LUTRON

Tape Light Solutions

043611c

Installation Instructions

The instructions below provide an overview of installation for Lutron tape light. Installation may vary based on the specific layout of each tape light being installed.

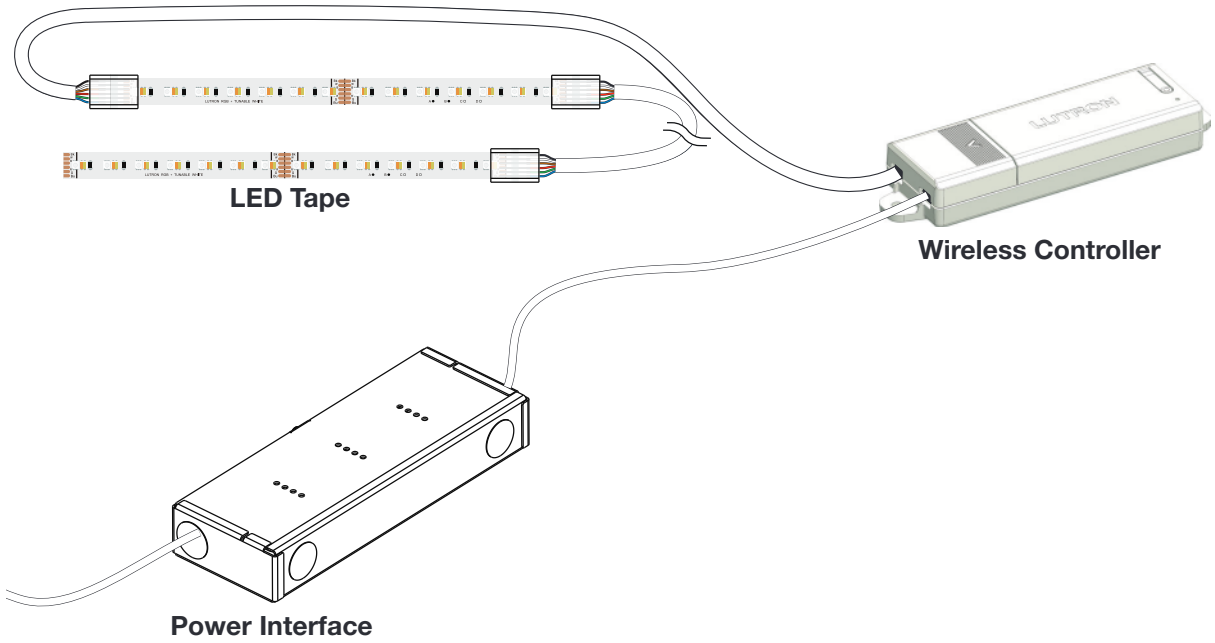
Notes:

- For installation by a qualified electrician in accordance with all local and national electrical codes
- Use copper conductors only
- For indoor use only
- DO NOT install if product has any visible damage
- If moisture or condensation is evident, allow the product to dry completely before installation
- Operate between 32 °F (0 °C) and 104 °F (40 °C) ambient
- 0% to 90% humidity, non-condensing

Component Installation:

Click on a component to be taken to its installation instructions.

LED Tape	Power Interface	Wireless Controller



Additional Information:

Click on the links below to be taken to the appropriate information.

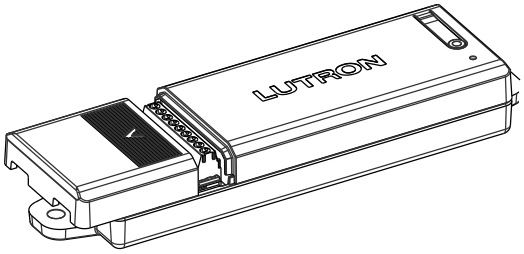
Components	Troubleshooting	General Information / Contact Us	Extrusion Install Guide

Components

(may vary by model number)

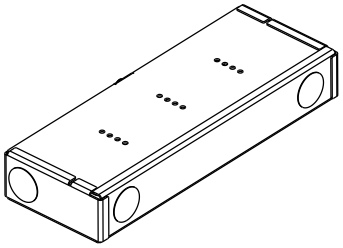
Wireless Controller

RRL-MWCL-WH; HWL-MWCL-WH;
Input: 24 V⎓ 4 A
Output: 24 V⎓ 4 A 96 W



Power Devices

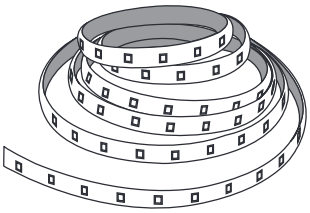
LU-PH3-B
Input: 120/277 V~ 50/60 Hz
Output: 24 V⎓ 96 W



LU-PH3-A
Input: 120/277 V~ 50/60 Hz
Output: 24 V⎓ 96 W

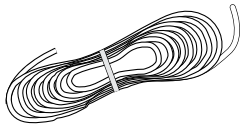
LED Tape

LU-T05-RT-IN; LU-T30-RT-IN;

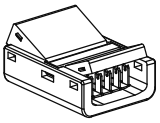


Accessories

Cable: LU-WK1-6W
Connectors: LU-CK1-6W



Cable

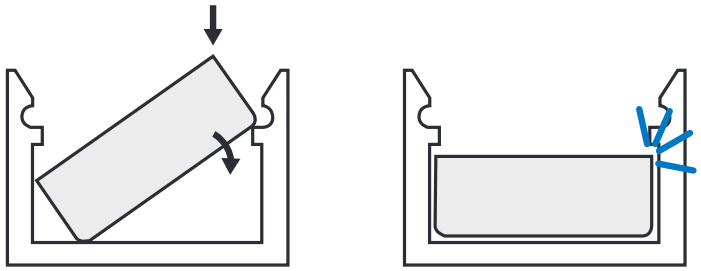


Connectors
Qty: 10

LED Tape Installation

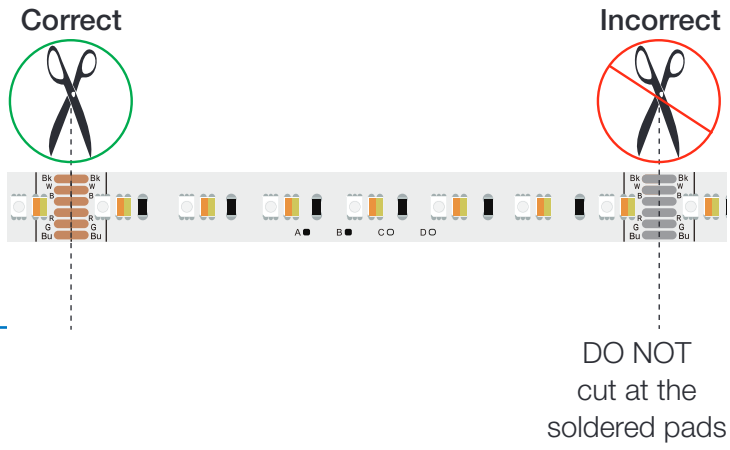
1. If installing the LED tape into an aluminum channel (optional), follow the mounting instructions on the Extrusion Install Guide prior to installing the tape.

Note: When using a 6-pin connector with the SR2 extrusion, slide the connector in from the extrusion end or insert angled from the top and snap in.



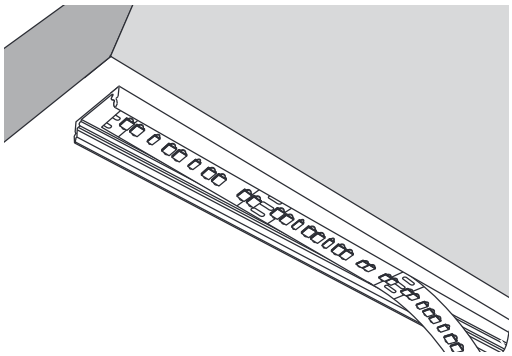
2. Measure and cut the LED tape to the desired length at one of the marked locations, ensuring that the cut is perpendicular to the tape.

Note: If using tape-to-wire connectors, DO NOT cut at the soldered pads. Connectors CANNOT be used at locations with soldered pads.



3. Clean the surface that the LED tape will be adhered to, ensuring that it is dry and free of dust.

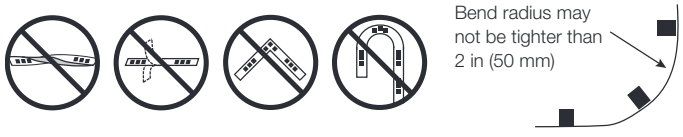
4. Peel the backing off the LED tape and attach the LED tape to the surface at a point that allows the LED tape to connect to the wireless controller. Press and hold for 10 seconds.



a. The first section of tape is provided with soldered leads for convenience, but the tape may be started from any section by installing a wire-to-tape connector (see LED Tape Installation step 5).

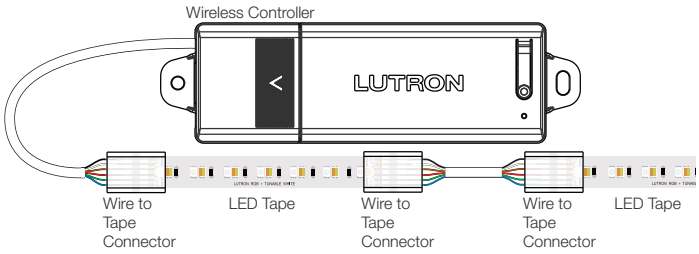
b. DO NOT twist or repeatedly bend the LED tape as this could cause damage to the connections in the tape itself.

Note: Bend radius may not be tighter than 2 in (50 mm).



LED Tape Installation *continued)*

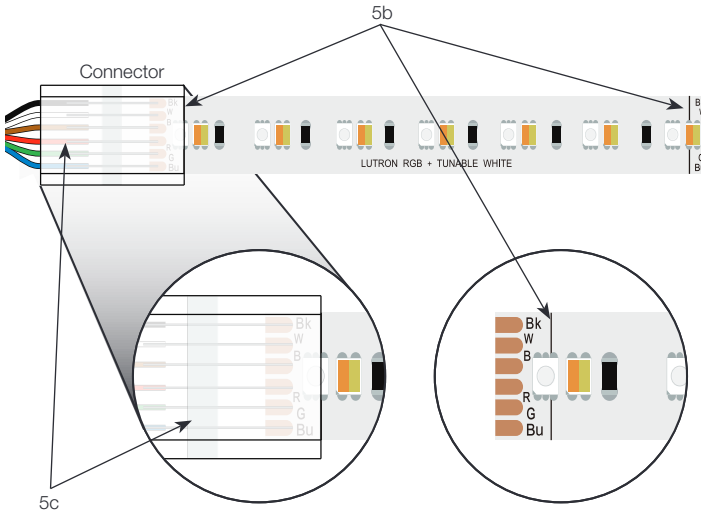
5. Join additional sections of LED tape to the series (optional).



a. Measure and cut the length of cable needed to connect the tapes in their installed locations.

b. Insert the end of the LED tape into the connector. Close the connector using pliers.

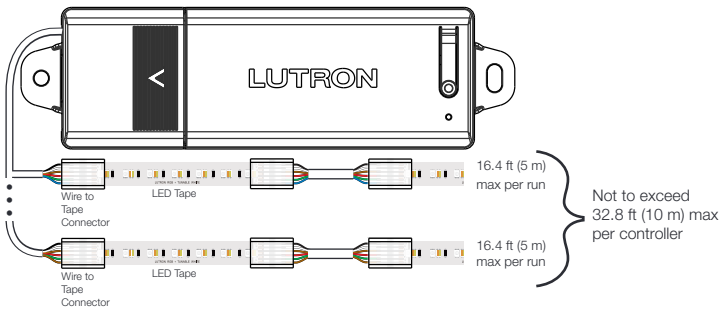
IMPORTANT: Align the edge of the connector with the printed line on the tape. Improper alignment of the connector may damage the LED tape.



c. Insert **unstripped,** Lutron provided, 22 AWG (0.50 mm^2) wires into the wire holes in the connector ensuring to align the wire color to the appropriate channel on the tape.

Tape Marking	Wire Color	Controller Terminal
Bk	Black	6
W	White	5
B	Brown	4
R	Red	3
G	Green	2
Bu	Blue	1

d. Only 16.4 ft (5 m) of tape may be wired in series for any run of tape. If more than 16.4 ft (5 m) of tape will be used (up to the controller's rating) multiple runs of tape should be wired in parallel.

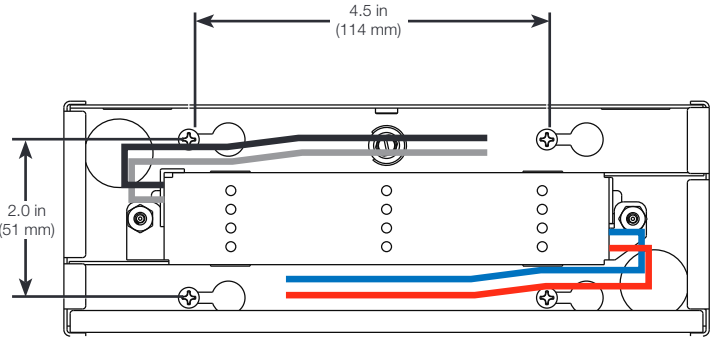


Power Interface Installation - LU-PH3-B

WARNING: SHOCK HAZARD. May result in Serious Injury or Death. Disconnect power before servicing or installing the unit.

Note: This section is for installation of LU-PH3-B. For installation of LU-PH3-A, proceed to the next section.

1. Remove the top cover of the power interface to access the mounting holes and flying leads.



Option 1

2. Choose a mounting location. Consider the following when choosing a mounting location:

a. For cabinet and surface mount use only.

b. Install remotely from controller and tape light.

c. A minimum of 2 in (51 mm) is required between power interface and any other equipment or surface.

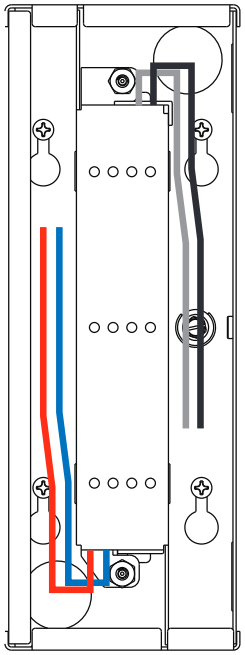
d. Before mounting using the included wood screws, drill pilot holes into the mounting surface with a drill bit no larger than 5/64 in (2 mm) in diameter.

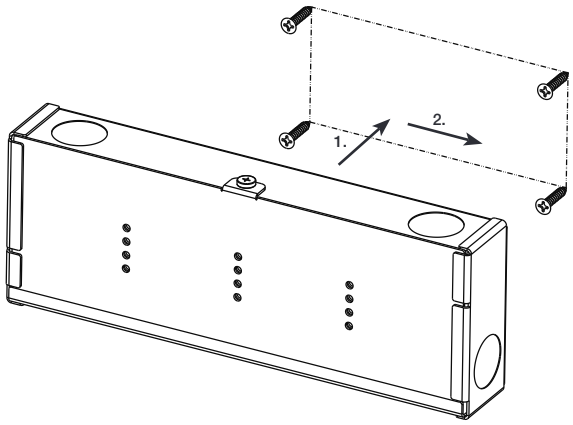
e. Leave .25 in (6.35 mm) of each screw protruding from mounting surface.

f. Align the four keyhole slots on the back of the power interface over the screws, then slide gently from the left to the right **(Option 1)** or from the top to the bottom **(Option 2)**.

g. Mount the power interface in a position where it can be easily located and accessed if service or troubleshooting is necessary.

h. Any other mounting configurations will require additional mechanical support. Improper installation may result in hazards to personnel or property.


Option 2



3. Open the necessary knockouts to pass wires into the wiring compartment.

Power Interface Installation - LU-PH3-B *continued)*

4. For installations using a kit (RRL-MTK-RT-IN or HWL-MTK-RT-IN), use the provided 2-conductor wire for this step.

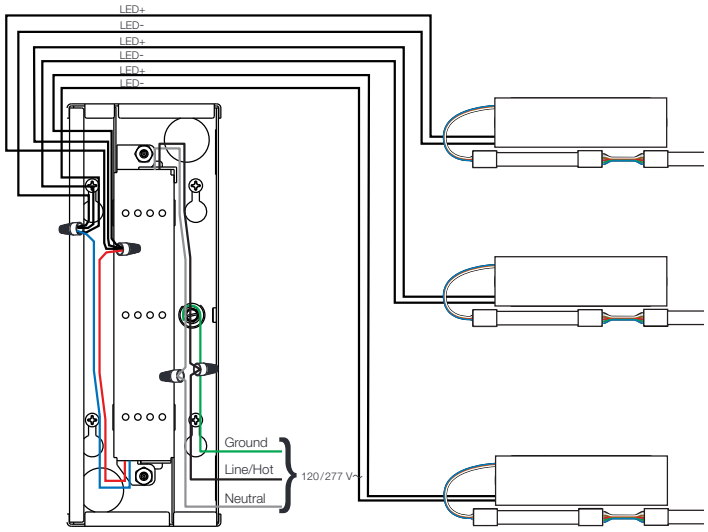
For all other installation types, or if more wire is needed, reference the Tape Light Solutions Spec Submittal (P/N 3691301) or Application Note #830 (P/N 048830) at www.lutron.com for acceptable lengths and sizes for the wire being installed from the power interface to the wireless controller.

a. For wireless controllers programmed in separate zones, wiring LED+ and LED- in a homerun configuration **(Option 1)** will minimize interactions between controllers. Wiring in a T-tap configuration **(Option 2)** may result in subtle interactions between controllers.

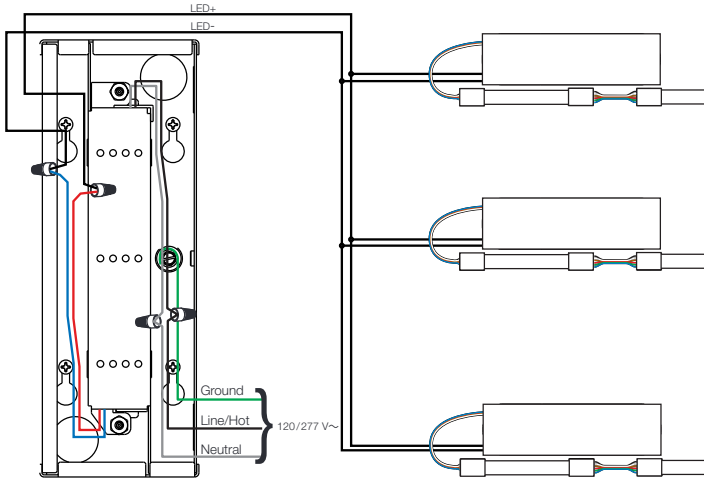
b. If wireless controllers are programmed in a single zone, LED+ and LED- wires can be wired either in a homerun or T-tap configuration **(Option 1 or Option 2)** without concern of interaction between controllers.

c. Connect the necessary wires to the power interface as shown in the wiring diagram. Power interface leads and provided connectors accept 12 AWG to 20 AWG (4.0 mm^2 to 0.75 mm^2) wires. Wireless controller terminals accept 14 AWG to 22 AWG (2.5 mm^2 to 0.50 mm^2) wires.

Note: Use the included wire connectors to make all connections inside the integrated wiring compartment.



Option 1: Homerun Wiring Configuration



Option 2: T-tapped Wiring Configuration

5. Complete the installation of the wireless controller per the Wireless Controller Installation section, replace the top cover to contain all wire connections, then reapply power.

Power Interface Installation - LU-PH3-A

WARNING: SHOCK HAZARD. May result in Serious Injury or Death. Disconnect power before servicing or installing the unit.

Note: This section is for installation of LU-PH3-A. For installation of LU-PH3-B, refer to the previous section.

1. Remove the top cover of the power interface to access the mounting holes and terminal blocks.

2. Mount the power interface as indicated in options 1, 2, or 3 to the right.

   Note: Consider the following when choosing a mounting location:

   a. A minimum of 3 in (76 mm) is required between any two power interfaces.

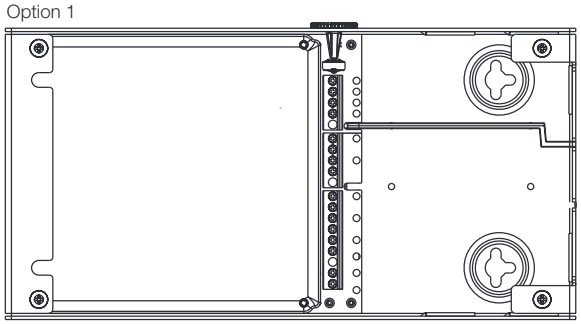
   b. Mount the power interface in a position where it can be easily located and accessed if service or troubleshooting is necessary.

   c. Any other mounting configurations will require additional mechanical support. Improper installation may result in hazards to personnel or property.

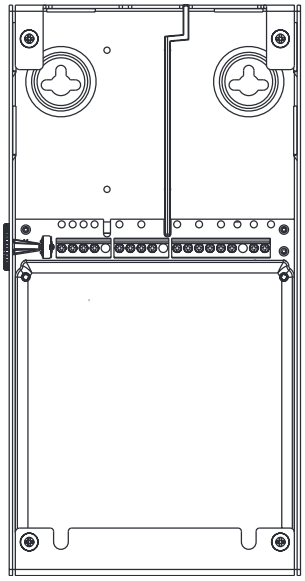
   Note: For 277 V~ applications, a suitable barrier may be required between the non-Class 2 and Class 2 wiring, per local and national electrical wiring codes. For your convenience, the power interface includes an optional barrier.

3. Open the necessary knockouts to pass wires into the wiring compartment.

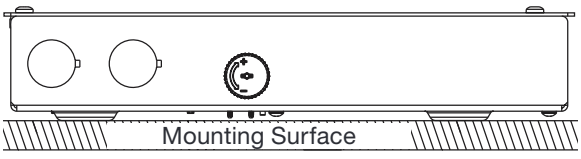
Option 1



Option 2



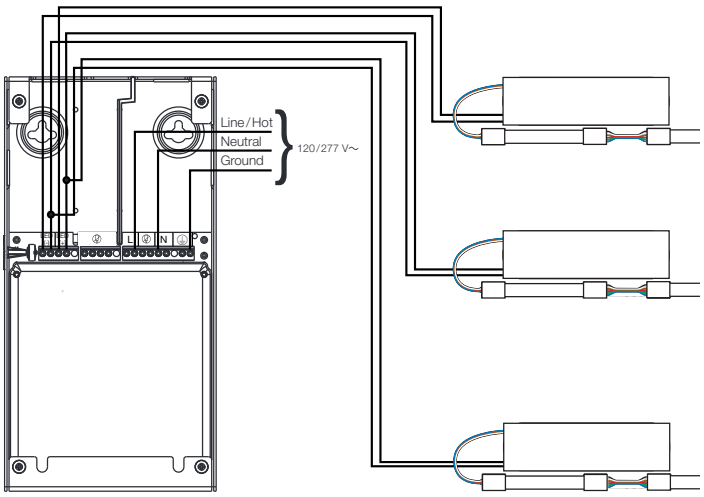
Option 3



Power Interface Installation - LU-PH3-A *continued)*

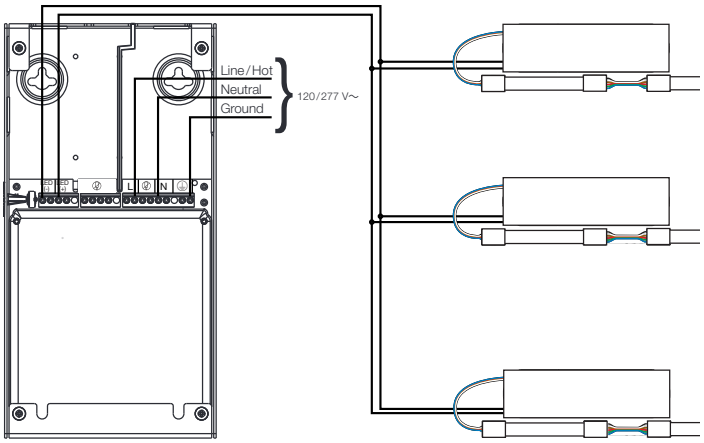
4. Referencing the Tape Light Solution Spec Submittal (P/N 3691301) or Application Note #830 Lumaris Tape Light Advanced Applications Guide (P/N 048830) at www.lutron.com, confirm the length and gauge of the wire being installed from the power interface to the wireless controller.

a. If wireless controllers are programmed in separate zones and LED+ and LED- wires are in a T-tap configuration **(Option 2)**, it may result in subtle interaction between controllers. Wiring in a homerun configuration **(Option 1)** will have limited interaction between controllers programmed in separate zones.



Option 1: Homerun Wiring Configuration

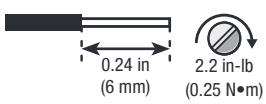
b. If wireless controllers are programmed in a single zone, LED+ and LED- wires can be wired either in a homerun or T-tap configuration **(Option 1 or Option 2)** without concern of interaction between controllers.



Option 2: T-tapped Wiring Configuration

c. Connect the necessary wires to the power interface as shown in the wiring diagram. Power interface terminals accept 12 AWG to 20 AWG (4.0 mm^2 to 0.75 mm^2) wires. Wireless controller terminals accept 14 AWG to 22 AWG (2.5 mm^2 to 0.50 mm^2) wires.

Note: When wiring three controllers to the power interface, two of the three wireless controller LED+ and LED- wires need to be spliced together in the power interface wiring compartment with a wire connector and single wire run to the terminal block. LED+ and LED- terminals on the power interface accept one wire per terminal only.



5. Complete the installation of the wireless controller per the following section, replace the top cover, then reapply power.

Wireless Controller Installation

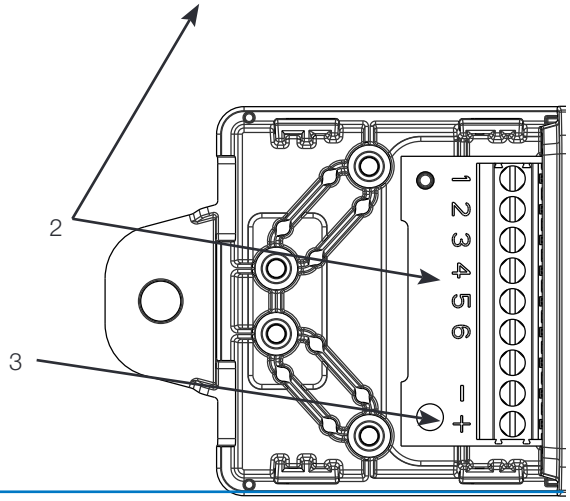
1. Mount the wireless controller using the provided screws.

Tape Style	Tape Identification	1	2	3	4	5	6
RGB+TW	A● B● CO DO	Blue	Green	Red	Brown	White	Black

2. Connect the wires from the LED tape to the output terminal of the controller ensuring to use the correct output wiring for the LED tape being used.

3. Connect the wires to the input terminal of the controller.

Note: Only one input and one output cable may be connected to the terminal block. Additional wires must be spliced outside of the wireless controller.

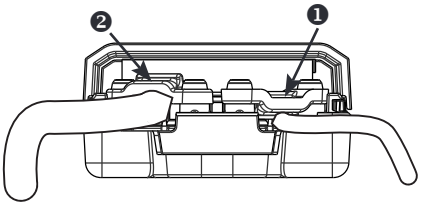


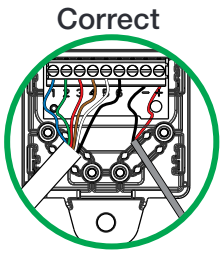
4. Install the strain relief and tighten the screws.

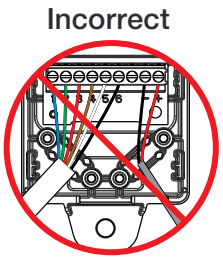
Note: The strain relief is reversible. Orientation ❶ provides the best strain relief for most wire diameters. For some large wire applications, orientation ❷ may be needed.

Note: All outside wire diameters must be between 0.10 in to 0.25 in (2.5 mm to 6.4 mm).

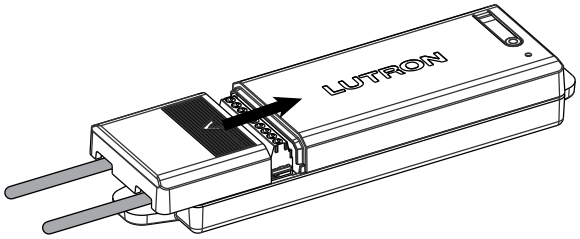
Note: When installing strain relief, wires should be positioned such that they are not pulled tight. Cable sleeve should be positioned under the strain relief as well.







5. Install the terminal cover.



Test Mode

1. To enter test mode, power the device and hold the button on the controller for 6 seconds until the status LED begins flashing rapidly.
2. The status LED will indicate the active channel on the tape with a number of flashes followed by a pause. For example, one flash followed by a pause corresponds to channel 1.
3. Press the button to cycle through all channels and ensure all segments of tape illuminate properly.
4. To exit test mode, hold the button on the controller for 6 seconds until the status LED begins flashing rapidly.

Troubleshooting

Indicator LED Flash Pattern	Reason	Remedy
LED on the wireless controller is off.	No power to the wireless controller or the controller is already activated on a system.	Confirm that the circuit breaker is on to the power interface and that all wires are connected to the proper terminals. To confirm whether the device is receiving power, follow the steps above to enter Test Mode and inspect LED feedback. If needed, devices may be deactivated using the Lutron App.
Red LED on the wireless controller flashes once, then a 2 second pause.	Output is short circuited.	Disconnect the LED tape from the wireless controller and check for shorts. Cycle power to the wireless controller to reset.
Red LED on the wireless controller flashes twice, then a 2 second pause.	Output is overloaded.	Confirm that no more than 32.8 ft (10 m) of LED tape is connected to the wireless controller output. Cycle power to the wireless controller to reset.
Red LED on the wireless controller flashes three times, then a 2 second pause.	Input voltage is too low.	Confirm that the wireless controller is being powered by 24 V ⎓ ± 10 %.
Red LED on the wireless controller flashes four times, then a 2 second pause.	Input voltage is too high.	
Green LED on the wireless controller is on continuously.	Device is not commissioned.	Activate the device in a system.
Green LED on the wireless controller flashes one to five times, then a pause.	Device is in test mode.	Press and hold the button on the wireless controller for 6 seconds until the status LED begins flashing to return to normal operation.

General Information / Contact Us

Limited Warranty:

For limited warranty information, please visit http://www.lutron.com/TechnicalDocumentLibrary/043492.pdf

FCC/IC Information:

This device complies with part 15 of the FCC Rules and Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) This device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation. Modifications not expressly approved by Lutron Electronics Co., Inc. could void the user's authority to operate this equipment.
NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help

This Class B digital apparatus complies with Canadian ICES-005.
This equipment complies with FCC/ISED radiation exposure limits set for an uncontrolled environment. The user should avoid prolonged exposure within 7.9 in (20 cm) of the antenna, which may exceed the FCC/ISED radio frequency exposure limits.

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