



## *Universal Retrofit System Installation Instructions*

Revised: 20150624

These instructions do not purport to cover all details or variations in components nor to provide for every possible contingency to be met in connection with installation, operation, or maintenance. Should further information be desired or should a particular problem arise which is not covered sufficiently for the purchaser's purpose, the matter should be referred to Linmore LED Labs. Linmore does not claim liability for any installation not performed according to this guide or not by a qualified electrician.

### **IMPORTANT SAFEGUARDS**

When using electrical equipment, basic safety precautions should always be followed including the following:

#### **READ AND FOLLOW ALL SAFETY INSTRUCTIONS**

1. DANGER – RISK OF SHOCK – DISCONNECT POWER BEFORE INSTALLATION
2. WARNING – Risk of fire or electric shock. LED Upgrade Kit installation requires knowledge of luminaires electrical systems. If not qualified, do not attempt installation. Product must be installed in accordance with NEC or your local electrical code. If you are not familiar with these codes and requirements, contact a qualified electrician.
3. WARNING – Risk of fire or electric shock. Luminaire wiring and electrical parts may be damaged when drilling for installation of the LED upgrade kit. Check for enclosed wiring and components.
4. WARNING – Risk of fire or electric shock. Check the existing wiring for damage before installing upgrade kit. Do not install if existing wires are damaged.
5. WARNING – To prevent wiring damage or abrasion, do not expose wires to the edge of sheet metal or any other sharp objects.
6. 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.
7. 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.
8. Only the holes indicated in the photographs or drawings may be made or altered as a result of the kit installation. Do not leave any other holes open in a wiring enclosure or electrical component.

**SAVE THESE INSTRUCTIONS FOR FUTURE REFERENCE NOTES:**

1. Upgrade Kit is for installation in a nominal 1x4 or 2x4 Listed dry or damp location fluorescent troffer, wrap or strip luminaire, with or without a diffuser. The luminaire shall have the following minimum dimensions:
  - 2-15/16" deep pan
  - 3" wide minimum wiring compartment
  - 46" minimum length to accommodate 4' nominal length light bar and 22" minimum length to accommodate 2' nominal length light bar
2. Consult your local authority regarding disposal or recycling of removed ballast and lamps.

**LIST OF SUPPLIED COMPONENTS:**

URS Light Bar(s) per Chosen Kit  
LED Drivers(s) as Ordered  
Self-Tapping Screws: 2 per Bar and 2 per Driver

**LIST OF ITEMS INSTALLER MAY HAVE TO SUPPLY:**

Additional wire to extend wire length or make jumpers  
Wire nuts  
Extra self-tapping screws

**NOTE:** The instructions below reflect the steps necessary for retrofit of a typical fluorescent troffer luminaire. These steps are functionally identical for retrofit of a typical wrap or strip luminaire.

Step 1: Locate latches on the lens frame and release them allowing the lens frame to open. Carefully let the lens frame hang.

Step 2: Remove the existing linear fluorescent tubes and properly dispose of them.



Step 3: Remove the wiring compartment by squeezing the sides in and pulling down. Set aside.



Step 4: Cut the leads from the ballast to the socket housing on both ends of the luminaire and cap socket leads. When cutting the leads, leave the smallest amount of wire attached to the luminaire.



Step 5: Cut the leads from the ballast to the input power ensuring to leave as much length as possible for electrical connections. Remove ballast from housing and dispose of properly.

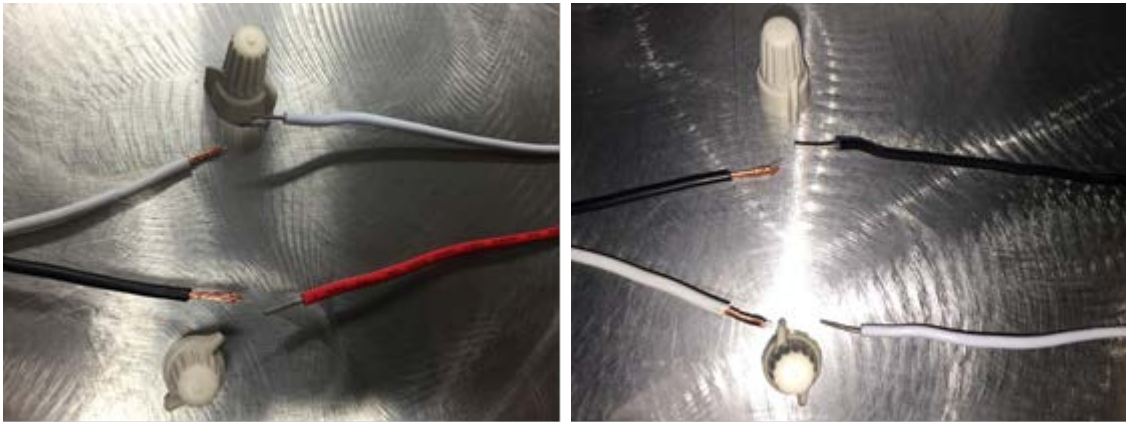
Step 6: Push exposed socket leads back into socket housing on each side of the luminaire or cap any exposed accessible leads.

Step 7: Prepare input power by stripping input power leads 5/8".

Step 8: Bring new driver into housing using mounting holes from old ballast when possible and secure it using supplied self-tapping screws. Ensure that the existing luminaire housing is properly grounded to ensure proper driver grounding. If housing has multiple locations for power supply, new driver can be secured in any of these locations.



Step 9: Make the input electrical connection per diagram on the face of the LED Driver. The White Input Wire is the Neutral. The Black or Red Input Wire is Line Voltage Input from 100 – 277 Volts. Ensure that the driver is properly grounded to the luminaire.



Step 10: The LED Driver comes standard with 0-10 Volt Dimming. The Blue, Yellow, and White wires on the output side of the driver are for dimming functions. If the dimming functions will NOT be used, tie the blue and yellow wires together with a wire nut and cap the white dimming wire.



If the dimming functions will be used, this is the function of the dimming wires:

Yellow: 0-10V + Dimming Input

White: 0-10V – Dimming Input

Blue: Input Power Supply for Dimmer at 9 Volts (when required by dimming system). If not required, cap this wire.

Step 11: Bring wiring compartment cover previously removed in Step 3 into the housing. Carefully tuck all leads and wire connectors into the wire compartment. Reattach wire compartment by snapping into place over the driver insuring no wires are pinched. Route the driver outgoing leads through the wiring compartment allowing leads to be exposed through the end of the wiring compartment. Sometimes, the installer may want to relocate the wiring compartment cover. It can be located to a similar location in the housing and secured with self-tapping screws.

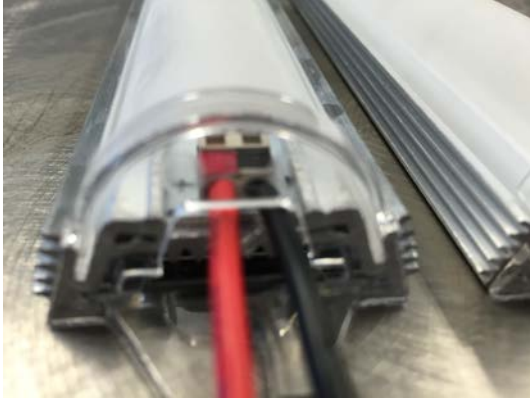
Step 12: Determine where each URS Light Bar will be located in the luminaire housing. Start a self-tapping screw for one end of the URS Light Bar. Slide one end of the URS Light Bar end cap under the head of the self-tapping screw. Locate the opposite end of the URS Light Bar and set a self-tapping screw in the chosen location. Go back to the screw that was started and finish securing the screw.



Step 13: Finish installing the remainder of the URS Light Bars in the manner described in Step 12.

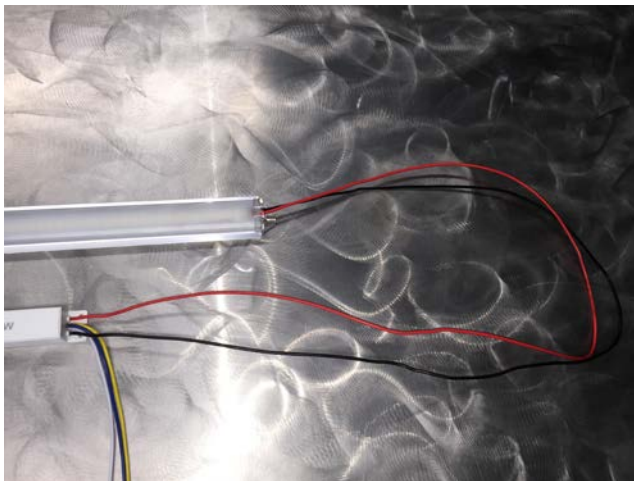


Step 14: The URS Light Bars have a press-in style connector on each end visible through the clear end caps. The press-in connectors are both marked by color (red=positive and black=negative) and printed on the LED strip is "+ " & "-" indications of the same, respectively.

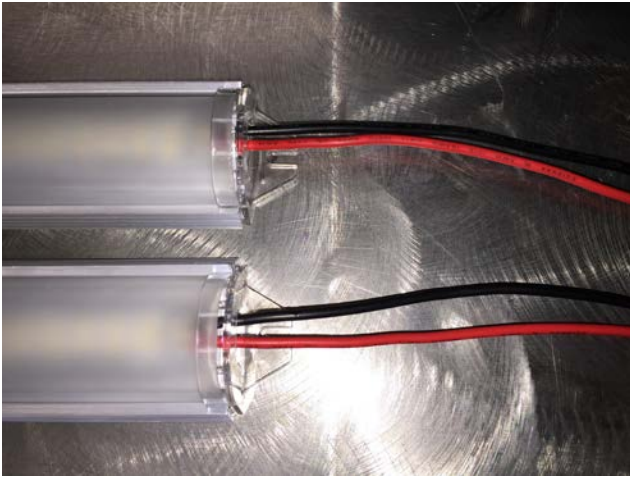


Connect the driver output leads to the chosen end of the URS Light Bar(s) according to the following pictures based on the number of URS Light Bars driven by a single driver. There are four configurations: 1 Bar, 2 Bars, 3 Bars, or 4 Bars

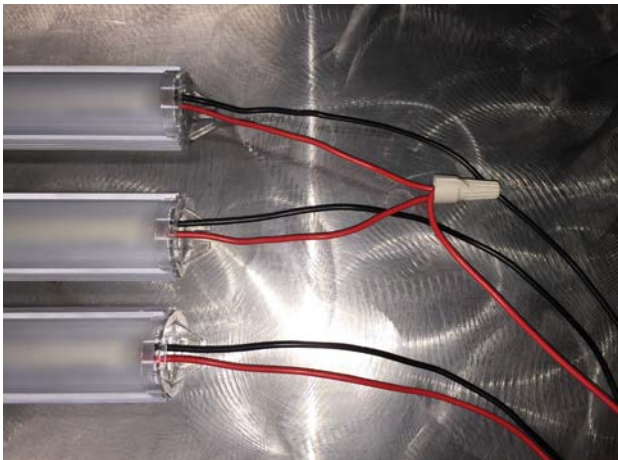
**1 Bar:** 2 Driver Output Leads: 1 Red/+ and 1 Black/-



**2 Bar:** 4 Driver Output Leads: 2 Red/+ and 2 Black/-



**3 Bar:** 5 Driver Output Leads: 2 Red/+ and 3 Black/-



**4 Bar:** 6 Driver Output Leads: 2 Red/+ and 4 Black/-



Step 15: Compact any excess wire lengths under the wiring compartment cover.

Step 16: Close the lens door and secure the latches.

Step 17: Restore the power supply to the fixture and ensure proper operation.