

# Easily upgrade to LED from fluorescent.

Topstar Flicker Free LED T8 tubs provide smooth and flicker-free light without the distractions, eyestrain and headaches commonly associated with fluorescent light sources. It is the perfect replacement used in offices, classrooms and other commercial and educational applications. This tube is DLC listed and qualify for nationwide utility rebates, enabling school districts, universities and facility managers to reach a quick return on investment.

- DLC 4.3 qualified
- 32W fluorescent replacement
- High efficacy
- Wide beam 325° light emitting area
- Built-in universal voltage driver 120-277V
- Shatter-Proof is available
- Bypass installation
- 4000K / 5000K CCT
- Extra long 50 000 hr lifetime
- UL Classified & FCC compliant
- THD<20%, PF>0.9, Non-Dimmable
- Flicker = 0%

## Electrical and Technical Data (Flicker = 0%)

Ordering Code	Watt(W)	Initial Lumen**	LPW	Base	CRI	Color Temp	Rated Average life	MOL (in)	Beam Angle
L48T8-840-14P-G2-FF	14.5	1800	125lm/W	G13	82	4000K	50,000	48	160
L48T8-850-14P-G2-FF	14.5	1800	125lm/W	G13	82	5000K	50,000	48	160
* L48T8-840-14P-G3-FF	14.5	2100	145lm/W	G13	82	4000K	50,000	48	160
* L48T8-850-14P-G3-FF	14.5	2100	145lm/W	G13	82	5000K	50,000	48	160
L48T8-840-18P-G2-FF	18.5	2600	140lm/W	G13	82	4000K	50,000	48	160
L48T8-850-18P-G2-FF	18.5	2600	140lm/W	G13	82	5000K	50,000	48	160
* L48T8-840-18P-G4-FF	18.5	2800	150lm/W	G13	82	4000K	50,000	48	160
* L48T8-850-18P-G4-FF	18.5	2800	150lm/W	G13	82	5000K	50,000	48	160

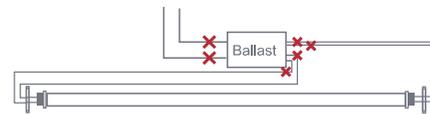
\* The code with "G3" or "G4" is the shatter-proof version. The "14P-G3" tubes have no stock in US.  
 \*\* The initial Lumen above are tested @ 4000K.



## Installation Guide

- 1) Read all WARNINGS before continuing this section.
- 2) Ensure fixture is 120-277V.
- 3) Make sure POWER IS TURNED OFF AT THE SOURCE.
- 4) Remove lens if applicable, remove cover and fluorescent tubes.
- 5) Cut all wires that connect ballast (Cf. Diagram 1). Properly discard ballast or cap off wires. Cut wire away from lamp holders.
- 6) If applicable, replace lamp holders at power end with non-shunted lamp holders.
- 7) Connect Live (L) from power source into non-Shunted lamp holder "L In".
- 8) Connect neutral (N) wire from power source into non-Shunted lamp holder "N In".
- 9) If installing a single tube refer to Diagram 3 and go to section 13. If connecting multiple lamps, continue reading.
- 10) Connect separate hot wire into "Hot Out" from primary source lamp holder and connect that wire into "Hot In" on the adjacent tube.
- 11) Connect separate neutral wire into "Neutral Out" from primary source lamp holder and connect that wire into "Neutral In" on the adjacent tube. See Diagram 4 below.
- 12) Continue this process for additional lamps.
- 13) This device is powered on one end only; the end with L and N markings (Cf. Diagram 2). Do not wire opposite end of lamp holder.
- 14) Install lamp with the L and N markings into the wired lamp holder end.
- 15) Visibly affix "Modification Sticker" and reinstall housing cover and lens if applicable.
- 16) Return power back to source and installation is now completed.

Diagram 1 – Cut all ballast wires



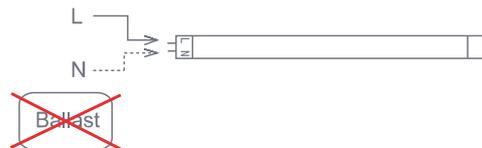
Cut all wires connecting ballast.

Diagram 2 – Connecting end



Connect power to end with L and N markings.

Diagram 3 – Single tube wiring



Only wire to one end, the end with L and N markings.  
Wiring should be made using non shunted lamp holder.

**WARNING** - Risk of fire or electric shock. LED Retrofit Kit installation requires knowledge of luminaire electrical systems. Installation should be performed only by a qualified electrician in accordance with the National Electrical Code and relevant local code.

**WARNING** - Risk of fire or electric shock. Install this kit only in the luminaires that have the construction features and dimensions shown in the photographs and/or drawings.

**WARNING** - To prevent wiring damage or abrasion, do not expose wiring to edges of sheet metal or other sharp objects.

**WARNING** - Risk of fire or electric shock. Luminaire wiring and electrical parts may be damaged when drilling for installation of LED retrofit kit. Check for enclosed wiring and components.

- Disconnect power at the source before installation, inspection or removal. Do not simply switch off fixture.
- This item is rated at 120-277V. Installer must determine whether line voltage 120-277V is available at the luminaire before installation.
- Not intended for use with emergency exit fixtures or emergency exit lights.
- Not for use with luminaire ballast.
- Do not use if product is damaged.
- This lamp is non-dimmable. Not for use with dimmers.
- Suitable for use with non-shunted lamp holders only.
- Connect hot wire only to end cap with the L and N markings. See Diagram 2. Opposite end cap is dead, do not wire.
- Do not make or alter any open holes in an enclosure of wiring or electrical components during kit installation.
- To avoid potential fire or shock hazard, do not use this retrofit kit in luminaires employing shunted bi-pin lamp holders. Note: Shunted lamp holders are found only in fluorescent luminaires with Instant-Start ballasts. Instant-Start ballasts can be identified by the words "Instant Start" or "I.S." marked on the ballast. This designation may be in the form of a statement pertaining to the ballast itself, or may be combined with the marking for the lamps with which the ballast is intended to be used, for example, F40T12/IS. For more information, contact the LED luminaire retrofit kit manufacturer.
- "This luminaire has been modified to operate LED lamps" shall be marked on the retrofit luminaire where readily visible by the user during normal maintenance including re-lamping.
- Risk of fire or electric shock. Do not open or modify. No user serviceable parts inside.
- Installers should not disconnect existing wires from lamp holder terminals to make new connections at lamp holder terminals. Instead installers should cut existing lamp holder leads away from the lamp holder and make new electrical connections to lamp holder lead wires by employing applicable connectors.
- SUITABLE FOR DAMP LOCATIONS. Suitable for use in wet locations when used in an outdoor-rated fixture. Not for use where directly exposed to the weather or water.
- Complies with Part 15 of FCC. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received including interference that may cause undesired operation.
- SUITABLE FOR "TYPE IC" OR "TYPE NON-IC" LUMINAIRES.
- No external weight or mechanical force should be applied to tube or components.
- THE RETROFIT ASSEMBLY IS ACCEPTED AS A COMPONENT OF A LUMINAIRE WHERE THE SUITABILITY OF THE COMBINATION SHALL BE DETERMINED BY UL OR AUTHORITIES HAVING JURISDICTION.