

Subject 8753

May 17, 2013

SUMMARY OF TOPICS

The following topics for the Standard for Field-Replaceable Light Emitting Diode (LED) Light Engines, UL 8753/ULC-S8753, are being recirculated:

1. The Proposed First Edition of the Joint UL/ULC Standard for Field-Replaceable Light Emitting Diode (LED) Light Engines, UL 8753/ULC-S8753

COMMENTS DUE: June 17, 2013

For your convenience in review, proposed additions to the previously proposed requirements dated 2013-03-08 are shown underlined and proposed deletions are shown ~~lined-out~~.

1. The Proposed First Edition of the Joint UL/ULC Standard for Field-Replaceable Light Emitting Diode (LED) Light Engines, UL 8753/ULC-S8753

RATIONALE

Responses to comments have been posted within the UL 8753 Proposal Review Work Area dated 2013-03-08.

Please note an error is also being corrected in Table 2 with regard to HWI and HAI. As corrected, the table exactly matches the requirements for LED lamps in the existing tri-national Standard for Self-Ballasted Lamps and Lamp Adapters, UL 1993/CSA C22.2 No. 1993/NMX-J-578/1-ANCE. The original requirements were derived from the Standard for Polymeric Materials – Use in Electrical Equipment Evaluations, UL 746C.

In addition, editorial changes are being made to paragraphs 3.26, 6.5.4, 8.4.9, 8.4.10, 8.5.1, 8.5.4, 8.8.1, 8.9.2, 8.11.1, 8.12.2, 8.13.1, 8.17.3, 8.19.2, 8.19.4, 8.20.1, and 8.20.2.

The revisions to Section 9.4, Section 9.9, and Table 5 are also editorial and should have previously been deleted when the proposal was revised to remove references to the test boxes.

PROPOSAL

1.3 This standard does not cover the holders, sockets, and the like to which these LED light engines are intended to be mounted. Such devices products are covered by UL 8754 / ULC-S8754.

3.5 DEVICE – A general term for a light engine. A more specific term is used if a requirement applies only to a certain type of device.

3.11.1 LAMP BASE – The part of the device that engages the lampholder and makes contact with the electrical circuits of the lampholder.

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3.13 LED DRIVER (CONTROLGEAR) – A device component comprised of a power source and control circuitry designed to operate an LED array or module. The control circuitry can range from a simple (bridge rectifier and resistor) to complex (incorporating power factor control, constant voltage or constant current outputs, and the like).

3.14 LED LENS, INTEGRAL – The optical element integral to an LED package that ~~focuses or diffuses~~ redirects the light from the LED die(s). Optical assemblies secured to the LED package after package manufacture (such as during the assembly of an LED array) are not considered integral LED lenses.

3.26 THERMAL INTERFACE – The surface on a light engine intended to make physical contact with a non-integral heat sink, so as to transfer heat away from the light engine. Because of its function, this surface would be inaccessible to contact when the light engine is installed in the end product with its intended lampholder.

4.4.1.3.1 By definition, live parts within the following circuits are not considered to be a risk of electric shock for the purposes of this standard:

- a) Class 2 circuits complying with CAN/CSA C22.2 No. 223 / UL 1310.
- b) Low-voltage, limited-energy (LVLE) circuits complying with CAN/CSA-C22.2 No. 250.13 / UL 8750, and
- c) Limited Power Sources (LPS) complying with CAN/CSA-C22.2 No. 60950-1 / UL 60950-1.

4.4.2.3.1 By definition, live parts within the following circuits are not considered to be a risk of fire for the purposes of this standard:

- a) Class 2 circuits complying with CAN/CSA C22.2 No. 223 / UL 1310.
- b) Low-voltage, limited-energy (LVLE) circuits complying with CAN/CSA-C22.2 No. 250.13 / UL 8750, and
- c) Limited Power Sources (LPS) complying with CAN/CSA-C22.2 No. 60950-1 / UL 60950-1.

5.2.1 An enclosure shall not have openings wider than 2 mm (0.078 in), unless they do not permit a 2 mm (0.078 in) diameter rod of any length to contact live parts. The electrical contacts used to engage its intended lampholder are not required to comply.

Exception: ~~Not applicable to enclosures containing only a Class 2, LPS or LVLE circuit.~~ Contact is permitted with live parts that are not considered to be a risk of fire.

6.5.4 The electrical spacings between conductive parts on a printed wiring board may alternatively be evaluated for compliance with UL 8750, and the following:

- a) When the power available between two traces within the same circuit is less than 50 W, determined in accordance with the 50-Watt point power measurement test of CAN/CSA-C22.2 No. 250.13 / UL 8750, the spacing between those two parts are not defined.
- b) The suitability of the spacing between foil traces may alternatively be determined by conducting a dielectric voltage-withstand test. If there is no dielectric breakdown, then the spacing is considered acceptable. The test potential shall be $2 V + 1000$ volts DC for 1 minute, where V equals:

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