

Hybrid T8 LED tube: it installs **directly on the existing ballast (UL Type A)** or **in ballast bypass mode, wired to 120-347 V (UL Type B)**, single-ended or double-ended. **Important: read before installing and retain for future reference.**

⚠ WARNINGS

- **Danger: risk of shock.** Disconnect power before installation.
- **Risk of fire or electric shock.** LED retrofit installation requires knowledge of luminaire electrical systems. If not qualified, do not attempt installation: contact a **qualified electrician**.
- The product must be installed in accordance with the national electrical code or your local electrical code. If you are not familiar with these codes and requirements, contact a qualified electrician.
- Install this product only in luminaires that have the construction features and dimensions shown in the photographs and/or drawings and where the input rating of the product does not exceed the input rating of the luminaire.
- 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 any enclosure of wiring or electrical components during installation.
- The product includes installation instructions, the LED lamp and luminaire marking labels. The T8 LED tubes are intended to retrofit listed surface mounted, or type non-IC or type IC recessed mounted fluorescent luminaires, with or without diffuser, for **a maximum of 4 lamps with a lamp-to-lamp distance of 11 cm minimum**; or listed surface mounted fluorescent luminaires without diffuser for **a maximum of 6 lamps with a lamp-to-lamp distance of 5.5 cm minimum**.
- The electrical rating of these products is **120-347 V AC**: the installer must determine whether there is 120-347 V at the luminaire before installation.
- Do not disconnect existing wires from lampholder terminals to make new connections at the lampholder terminals: instead, cut the existing lampholder leads away from the lampholder and make new connections to the lampholder lead wires with applicable connectors.
- This product is accepted as a component of a luminaire where the suitability of the combination shall be determined by the authorities having jurisdiction.

USE

- This lamp is **dimnable in Type A (ballast dependent) mode only**, and ONLY with compatible dimmable ballasts.
- Suitable for **dry and damp** locations.
- Not intended for use with emergency exits.
- **For single-ended wiring only:** to avoid potential fire or shock hazard, do not use this product in luminaires employing shunted bi-pin lampholders. Shunted lampholders are found only in fluorescent luminaires with instant-start ballasts, which can be identified by the words "Instant Start" or "I.S." marked on the ballast, alone or combined with the marking of the intended lamps (e.g. F40T12/IS). For more information, contact LEDCO.
- This device complies with Part 15 of the FCC Rules. 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.

DIRECT REPLACEMENT ON BALLAST (UL TYPE A)

- 1 Make sure the ballast is on the **compatible ballast list**. If not, you can choose ballast bypass mode: see the UL Type B instructions below.

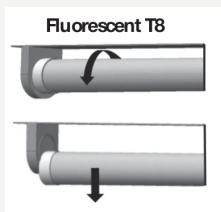
- 2 Turn off the power to the luminaire (figure 1).



- 3 Remove the diffuser, if applicable.

DIRECT REPLACEMENT ON BALLAST (UL TYPE A) (CONTINUED)

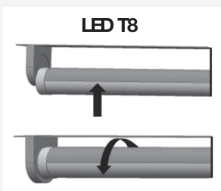
- 4 Remove the existing fluorescent lamps from the luminaire (figure 2). Verify the fluorescent tube type with the table below.



Fluorescent T8: rotate the tube, then lower it.

- 5 Dispose of the existing fluorescent lamps in accordance with government regulations in your area.

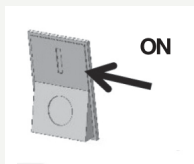
- 6 Install the T8 LED tubes. Ensure that the pins are firmly seated in the lampholders (figure 3).



LED T8: insert the tube, then rotate it.

- 7 Replace the diffuser (if removed).

- 8 **Switch on the power** to the luminaire (figure 4).



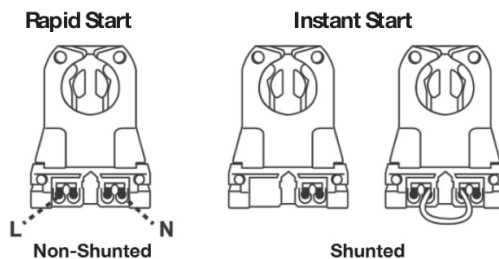
FLUORESCENT LAMPS REPLACED (ANSI DESIGNATION)

Tube length	ANSI designation of target lamps
2 ft	17W/24T8
3 ft	25W/36T8
4 ft	32W/48T8, 30W/48T8, 28W/48T8, 25W/48T8

BALLAST BYPASS (UL TYPE B)

1. Make sure the circuit breaker that supplies power to the fixture is turned **OFF**.
2. Remove the lens or diffuser cover (if applicable) and the existing lamps.
3. Open or remove the ballast wiring compartment cover.
4. Identify the line and neutral wires running from the breaker box to the ballast and confirm the power is off using a voltmeter.
5. Cut all wires connected to the ballast and remove the ballast (and starter, if present). Dispose of the removed ballast and fluorescent lamps in accordance with government regulations in your area.
6. The T8 LED tubes are designed to work with shunted and non-shunted lampholders. They can be wired for single-ended or double-ended power.

LAMP HOLDERS



Rapid start: **non-shunted** lampholder (L = line, N = neutral) · Instant start: **shunted** lampholders.

SINGLE-ENDED WIRING — BALLAST BYPASS (UL TYPE B)

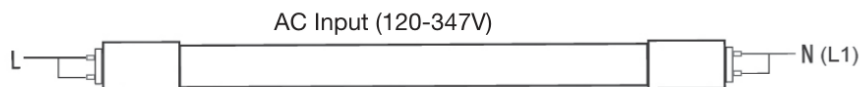
Use **non-shunted lampholders**. Connect line and neutral to pins **L and N1**. Do not connect N2 and N3.



AC = 120-347 V AC supply · L and N1: line and neutral · N2 and N3 (x): not connected.

DOUBLE-ENDED WIRING — BALLAST BYPASS (UL TYPE B)

Connect line to **L and N1**. Connect neutral to **N2 and N3**. This can also be reversed (line to N2 and N3, neutral to L and N1).



AC input (120-347 V) · L: line · N (L1): neutral (or line if reversed).

7. Mark the re-wiring method on the **relamping label** and attach it in a visible location inside the fixture.

8. Install the ballast cover and diffuser (if applicable) back on the luminaire. Install the T8 LED tube.

9. Turn the power on at the breaker box and turn on the lights.

10. Wiring for multiple lamps is the same as illustrated and detailed above.