



# Right Light Guide for LED Tubes

LED linear lights (TLEDs) are an emerging energy-efficient technology. Use this guide to learn more about them.

## 1 Why consider LED tubes?

**Fluorescent lighting is everywhere.** Fluorescent lighting is universal. Look up, and you'll likely find these familiar tubes lining the ceilings of many buildings. Linear fluorescent lamps (LFLs) have largely reached their maximum energy-saving potential, and they also require recycling.

**LED lighting is a new alternative.**

LED lighting is rapidly evolving and providing an alternative to LFLs. Building owners and facility managers are adopting LED lighting for its long life span, energy efficiency, and controllability.



## 2 How do you compare products?

### Type A – Plug & Play

**LED tube with integrated driver on existing ballast:**

Linear LED lamp designed to work with compatible fluorescent ballasts. Most products are designed to work with T8 and T5 electronic ballasts.

**Pros:** Cheapest, simplest install with no fixture modification.

**Cons:** LED lamp must be compatible with fluorescent electronic ballast.

### Type B – Direct Wire

**LED tube with integrated driver wired to mains:**

Like Type A, this tube operates with an internal driver. The difference is that lamp sockets are directly wired to line voltage and ballast is removed.

**Pros:** Maintenance costs due to failed ballasts are eliminated.

**Cons:** Higher install cost. Electrician, wiring, and non-shunted lamp holders required.

### Type C – External Driver

**LED tube with remote driver rather than integrated:**

This tube uses a remote driver. Like Type B it involves electrical modification to the existing fixture, but at low-voltage to the sockets.

**Pros:** Best overall system compatibility.

**Cons:** Higher install cost. Wiring and external driver required.

**Looking for quality? Check for the DLC mark.** The DesignLights Consortium™ (DLC) is dedicated to accelerating the widespread adoption of high-performing, energy efficient commercial lighting solutions. DLC keeps up a qualified products list (QPL) that features lights meeting their performance standards. Check their list at [designlights.org/qpl](http://designlights.org/qpl).

