexico, Clause 6.4.67 does not apply.</p>	
6.8	Info	Section 6.6 of 3 rd Ed. Relocated as section 6.8 in 4 th Ed.	
6.10.1		<p><i>Added “with a lamp containment barrier”</i></p> <p><u>Adapters with a lamp containment barrier and</u> employing replaceable tungsten halogen lamps shall be marked with a lamp caution in accordance with Table 10.1, Items 8 and 16.</p> <p>In Canada, the caution marking of Table 10.1, Item 8, is not required.</p>	

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6.10.2		Added "integral", removed marking for "open type lamp" was formerly 6.10.2b and relocated/updated requirement in 6.10.3 Adapters employing replaceable tungsten halogen lamps that do not require an additional lamp where the lamp has an integral containment barrier shall be marked: a) with a maximum lamp caution in accordance with Table 10.1, Items 8 and 15, or	
7.2.1b), 7.3.1b)	Info	Updated clause references	
7.2.1c)	Info	Added "if the device has accessible non-current carrying metal parts. " Comply with the humidity test of Clause 8.13 <u>if the device has accessible non-current-carrying metal parts.</u>	
7.3.1d)	Info	Added "if the device has accessible non-current carrying metal parts. " Comply with the humidity test of Clause 8.13 <u>if the device has accessible non-current-carrying metal parts.</u>	
Table 8.1	Info	Updated "Lamp Base Test" standard references	
Table 8.2	Info	Provide additional requirements for small coils for inductor thermal measurement method in temperature test – Updated Coil Insulation Systems temperature limits. Updated notes	
8.6.1		Updated test potential from 1240 V to "twice the rated voltage + 1000 V" A device with accessible non-current-carrying metal parts that could be energized from within shall withstand for 1 minute, without breakdown, the application of a test potential of 1240 V twice the rated voltage + 1000 V between all live parts and all accessible non-current-carrying metal parts.	
8.8.4	Info	Updated text from "lamps" to "discharge tubes". i.e. clarification regarding broken glass permitted only for fluorescent lamps	
8.9.3	Info	Delete subsequent testing by dielectric voltage withstand	
8.10.2	Info	New paragraph added clarifying applicability of deflection test	
8.13	Info	Removed limiting requirement "and having accessible non-current-carrying metal parts"	
8.14.1	Info	Added marking per Table 10.1, Item 11	
8.14.2	Info	Removed limiting requirement "mounting base-up, as in intended service, and then"	
Figure 8.3	Info	A correction (R4 to 365 k-ohm) and added note Added note	
Figure 8.4	Info	Added notes 1,2,3	
9.3.2	Info	Clarification of thermocouple use	
Figure 9.1	Info	Updated figure. Revise "steel" to "metal" to correlate with the text in 9.5.1.1	
9.5.3.1b)2)	Info	Dimension correction – 50.8 mm ´ 152 mm became 38 mm ´ 140 mm	
9.5.3.1b)3)	Info	Dimension correction – 25.4 mm ´ 152 mm became 19 mm ´ 140 mm	
9.5.3.1b)4)	Info	Dimension correction – 50.8 mm x 102 mm became 38 mm x 89 mm	
Figure 9.2	Info	Updated figure. Dimensions for thickness corrected.	
10.1.1	Info	Removed "in accordance with Table 10.1:"	
10.1.5	Info	Added "(item 8)"	
10.1.6	Info	Removed requirement that was only for "permanent type (Type P)" labels, not required for all labels.	

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Clause	Verdict	Comment	NC#
10.2.2	Info	Added: Hertz can be omitted if volts is expressed as "VAC" and the device has been evaluated for 60 Hertz, or if volts is expressed as "VDC."	
10.2.4	Info	Removed section requirement that was originally in the 3 rd edition. Former text read: 10.2.4 A device intended for wet locations, subjected to the water spray test of Clause 8.14, and tested with a specific orientation or restricted positioning, shall be marked in accordance with Table 10.1, Item 12, to describe how the device must be oriented or with the restricted position in order to exclude entry by water.	
10.2.6	Info	Added "In the United States,"	
10.3 (MEX)	Info	Updated notes 1-3	
Table 10.1	Info	<p>Updated table, some text references were updated. Some markings are not required to be in all capital letters any longer. Alternate markings were added.</p> <p>Updated note. Main changes as follows: Item 1, revised to lower case, Item 2, revised to lower case, Item 3, clarification on date coding, Item 4, clarification of factory code, Item 9, alternate shorter wording, Item 10, alternate shorter wording proposed, Item 11, alternate shorter wording proposed, Item 12, alternate shorter wording proposed; need not be verbatim; additional paragraph reference, Item 13, alternate wording proposed, Item 14, alternate shorter wording proposed, Items 15, 16, 17 clarification; these are for conventional tungsten-halogen lamp. In item 17, the marking was originally a luminaire marking from UL 1598 and not for the replacement lamp. Item 20, 21, revised to "lamp" to "luminaire;" revised paragraph reference, Item 20, 21, revised to "lamp" to "luminaire;" revised paragraph reference, Item 22, alternate shorter wording proposed, Item 27, alternate wording; clarification of text Additional note at bottom, a clarification.</p>	
10.4.1		<p><i>Added "weighing over 200 g (0.44 lbs)" requirement, changed Table 10.1, Items 19 & 21 to 19 & 20</i></p> <p>A device intended for use in free-standing portable luminaires weighing over 200 g (0.44 lbs) shall be provided with instructions in accordance with Table 10.1, Items 19, 20, and 24.</p>	
10.4.2		<p><i>Updated requirements</i></p> <p>A device intended for use only in recessed-type luminaires, typically not intended for use in free-standing portable luminaires, such as a PAR or R-shaped bulb, lamp types or devices weighing less than 200 g (0.44 lb) is not required to comply with Clause 10.4.1.</p>	
10.4.3	Info	Added "such as a circular lamp"	
Annex A	Info	Updated standards list	



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Supplement SA		<i>New section added;</i> <u>SUPPLEMENTAL REQUIREMENTS FOR LIGHT-EMITTING DIODES (LED)</u> <i>This new section includes new construction requirements, performance test requirements, markings, and instructions for LEDs.</i>	
		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.	