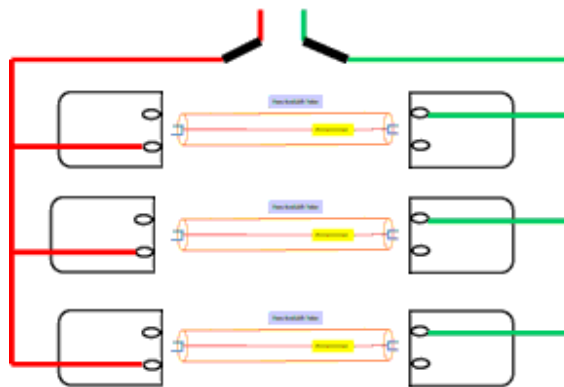


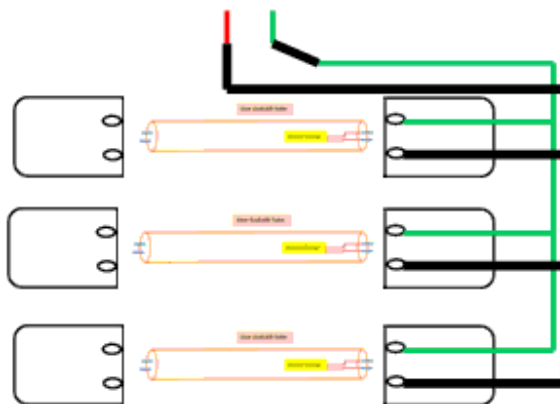
## Fundamental Considerations when Choosing LED Tube Lamps

With continual improvement of lighting efficacy (lumen per watt), long life, low maintenance, low energy consumption and utility company rebates, the adaption rate of LED T8 tube lamps continues to accelerate dramatically over the last couple years for lighting applications in commercial, industrial, educational, hospital, apartment, and retail facilities. Facilities managers and lighting contractors who are new to LED lighting however can be confused or even frustrated when it comes to choosing the right LED T8 lamp for his/her energy efficient project. Below is a list of fundamental information to consider when planning for an upgrade to LED tubes:

- *Double-ended* LED tube is energized using the existing wiring to both lamp holders of the fixture as shown in the diagram below. It requires bypassing the ballast and simply connecting “hot to hot” and “neutral to neutral” (Always following installation instructions). Some LED tubes can be wired as a double end but with additional wiring, thus taking more time and increasing cost.



- *Single-ended* LED tube use only one of the two lamp holders but requires the *non-shunted* lamp holders, as shown in the diagram below. If the existing fixture uses *shunted* lamp holders, it will be necessary to replace them with non-shunted lamp holders or upgrade the entire fixture, either way it will take more time and cost.



- **Price difference:** Double-ended LED tube is slightly more expensive than single-ended LED tube in general, but its cost is easily offset by the saving on installation time.

- Retrofit versus upgrade: Double-ended LED tubes are best suited for retrofit existing fixture, while single-ended LED tubes are used with new fixtures. However, when installation cost is negligible by using in-house facility staff, single-ended LED tube can also be used for retrofit existing fixtures.
- Safety requirements: The new UL 1598C safety requirements for LED retrofit kit takes effect in February 2013 and it will supersede 1598B. For liability coverage, use UL1598C classified LED tubes only.
- Energy consumption: 18 watt LED tubes still provide the best return on your investment. When you compare them to 32 watt fluorescent lamps and 22 watt LED tubes, you'll find that the efficacy (LPW) is comparable, but the delta in savings from 32 watts to 18 watts will yield more long term saving.
- Rebate programs: rebate requirements differ greatly from utility to utility. US Department of Energy maintains a website, <http://www.dsireusa.org/>, which lists most energy efficient rebates and incentives in the US. However, the data shown at the site may not be up-to-date. For latest rebate requirements, please contact your local utility company.

Aleddra offers both EasiRetrofit™ (double-ended) and single-ended LED tubes. Our EasiRetrofit™ LED tubes can be used with both shunted and non-shunted lamp holders and saves 50 to 70% of installation time when comparing to single-ended LED tubes. To find out how Aleddra can help you with your energy efficient lighting retrofit, contact your local distributors or Aleddra at 425-430-4555, or email us at [sales@aleddra.com](mailto:sales@aleddra.com).

Submit *EasiRetrofit*™ Video To Win a Free iPad Mini: [more ...](#)

### LED is FUN Floating Jellyfish LED Lamps



Have you seen a creepy, creative, and vibrant LED lamp? These are the three words people used when seeing this floating jellyfish LED lamp the first time. For more picture of this lamp, visit [LED is Fun Facebook page](#). You are invited to guess how it is done by leaving your comment on our Facebook page. And if you right, we will send you a free 8 GB USB. We will unveil the secret in our next newsletter.

### Mark Your Calendar:

- **LEDucation6**, March 20, 2012, New York, NY, [more ...](#)
  - **LIGHTFAIR International**, April 23-25, 2013, Philadelphia, PA, [more ...](#)
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[www.aleddra.com](http://www.aleddra.com) • [eCatalog](#) • [sales@aleddra.com](mailto:sales@aleddra.com)

Phone: 1-425-430-4555 • Fax: 1-425-277-5289

[unsubscribe@aleddra.com](mailto:unsubscribe@aleddra.com)