

Scenario Analysis on T8 LED Retrofit

A company's branch office may have several hundred 4-ft linear fluorescent lamps where half of them use shunted tombstone and the other half non-shunted tombstone. When evaluating cost effectiveness for this retrofit LED project, these are the typical options:

Option #1	Option #2	Option #3
Non-UL	UL-classified	UL-classified
Double-ended tube	Double-ended tube	Single-ended tube
2-year warranty	5-year warranty	3-year warranty
75 LPW	>90 LPW	>90LPW
Not listed	LDL-listed	LDL-listed

Which option will be the most economical for the company?

Option #1 is not rebate-able for utility rebates

- Utilities have strengthened safety requirements that include a UL certification.
- Safety: a non-UL lamp wired on two ends can not protect the installer during installation.
- Building owners shouldn't use non-UL products for any reason.
- The original install company may not be around in two years to effectively service the warranty and provide long-term customer satisfaction.

Option #2 is the most economical choice in most situations:

- Meets all UL classification for safety (including 1598B and 1598C, pending).
- Double-ended tube saves 50-70% during installation without the need to re-wire or replace tombstone when comparing to single-ended tubes.
- Double-ended LED tube supports both shunted and non-shunted tombstone. Single-ended LED tube can not be used with shunted tombstones, making it is necessary to replace the tombstones when using single-ended tube. This increases installation time and cost significantly.
- LDL listed tubes may qualify for rebate from local utility companies, which is more than offset the price difference.
- US federal government's EPC Act (Energy Policy Act 2005) incentive offers up to 60 cent per square foot on energy efficient lighting retrofit, which is on top of local utility rebate. Non-UL and low energy efficient LED tubes are not qualified.
- Local government incentive may be available.

Option #3 is not the most economical choice:

- The installation cost is high for replacing shunted tombstones.

- All fluorescent fixtures use non-shunted tombstone.
- Heavily rebate reliant.

Some remarks:

- **aleddra** is the clear advantage for retrofit projects requiring the UL-classified label for LED tubes.
- EPC Act incentive expires on January 1, 2014. Lighting retrofit project must be completed by the end of 2013.
- Check with local utility companies for lighting rebate details and local government for energy efficiency incentives.

Contact your **aleddra** agents and distributors for more information on the details on how you can take the **aleddra** advantage.