

Safety Test Shows Double-Ended EasiRetrofit LED Tube Safer than Single-ended Tube for Maintenance

Safety is always a concern when it comes to the use of any electrical device or equipment. When LED lamps first appeared on the market, extra attention was given to its safety and as a result, much improvement was made on safety standards and practices. However, this is not to say that safety issues have been completely resolved. A recent recall of two LED lamps by a leading lighting manufacturer has once again increased public awareness of the issue. Specifically, the recall of these two LED lamps is due to their electrical shock hazards.

The LED T8 tube is one of most commonly used lamps, but most people do not realize that it has not one but two potential areas of shock hazard: one during retrofit installation and the other during maintenance replacement. Possible methods to resolve the shock hazard depend on whether the LED tube is single-ended or double-ended.

- During installation where line voltage is applied directly to the lamp-holder(s):
 - Single-ended LED tube: Installation requires re-wiring electrical power to one of the two lamp-holders, so there is no shock hazard.
 - Double-ended LED tube: Due to the fact that electrical power is applied to both lamp-holders, safety switch(es) on the LED tube end cap is needed to effectively eliminate the shock risk.
- During maintenance replacement when a maintenance crew mistakenly inserts a fluorescent tube back into a fixture converted for LED tube use only:
 - Single-ended LED tube fixture: Given that electrical power is connected to the bin-pin of one lamp-holder, this will cause an electrical short-circuit. In the case of 110V input voltage, it will burn out the fluorescent tube without causing much damage (as shown in the video below). But in the case of 277V, this could cause the fluorescent lamp to *terminate with authority* (explosion).
 - Double-ended LED tube fixture: There is no shock hazard because line voltage alone isn't sufficient to energize the fluorescent without ballast.



LED tube fixture safety demo video: fluorescent tube re-insertion (courtesy of MLCC)
<http://www.youtube.com/watch?v=hYRa1hh9tvo>

It is evident that overall, the safest choice is the double-ended LED tube with the safety switch, which provides adequate shock hazard protection during installation and maintenance.

Aleddra's EasiRetrofit® LED tube meets these requirements perfectly: It is a double-ended tube with a double safety switch on either end cap. It is also on the DLC (Design Lights Consortium) qualified LED

product list for rebate. Furthermore, the Aleddra's EasiRetrofit® LED tube is fast becoming the most popular choice for replacing linear fluorescent T12/T8 due to its ease of installation and the extra protection it provides maintenance crews.

Aleddra LED Lighting is headquartered in Seattle and has sales agents and distribution partners throughout the U.S. We are ready to assist you in implementing the safest and most cost-effective T8/T12 replacement solutions. Contact us today at +1-425-430-4555 or sales@aleddra.com.

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