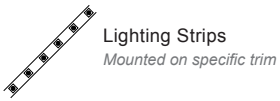


INSTALLATION INSTRUCTIONS (1/1)

REQUIRED COMPONENTS



Lighting Strips
Mounted on specific trim



Driver
(1) Job-specific requirements



120" End Feed
(1) power connector per light strip

TERMS & CONDITIONS

To comply with Phantom Lighting System warranty policies and ETL Standards, all lighting strips must be used in conjunction with Phantom Lighting drivers. All Phantom Lighting drivers are ETL Approved and are strongly recommended for proper operation of lighting strips. Phantom Drivers should not be located in areas with no ventilation or subject to high ambient temperatures. If ambient temperature exceeds 115°F (46°C) around the driver, the circuit breakers may nuisance-trip due to excessive heat and void any warranty.

CAUTION: FAILURE TO CORRECTLY SIZE THE PRIMARY AND SECONDARY CONDUCTORS AND/OR THE OVERLOAD PROTECTION MAY RESULT IN BODILY INJURY AND/OR SERIOUS PROPERTY DAMAGE

If you have any questions or concerns regarding your application, please contact the Phantom factory at the number listed below, a local licensed electrician, or consult the U.S. National Electric Code.

READ AND UNDERSTAND THESE INSTRUCTIONS BEFORE INSTALLATION – SAVE THESE INSTRUCTIONS!

These fixtures are intended for installation in accordance with the National Electrical Code and local regulations. To ensure full compliance with local codes and regulations, check with your local electrical inspector before installation. To prevent electrical shock, turn off electricity at fuse box before proceeding. Remove all components from the shipping carton. The instructions are in a step by step sequence for correct and easy assembly. Save the shipping carton and packing materials until job is complete.

1. CALCULATE DRIVER REQUIREMENTS

Available driver sizes: 20W, 40W, 60W, 96W, 150W, 200W, 300W

Ultra lighting strips **without a lens** use standard LED tapes, producing 4.2 watts per foot. Example: a cabinet containing 10' of 4.2W Ultra Lighting Strips, 10' x 4.2 watts/ft = 42 total watts. Always allow a 20% safety factor when sizing to prevent nuisance tripping. Example: 42 watts x 1.2 = 50.4 watts, requiring a 60-watt driver. **Maximum run length per 4.2W feed is 23 feet or 96.6 watts.**

Ultra lighting strips **with a lens** use high-density LED tapes, producing either 5.0 or 7.5 watts per foot. Example: a cabinet containing 10' of 5.0W Ultra Lighting Strips, 10' x 5.0 watts/ft = 50 total watts. Always allow 20% safety factor when sizing to prevent nuisance tripping. Example: 50 watts x 1.2 = 60 watts, requiring a 60-watt driver. **Maximum run length per 5.0W feed is 20 feet or 100 watts; maximum run length per 7.5W feed is 13 feet or 97.5 watts.**

2. DETERMINE LOCATION OF DRIVER

The driver should be out of sight, but still accessible for servicing if necessary. Some electricians install it in the attic above the display, while others conceal it in the base or header of the cabinet.

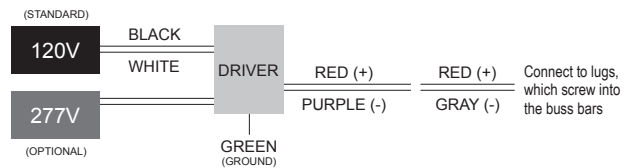
NOTE: the installer should use normal voltage drop calculations when determining the distance from the cabinet. Typically, the distance should not exceed 20' from location when using 16-gauge wire. If farther, use larger gauge wire.

3. INSTALL ULTRA LIGHTING STRIP

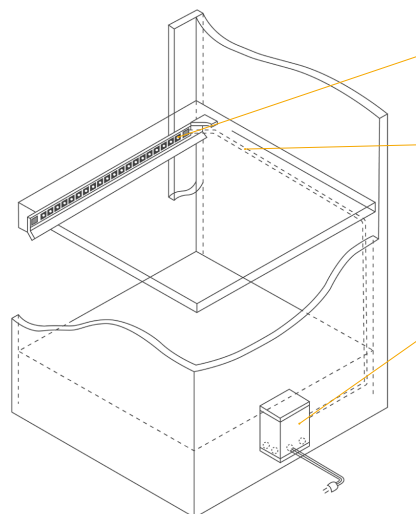
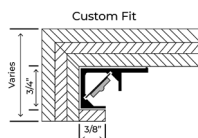
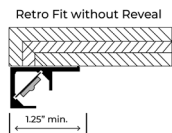
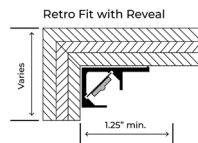
If trim pieces are broken up to make a longer run, see step 1 to confirm and comply with maximum run lengths. Then use the pre-cut holes to mount the trim with the screws. First, attach all mounting trims, then carefully apply tape, paying close attention to the power connectors. **HINT:** lights may be shimmed up/down to adjust spread of light from recessed cone.

4. CONNECT THE DRIVER

Using a dimmer is optional, but **not required** for this product. Low voltage dimmers are not included with this product; please visit our website for a list of compatible magnetic low-voltage dimmers or call technical support.



VISUAL INSTRUCTIONS



LED LIGHTING STRIP

Each LED lighting strip is concealed by either a trim or a lensed enclosure. For best results, use a matte finish on the back of the cabinet to minimize reflections and/or glare.

CONCEALED WIRING

For fixed shelving, furniture or retrofit applications, it may be necessary to conceal wiring from individual fixtures back to the transformer. We are happy to manufacture your lighting strips with long leads to accommodate any application. Consult factory for other fixed wiring methods.

DRIVER

Magnetic drivers are sized to match the total wattage of your lighting load and come equipped with one or more secondary circuit breakers. (See driver sheet for more sizing information and amperage calculations.)

DIMMER CONTROLS (BY OTHERS)

Magnetic low voltage transformers should always be used with a dimmer designated for magnetic or inductive loads. Electronic transformers should always be used with a dimmer designated for electronic loads.