

UNDERWRITERS LABORATORIES INC. CERTIFICATION REQUIREMENT DECISION

This Certification Requirement Decision is prepared by UL LLC. It is normative for the applicable UL Product Certification Program(s); however, it is currently not part of the UL Standard(s) referenced below.

Product Category (CCN): XBRT, XBRT7
Standard Number: UL 1088
Standard Title: Standard for Temporary Lighting Strings
Edition Date: July 10, 2015
Edition Number: 7
Section / Paragraph Reference: 18.1.4
Subject: Metallic Lamp Guards that are Unlikely to Become Energized

DECISION:

18.1.4 A metal lamp guard with or without a nonmetallic coating shall be positively bonded to the equipment grounding conductor of the string.

Exception No. 1: A metal lamp guard that is shipped separate from the lampholder shall be provided with instructions (see 44.17) for positive connection to the equipment grounding conductor of the string unless the bonding connection is automatically obtained.

Exception No. 2: A metal lamp guard that must be removed for relamping shall be designed so that the bonding connection is automatically provided on assembly to the lampholder.

Exception No. 3: A metal lamp guard of a temporary lighting string employing non-replaceable light sources that is unlikely to become energized.

RATIONALE FOR DECISION:

Prior to the 6th Edition, UL 1088 only covered temporary lighting strings employing Edison screw base lampholders. As a result the requirements were broadly written to mitigate inherent risks of electric shock associated with the use of replaceable lamps in a construction site environment. Now the scope of UL 1088 also covers temporary lighting strings employing non-replaceable LED light sources. This allows some of the specific risk of shock conditions originally anticipated by the standard to be eliminated or mitigated by product design. While this CRD does not modify the existing requirements applicable to traditional lighting strings employing lamps with Edison screw bases, it provides an alternative approach for grounding requirements in new temporary lighting strings with non-replaceable LED light sources.

The potential risk of electric shock is addressed in ANSI/UL 1088 / CAN/ULC-S1088 by multiple layers of construction requirements including minimum spacings, adequacy of insulation, grounding and bonding, as well as testing requirements including abnormal operation, dielectric voltage withstand and continuity tests.

However, regardless of construction design Clause 18.1.4 of the standard requires all temporary lighting strings provided with metal guards to have the guard bonded to the equipment grounding conductor (EGC). This is to further mitigate the potential risk of electric shock even during relamping when the guard could inadvertently become energized from an exposed screwshell. The standard did not anticipate new constructions of temporary lighting strings with non-replaceable LEDs where a metallic lamp guard may be provided as a decorative feature only.

The Canadian standards for portable luminaires CSA C22.2 No. 250.4, which also covers temporary lighting strings, and the US standard for portable luminaires ANSI/UL 153 both have provisions to allow accessible non-current carrying parts that are suitably insulated and not likely to become energized to be provided without being bonded to the EGC.

An equivalent provision is needed in ANSI/UL 1088 / CAN/ULC-S1088 to accommodate exposed metal parts of temporary lighting strings that are unlikely to contact live parts under any condition of use, including during installation and servicing.

This proposal is intended to accommodate such temporary lighting string designs while maintaining the same level of safety anticipated for metal guards of temporary lighting strings employing Edison screw base lampholders.

The revision to 4.2.5.2.3 corrects a discrepancy between the stated minimum distance of 365.8 mm that must exist between convenience receptacles and the equivalent value of 12 ft. shown in parenthesis. The requirement was introduced in the 15th Edition of UL 48 to align with section 210.52(A)(1) of the NEC that permits up to 12 feet of space horizontally between receptacles along a floor line (i.e. 6 ft. in either direction from a center point). However the stated value of 365.8 mm does not convert to 12 ft. Adding the correct metric value of 3.66 m will correct this discrepancy.

The revisions to 4.3.5.1.3 and 4.3.5.2.2 will fix the cross-reference paragraph numbers to point the correct markings for dedicated and convenience receptacles in section 7 of the standard.

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