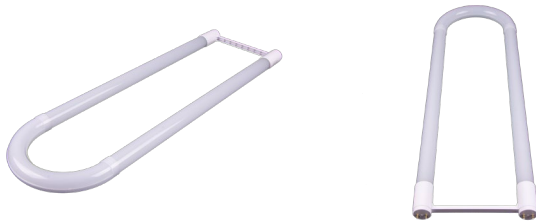


Installation Guide: U-Bent T8 Type-B DEP/SEP LED Tube Lamp



U-Bent T8 Type-B DEP/SEP LED Tube Lamp

Contents:

Carefully open the box and check contents. Contact Revolution Lighting if any items are missing.		
Qty. #	U-Bent T8 Type-B DEP/SEP LED TUBE LAMP(S) [SKU #: (as ordered)]	U-Bent T8 Type-B DEP/SEP LED Tube Lamp(s)
Qty. 1	"RETROFITTED LUMINAIRE" Label for LED T8 SEP/DEP Tubes [SKU #: 300225]	This decal must be placed in the LED-modified luminaire so that it is visible if replacing an LED tube (only one label per retrofitted luminaire required).
Qty. 1	"Modified Power Socket" Label [SKU #: 300325]	If retrofitting as SEP, this decal must be placed at the base of the powered LED tube socket on the LED-modified luminaire so that it is visible when replacing an LED tube. The arrow on the label should point in the direction of the powered socket (only one label per retrofitted luminaire required at powered end).
Qty. 1	U-Bent T8 TYPE-B DEP/SEP LED TUBE INSTALLATION GUIDE [SKU #: 300566 v02]	Provides information necessary to retrofit a luminaire with the U-Bent T8 Type-B DEP/SEP LED Tube.

Installation Notes & Precautions:

- **Read all precautions, warnings, and instructions contained in this document.**
- These instructions can be used to install the U-Bent T8 Type-B DEP/SEP LED Tube Lamp into a properly wired luminaire/troffer.
- Installation should be performed by a qualified electrician or installer.
- Before installing lamps, verify that luminaire tombstone spacing matches the lamp length.
- LED tube is powered from either both ends (DEP) or from one end (SEP).
- **CAUTION: Wire the fixture according to these installation instructions for either DEP operation (see Step 4A) or SEP operation (see Step 4B).**
- Operating voltages: 120-277VAC
- A "Retrofitted Luminaire" label is included with your LED tube. This decal must be placed in a prominent location inside the luminaire so that it is visible if replacing an LED tube. If the luminaire is already modified for LED tube use and has a label, the new label may be discarded.
- A "Modified Power Socket" label (supplied) must be placed near the powered side of the fixture when wired for SEP operation.
- The LED tube may be used in open or enclosed surface or recessed (Type-IC) luminaires.
- This light source is not intended as an emergency exit fixture or light.
- The LED tube is not for use in luminaires controlled by a dimmer.

STEP 1 – Turn Off Power

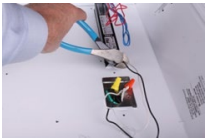


- Disconnect power to installation site.
WARNING: Ensure that all power is off using a voltmeter or other method.

STEP 2 – Prepare Fixture for Retrofit

- Remove troffer lens, if present.
- Remove existing fluorescent or LED tube lamps by rotating one quarter turn and sliding each lamp out. Dispose of fluorescent lamps per job/company site rules and regulations.
- Remove ballast cover. (Cover may be secured with screws or tabs.)

STEP 3—Bypass Ballast



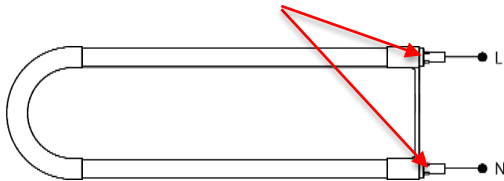
- Cut all ballast wires as close to ballast as possible, then choose one of the following two options:
 - Unscrew screw(s) and remove ballast from luminaire, then reinsert original screw(s) into ballast mounting hole(s).

OR

- Abandon and leave ballast in its original mounting location.
- Remove lamp-holder (socket/tombstone) covers from both ends of luminaire. (Covers may be secured with screws or tabs.)
- **Proceed next to Step 4A for DEP wiring or Step 4B for SEP wiring.**

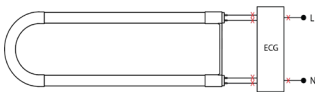
STEP 4A – Wiring for DEP Operation

DEP Tombstone Socket Connections (120-277VAC)

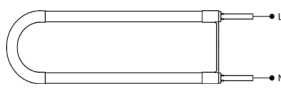


- Ensure that lamp sockets in the fixture are wired according to the above diagram labeled "DEP Tombstone Socket Connections," which depicts a double-end-power configuration with the hot wire connected to both contacts of one (either) socket and the neutral wire connected to both contacts of the other socket. (In this diagram, 'N' is neutral; 'L' is hot.)

Before

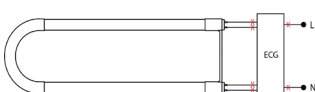


After

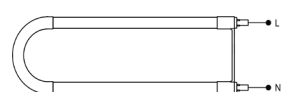


DEP Wiring Configuration #1: Externally Shunted Tombstones (Recommended)

Before



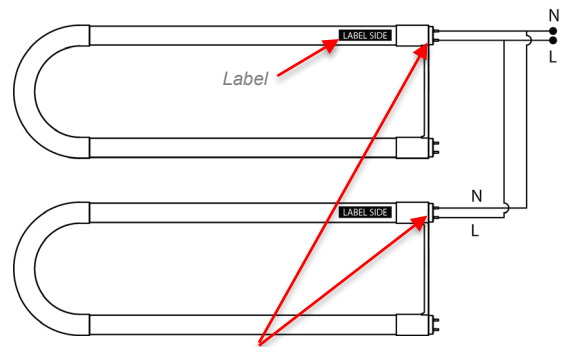
After



DEP Wiring Configuration #2: Internally Shunted Tombstones

- **NOTE: When wired for DEP operation, these LED tube lamps will work with either shunted or non-shunted tombstone sockets. However, the recommended arrangement is to use non-shunted sockets that are externally shunted as shown in Wiring Configuration #1. (See Before & After wiring diagrams.)**
- **NOTE: If only one wire connection is made to a non-shunted socket, it must be made to the contact for the tube-lamp pin labeled "N". Use Wiring Configuration #1 to ensure functionality for all installed tube positions.**
- After checking the socket wiring, cut and strip approximately ½ in. of insulation from the free ends of the wires coming from the tombstone sockets.
- Splice the hot (black) and neutral (white) incoming power leads to all corresponding hot and neutral wires from the sockets using the appropriate wire nuts.
- Secure all fasteners, clips and wires (use electrical tape if necessary) and reinstall socket covers at both ends of troffer.
- Apply supplied label SKU #300225. If necessary, clean area where the label will be placed before affixing the self-adhesive label. Ensure that the label will not be covered by any cover pieces, trim, or other items

STEP 4B – Wiring for SEP Operation



SEP Non-Shunted Tombstone Socket Connections (120-277VAC)

- **WARNING: When wired for SEP operation, these LED tube lamps work ONLY with non-shunted tombstone sockets. Do not use shunted sockets.**
- Remove existing shunted tombstone sockets, if present, and replace them with non-shunted push-in sockets. (Non-shunted tombstone sockets are typically used with programmed-start ballasts.)
- Ensure that all lamp sockets in the fixture are wired according to diagrams above, which depict a single-end-power (SEP) wiring configuration using non-shunted sockets.
- In a retrofitted SEP 2' x 2' U-bent retrofit troffer, only two of the four bi-pin sockets will have connections, as shown in the above wiring diagram. **NOTE: Do not make any electrical connections to the other (non-powered) bi-pin sockets.**
- After checking the socket wiring, cut and strip approximately ½ in. of insulation from the free ends of the wires leading to the tombstone sockets.
- Using appropriate wire nuts, splice the hot (black) and neutral (white) incoming power leads to the corresponding socket wires, as shown.
- **IMPORTANT: Make sure that each powered bi-pin socket is wired so that the hot (black) and neutral (white) wires connect to the live end cap of the tube lamp when installed. (The live end cap is on the side of the lamp with the product label.) The product label must face upward when installed in the luminaire.**
- Secure all fasteners, clips, and wires (use electrical tape if necessary) and reinstall socket covers at both ends of troffer.
- Apply supplied label SKU #300325 with arrow pointing to a powered troffer socket, indicating modified power sockets. Also apply supplied label SKU #300225. If necessary, clean area where the label will be placed before affixing the self-adhesive label. Ensure that the label will not be covered by any cover pieces, trim, or other items.

STEP 5 – Insert LED Tube Lamps, etc.







- Before installing tube, check that the tube label is facing inward/upward toward the back/top of the luminaire housing.
- Secure each new LED U-bent tube by snapping bi-pins into tombstone sockets and securing the tube with support clips, if present.
- Repeat above step for all LED tube lamps.
- Replace ballast cover.
- Replace troffer lens, if present.

STEP 6 – Turn On Power






- Switch power back on.

Warnings:

-  **WARNING** – Risk of fire or electric shock. Do not alter, relocate, or remove wiring, lampholders, ballasts or any other electrical component. If necessary, contact a qualified electrician for assistance.
-  **WARNING** – To prevent wiring damage or abrasion, do not expose wiring to exposed edges of sheet metal or other sharp objects.
-  **WARNING** – Always disconnect power for your safety when performing the luminaire modification steps below! In some cases, it may be necessary to test the power feed with the power connected. Only connect the power when doing the testing, then disconnect the power from the luminaire when performing the steps below.
-  **WARNING** – Always follow local and regional NEMA Electrical codes. NEMA codes provide information on proper procedures, safety guidelines, proper tools, connection methods, and specifications on materials.
-  **WARNING** – Revolution Lighting Technologies, Inc. cannot and will not be liable for any modifications or results of modifications to electrical devices or luminaires. These instructions are provided as a reference. By using the included instructions, you are solely responsible for following all applicable electrical safety procedures, codes, methods, and materials. If you are unsure about any electrical modification or installation, please consult a licensed electrician or electrical contractor in your area.
-  **WARNING** – To lower the risk of fire or electric shock, do not use shunted lamp holders when tube lamp is wired for SEP operation. Shunted lamp holders are found only in fluorescent luminaires with Instant-Start ballasts.

Cautions:

-  **CAUTION** – Risk of Shock. Use in Dry or Damp Locations Only.
-  **CAUTION** – Do NOT install an LED tube into a fluorescent luminaire containing a ballast and/or starter. The ballast and/or starter must be removed prior to installation.
-  **CAUTION** – Do not make or alter any open holes in an enclosure of wiring or electrical components during kit installation.