

T8 Retrofit Fluorescent Tube Light to LED Tube Light Installation

More instructions and photos of different fixtures can be found on our Resource Page at:
<http://m4sales.com>

WARNING: Do not install and power up an LED tube light without rewiring fixture per the instructions. Tube damage will occur if the Fluorescent ballast/starter is in place and the warranty will be void. Do Not use these instructions for T5 Tubes as the wiring is different.

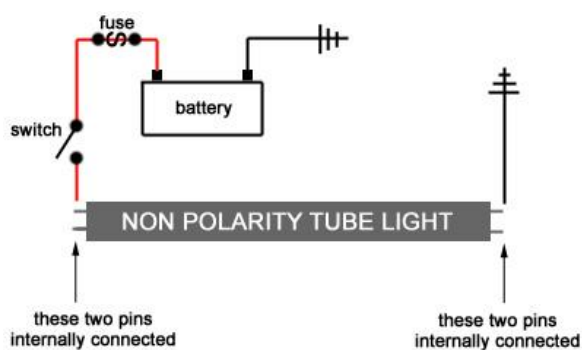
Instructions only for tube lights purchased from M4 LED Products <http://m4led.com>

PRODUCT NOTES: The tube lights we sell are different than other 12v LED retrofit lights on the market because ours use the natural pins on the bulb and fixture to supply power to the LED light. This gives a cleaner appearance since there are no wires protruding from the side of the tube light that can be seen dangling from the fixture. Our tube lights also have a frosted cover so you cannot see the individual LED lights when looking at the fixture. These T8 tubes are Non-Polarity, so it does not matter which end is positive and which end is grounded. At one end of the tube, the two pins are internally jumped together. At the other end of the tube, those two pins are jumped together, so you only need to connect a wire to one pin on each end of the tube, but two both can also be connected (redundancy).

CAUTION: THESE ARE FOR 12 VOLT DC APPLICATIONS ONLY. Serious Injury and Damage may occur if you try to install these into 110-120v AC Household Current.

DISCLAIMER: To install these retrofit lights, you will be altering the wiring in your fixture to bypass or remove the Fluorescent Ballast as it is no longer necessary. You will be cutting and splicing wires that will void your warranty on your original light fixture. Though this is an easy rewire, if you are not comfortable with basic wiring, please seek a professional's assistance. M4 shall not be accountable for any damage to the existing light fixture or damage caused by shorts, loose wires, or mis-wiring. If you do not want to alter your light fixture, **STOP NOW.**

These generic instructions are for a typical RV 12v Fluorescent Light Fixture with one or two 18" T8 bulbs. There are variations by fixture manufacture, but the general instructions will be the same. A limited number of fixtures also have riveted in ballast covers, you may still convert those fixtures, but you will need to work around the cover, or remove and replace the rivets that hold it in place. See more detailed pictures and different fixtures at <http://m4sales.com>.



The circuit simplified: One end of the tube light needs a positive power supplied, the other side ground. At each end of the tube, the two pins are interconnected, so you only need a wire connected to one pin at each end (but redundancy is ok)

Included with the light(s) are wire nuts, some wire that may or may not be needed, and a LED retrofit label.

Tools you will need are wire cutters, wire strippers, and possibly screwdrivers depending on your fixture.

- Remove the lens cover.

- Ensure this is a 12v DC fixture with 12v DC tube lights.

STOP: These light cannot be used on a 120v AC fixture.

- Turn off the RV main power (battery disconnect button). Ensure the lights will not illuminate before proceeding
- Remove the tubes. Some tubes pull straight down, others need to be rotated 90 degrees and then pulled down.

STOP: Before proceeding, test fit the new LED tube lights in your fixture with the fixture diffuser cover on. **Do not turn power on to the fixture when test fitting.** Remove the pin protectors to test fit the tube. Remove the new LED tube after test fitting and continue.

- The LED tubes have rotating end caps, put them in the orientation you need to face the light down. Hold the end caps (not the center of the tube) when installing the tube so the end caps do not rotate out of position.
- Remove the protective shield covering the ballast and wiring.
- Cut all wires from the ballast close to the ballast
- Identify where the 12 volt power and ground come into the fixture after the switch.

Sockets "A" (at one end of the fixture) POWER: The power wire from the coach is typically black, and if you have a switch in the fixture, it will go in and out of the switch. This wire will connect to the lamp socket(s) at one end of the fixture. For each socket, you only need to connect one wire to this power wire, so if you have a two-tube fixture you will be connecting three wires together.

- Identify one wire to keep going to each T8 socket on one end of the fixture
- Remove all additional wires going to the sockets or tape off cut any ends with electrical tape.
- Connect the remaining wires from "Sockets A" together, and then to the power wire coming from the fixture switch with a wire nut. If there is no switch, connect them to the power wire coming into the fixture directly. Use the supplied extra wire and wire nut if necessary

Sockets "B" (at the other end of the fixture) GROUND: The ground wire from the coach is typically white. You will connect this directly to the sockets at the other end of the fixture.

- Identify one wire going to each socket at the other end of the fixture.
- Remove all other wires or tape off any cut ends with electrical tape.
- Connect the remaining wires from "Sockets B" together with the ground wire coming into the fixture. Use the supplied extra wire if necessary and if you didn't need it on "Sockets A"



At this point, your fixture should look something like this (more pictures online)

- Install the tubes into the fixture. They are non-polarity, so it doesn't matter which way they go.
- Affix the supplied "Notice" sticker somewhere inside the fixture to alert anyone that the fixture has been converted to LED.
- Turn on the main power and test the lights. After testing, you may reinstall the ballast and wire shield or covering.

Enjoy your new LED tube lights, and let everybody know about M4LED.com