

June 15, 2016

To achieve optimal performance and reliability, we advise NOT to apply AC Hi-voltage Dielectric tests to LED products as this may result in damage or degradation to the unit. Per the UL Factory production test below, clause 18.1.1 outlines the conditions in which the Dielectric Voltage test is required

If you determine that the Dielectric Voltage test is required for your fixture assemble, we advise to use the factory Follow Up inspection instruction (FUII) of UL 1598 which gives exceptions to use DC voltage for the test. Table L2.2.2 below.

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18 Factory production tests

18.1 Dielectric voltage-withstand

18.1.1 A dielectric voltage-withstand test shall be performed on 100 percent of production of luminaires that contain conductors that are:

- (a) not visible after assembly; or
- (b) enclosed for a distance more than 38 mm (1.50 in) within
 - (1) a stem, arm, or tubing; or
 - (2) conduit that is not listed or certified.

18.1.2 A fluorescent luminaire with the construction described in Clause 18.1.1 and provided with a removable cover for access to conductors shall not be required to be subjected to the factory dielectric voltage-withstand test.

18.1.3 The dielectric voltage-withstand test apparatus shall be in accordance with Clause 19.20.

18.1.4 Luminaires shall be fully assembled, with control and protective components in conducting position, switches in the ON position, and fuses in place. Isolated non-current-carrying metal parts or decorative parts not likely to become energized shall not be required to be in place.

18.1.5 Solid state components that are not relied upon to reduce the risk of electric shock and that can be damaged by the applied dielectric potential may be disconnected for the test. The circuitry may be rearranged for the purpose of the test to reduce the likelihood of solid state component damage while retaining the representative dielectric stress on the circuit.

18.1.6 The luminaire shall be subjected, without breakdown, to a voltage of 1200 V ac, for a duration of 1 s, between:

- (a) primary wiring and accessible non-current-carrying metal parts that can become energized; and
- (b) primary wiring and accessible uninsulated live parts in the secondary circuit of an isolating transformer rated for a maximum open circuit voltage of 30 V rms or 42.4 V peak.

Table L2.2.2
 Factory Production Line Tests

| Test | Test Reference Clause UL 1598 |
|--|----------------------------------|
| Dielectric voltage-withstand | 18.1 ^a , 19.20 |
| Grounding continuity | 18.2, 19.19.2 |
| Glass support | 18.3 |
| Strain relief | 18.4 |
| Polarity | 18.5 |
| Ground-screw assembly strength | 18.6 |
| ^a Exception: The dielectric voltage-withstand test may be conducted with the applied DC Voltage of 1414 volts for one minute or 1697 volts for one second. The sensitivity for the trip circuit shall be maximum 141.1ma for the applied voltage. | |