## LED T8 TYPE AB DUAL-MODE TUBES

## INSTALLATION GUIDE

## L2T8D/8XX/10/F-70 L3T8D/8XX/12/F-70 L4T8D/8XX/12/F-70

WARNING: RISK OF SHOCK - DISCONNECT POWER BEFORE INSTALLATION
This product must be installed in accordance with all local and national safety codes
These T8 LED tubes are intended to retrofit existing surface mount, type IC or non-IC recess mounted
fluorescent luminaire, with or without diffuser for maximum of four lamps with lamp to lamp distance of
4.35 ". Or, retrofit surface mounted fluorescent luminaire without diffuser for maximum six lamps with lamp to lamp distance of 2.15 "

WARNING-- RISK OF FIRE OR ELECTRIC SHOCK:
-The electrical rating of this product is 120-277VAC, installer must determine whether fixture rated for 120-277V before installing
-LED Retrofit kit requires knowledge of luminaire electrical systems. If not qualified, do not attempt installation. Contact a qualified electrician.
WARNING: To prevent wiring damage or abrasion, do not expose wiring to edges of sheet metal or other sharp objects
-Do not make or alter any open holes in enclosure of wiring or electrical components during installation
Installers should not disconnect existing wires from lampholder terminals to make new connections.
Instead, installers should cut existing leads away from the lampholder and make new electrical
connections to lampholder lead wires by applicable connectors
-NOT FOR USE WITH DIMMERS
RISK OF ELECTRIC SHOCK—USE IN DRY OR DAMP LOCATIONS ONLY
THIS DEVICE NOT INTENDED FOR USE WITH EMERGENCY EXITS

INSTALL INSTRUGTIONS: MODE 1 - DIREGT REPLACEMENT

## For direct replacement for specific fluorescent lamp (32W/48T8,

 30W/48T8,28W/48T8,25W/48T8,25W/36T8,17W/24T8) follow steps below:1. Turn Power off
2. Remove lens or diffuser (if applicable)
3. Remove existing fluorescent lamp from the luminaire.
4. Ensure existing ballast in luminaire is compatible see ballast compatibility chart, www.topaz-usa.com/ballast-compatibility.
5. Install the LED replacement lamp (one for each fluorescent lamp removed).
6. Replace lens or diffuser back in place (if applicable)
7. Turn Power on


## INSTALL INSTRUCTIONS: MODE 2 - BY-PASS ELECTRONIC BALLAST

## 1. Turn Power off

2. Remove existing fluorescent tube(s), diffuser (if applicable) and open the ballast cover.
3. Disconnect luminaire supply wirings $L$ and $N$ to branch circuit as shown in Fig. 1.
4. Original circuit as shown in Fig. 2. Cut lampholder leads " $1,2,3,4, L, N$ ", then check whether the lampholder is shunted. Cut as far away from the lampholders to allow for longer lengths of wire at both lampholders. Note: Ballast must be retained in place in accordance to UL regulations.
5. Check the lamp holders. If the lamp holders are shunted, go to Step 6. If the lamp holders are not shunted, go to Step 7. For "One End" wiring configuration only, "WARNING: To avoid potential fire or shock hazard, do not use this retrofit kit in luminaires employing shunted bi-pin lampholders. 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.


FIG. 2


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6. If the lamp holders are shunted, connect one lead from each lampholder to branch circuit as follows, "Leads 3 and 4" connected to L; "Leads 1 and 2" connected to N as shown in Fig. 3.

7. The lamp holders are not shunted. "One End" or "Both End" wiring can be selected. For "One End" wiring, connect one lead from each lampholder to branch circuit as follows, "Leads 1 " connected to L; "Leads 2" connected to N. Don't connect Lead 3, Lead 4 to the circuit as shown in Fig. 4. Note: Leads 1 and Leads 2 are respectively connected to L and N 1 on the LED tube, Don't connect N2 and N3 in the circuit.
For "Both Ends" wiring, Connect one lead from each lampholder to branch circuit as follows, "Leads 1 and Leads 2 " connected to L; "Leads 3 and Leads 4 " connected to $N$. as shown in Fig. 4A.

8. Attach the field applied label to the luminaire. Install ballast cover and diffuser (if applicable)
back on Luminaire, and T8 LED tube as shown in Fig. 5.
FIG. 5
9: Turn on the AC power source, LED Tube will light.


The wiring of multiple lamps is the same as above.

## INSTALL INSTRUGTIONS - MODE 2 • BY PASS MAGNETIC BALLAST

## REPEAT STEPS 1 TO 3

4. Original circuit as shown in Fig. 6. Cut lamp holder leads "1, 2, 3, 4", Cut as far away from the lampholders to allow for longer lengths of wire at both lampholders. Note: Ballast must be retained in place. Note: Ballast must be retained in place in accordance to UL regulations.

"One End" or "Both End" wiring can be selected. For "One End" wiring ,connect one lead from each lampholder to branch circuit as follows, "Leads 1" connected to L; "Leads 2" connected to N. Don't connect Lead 3, Lead 4 to the circuit as shown in Fig. 7. Note: Leads 1 and Leads 2 are respectively connected to Land N1 on the Led tube, Don't connect N 2 and N 3 in the circuit.

For "Both Ends" wiring, Connect one lead from each lampholder to branch circuit as follows, "Leads 1 and Leads 2 " connected to L; "Leads 3 and Leads 4" connected to $N$. as shown in Fig. 7A.

REPEAT STEPS 8 TO 9 - The wiring of multiple lamps is the same as above.

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