LUTRON

Tape Light Solutions

Installation Instructions - *Please read before installing*

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 0 °C and 40 °C ambient.
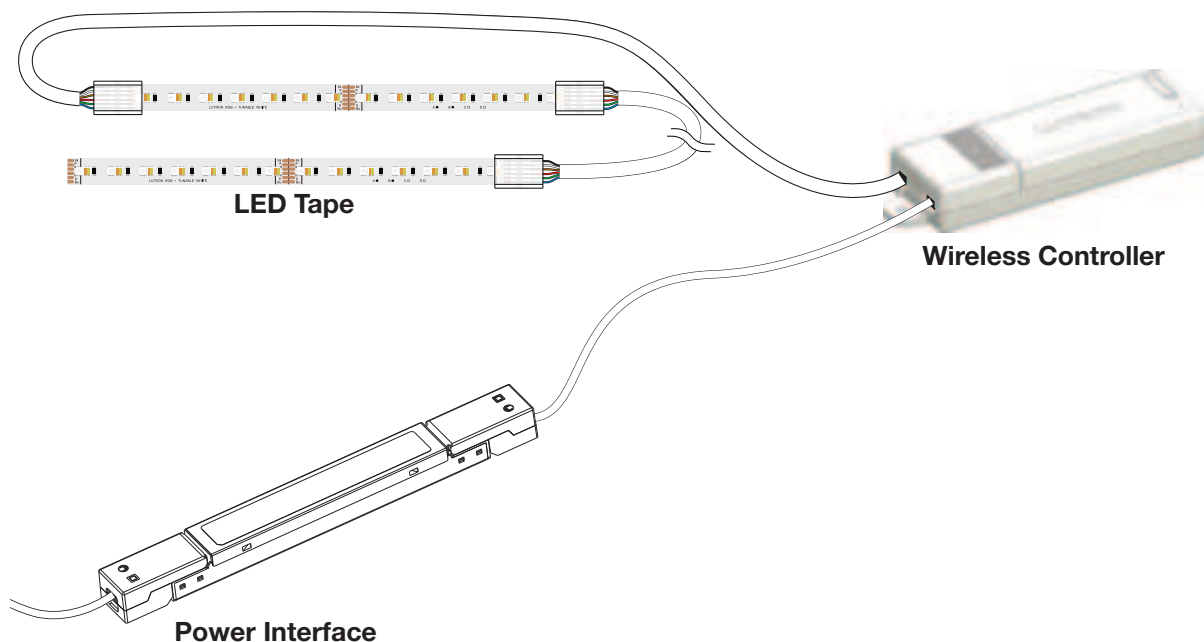- 0% to 90% humidity, non-condensing.

Component Installation:

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

LED Tape	Power Interface	Wireless Controller

LED Tape

Wireless Controller

Power Interface

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

RRLE-MWCL-WH; HWLE-MWCL-WH
Input: 24 V⎓ 4 A
Output: 24 V⎓ 4 A 96 W
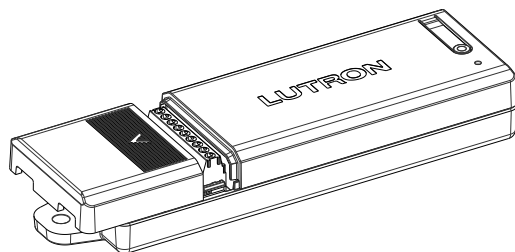
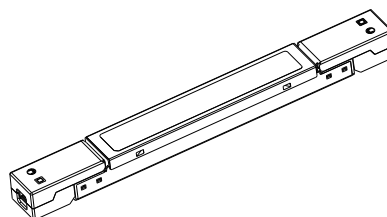## Power Interface

LU-PH3-B-E
Input: 220-240 V∼ 50/60 Hz
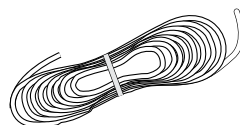Output: 24 V⎓ 96 W

LED Tape

LU-T05-RT-IN; LU-T30-RT-IN
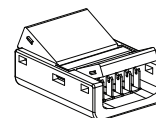Input: 24 V⎓ 9.6 W/m
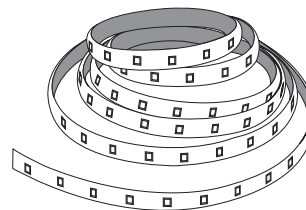
Accessories

Cable: LU-WK1-6W-E
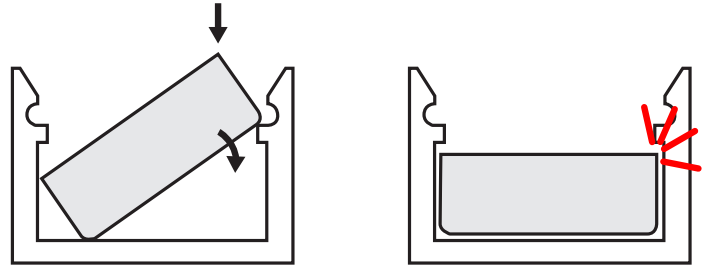Wire-to-Tape Connectors: LU-CK1-6W

Cable   Connectors

LED Tape Installation

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

   Note: Extrusions (SR1, SR2, SR3, 45S, 45T, RR1) are not suitable for mounting on tubular material when mounted with clips.

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

Correct

Incorrect

DO NOT cut at the soldered pads
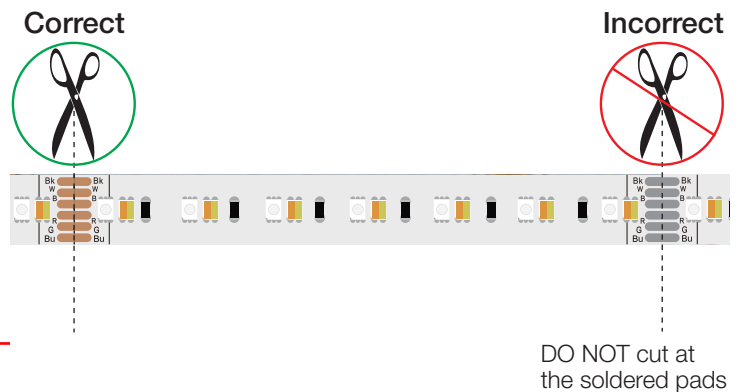
3. Clean the surface on which the LED tape will be adhered, ensuring that it is dry and free of dust.

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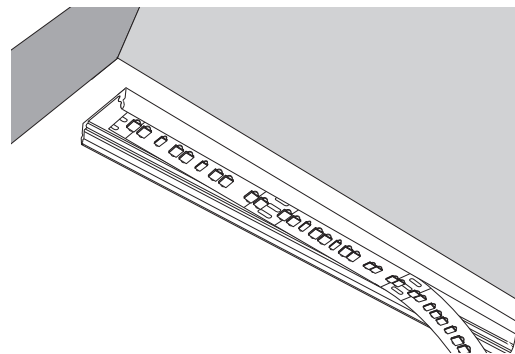
   **a.** The first section of tape is provided with soldered leads for convenience, but the tape may be started from any section by installing a wire-to-tape connector (see LED Tape Installation step 5).

   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 50 mm.

Bend radius may not be tighter than 50 mm

LED Tape Installation *(continued)*

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

Wireless Controller

Wire-to-Tape Connector   LED Tape   Wire-to-Tape Connector   Wire-to-Tape Connector   LED Tape
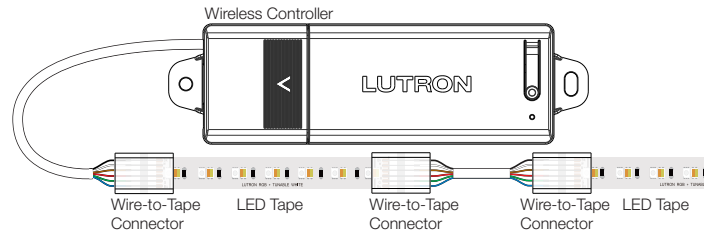
a. Measure and cut the length of cable needed to connect the tapes in their installed locations.

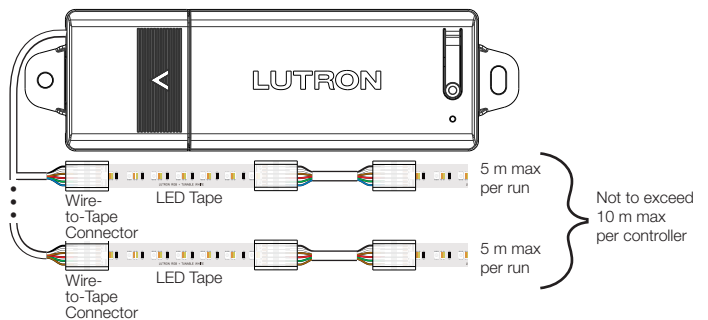**b.** Insert the end of the LED tape into the connector. Close the connector using pliers.

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

Connector

LUTRON RGB + TUNABLE WHITE
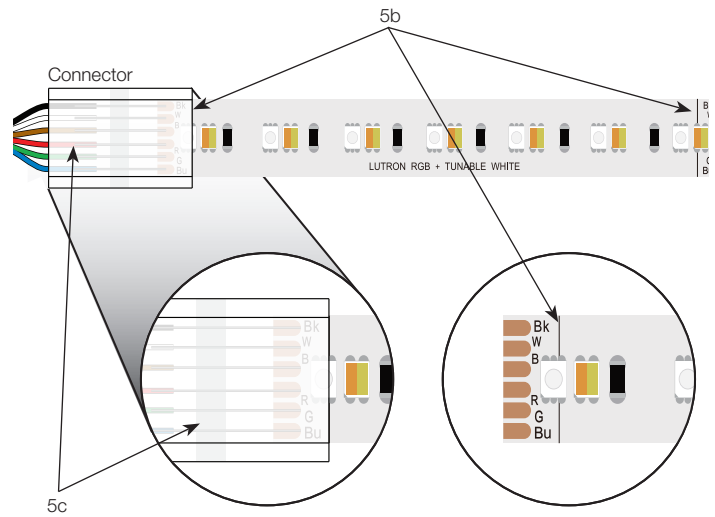
c. Insert **unstripped,** Lutron provided, 0.50 mm^2 (22 AWG) wires into the connector's wire holes ensuring to align the wire color to the appropriate channel on the tape.

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


Wire-to-Tape Connector   LED Tape   5 m max per run

Wire-to-Tape Connector   LED Tape   5 m max per run

Not to exceed 10 m max per controller

Power Interface Installation - LU-PH3-B-E

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

1. Lift the wiring covers on the power interface to access the mounting tabs and stab-in connectors.

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

   a. For cabinet and surface-mount use only.

   b. Install the power interface remotely from the controller and the tape light.

   c. It is recommended to mount the driver vertically, with the LED outputs pointing up. For all mounting methods, the t̄c calibration point should not exceed 90 °C.

   d. It is normal for this device to feel warm to the touch during normal operation. Consider this when selecting a mounting location.

   e. A minimum of 51 mm is required between the power interface and any other equipment or surface.

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

3. Use the mounting tabs to secure the power interface to the mounting surface with screws.

4. Install the line and LED +/- wires. Refer to Step 6 for instructions on installing the provided strain relief.

   Note: LU-PH3-B-E does not require an earth termination. 2-core cable is recommended.

201.6 mm

3.2 mm

Mounting Hole Pattern
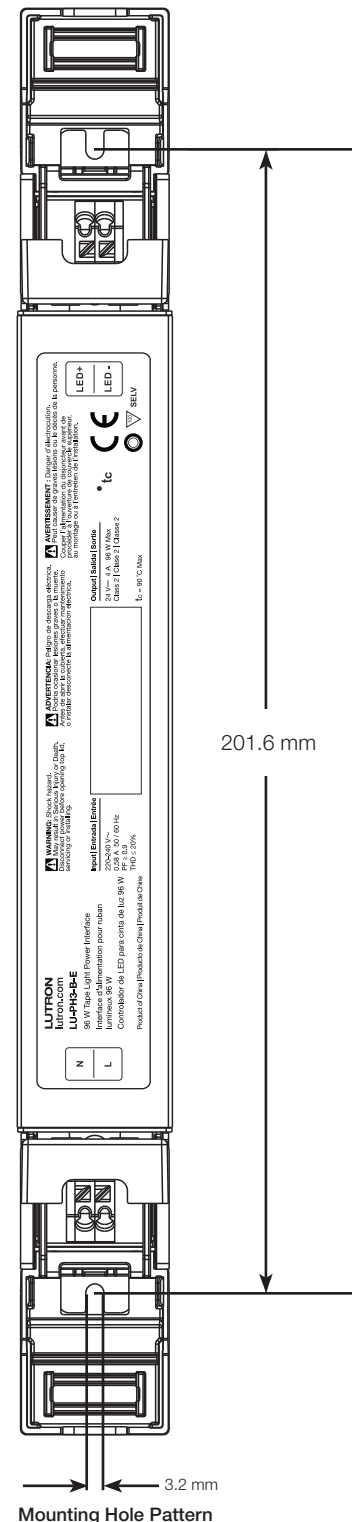
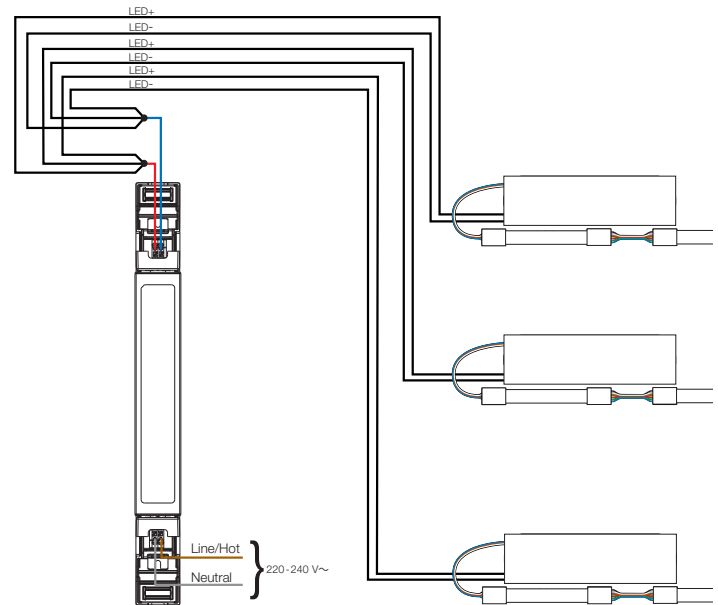## Power Interface Installation - LU-PH3-B-E *(continued)*

5. Connect the power interface to the wireless controller.

Note: If more wire is needed, reference the Tape Light Solutions Spec Submittal (P/N 3691318) 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 stab-in terminals accept $1.5 \ mm^2$ to $0.25 \ mm^2$ (16 AWG to 24 AWG) wires, with a strip length of 8.5 mm to 9.5 mm. Wireless controller terminals accept $2.5 \ mm^2$ to $0.50 \ mm^2$ (14 AWG to 22 AWG) wires.

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

Note: For installations where the total length of all tape used exceeds 5 m, T-tap wiring configurations must use wire at least $1.0 \ mm^2$ (18 AWG) in size for the trunk/shared wire. LU-WK1-6W-E may be used for branches, or in a homerun application.


**Option 1:** Homerun Wiring Configuration
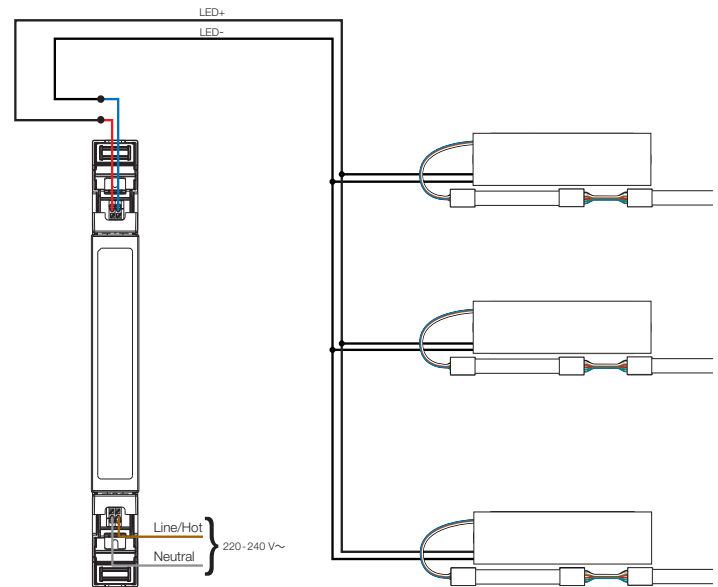
Option 2: T-tapped Wiring Configuration

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

6. Install the strain relief.

   a. The strain relief clip and removal tool are located inside the wiring compartment and are attached to the top cover.

   b. Remove the strain relief clip from the top cover. After inserting the wires into the stab-in terminals, press the strain relief clip down on the lock arms until the wires are secure underneath.

   c. In the event that the strain relief clip needs to be removed, detach the provided removal tool from the top cover and press it into the strain relief clip as shown.

   d. The strain relief clip can now be pulled off the lock arms. If needed, a small screwdriver can be used as leverage to push the clip up.

   e. Reattach removal tool to the top cover for future use.
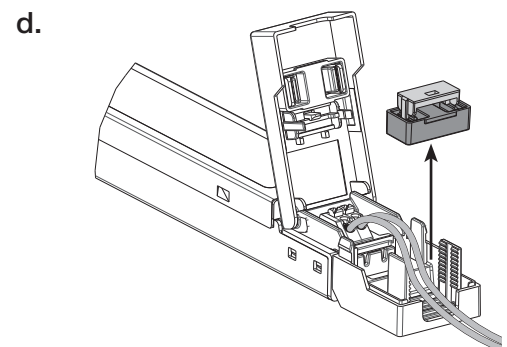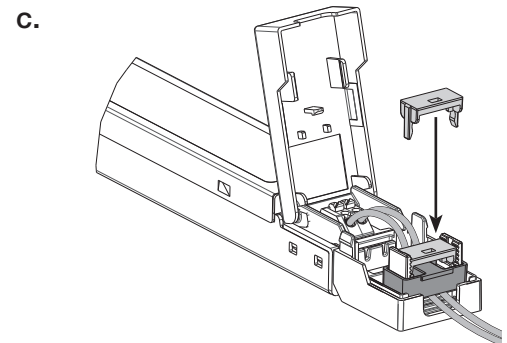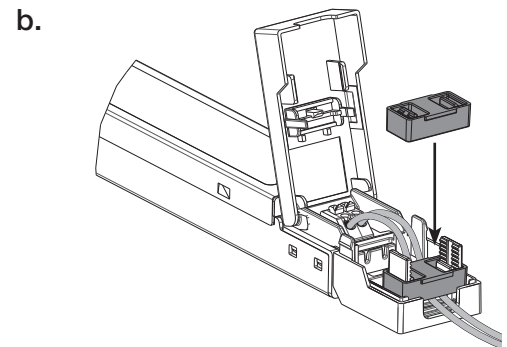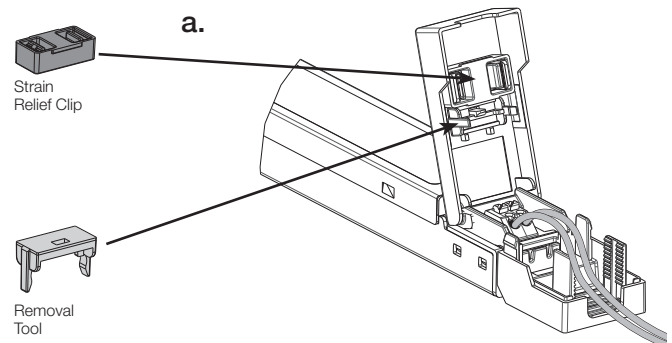
7. Complete the installation of the wireless controller per the **Wireless Controller Installation** section, close the top covers, then reapply power.

a.

Strain
Relief Clip

Removal
Tool

b.

c.

d.

Customer Assistance:
+44.(0)20.7702.0657 (UK & Europe)

Wireless Controller Installation

1. Mount the wireless controller using the provided screws.

Model Number	1	2	3	4	5	6
LU-Txx-RT-IN	Blue	Green	Red	Brown	White	Black

2. Referring to the table to the right, 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 from the power interface 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 2.5 mm to 6.4 mm.
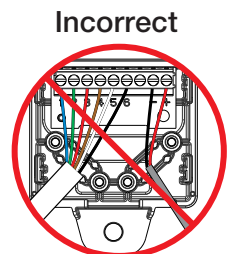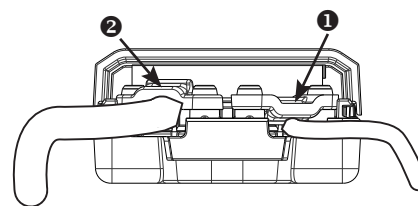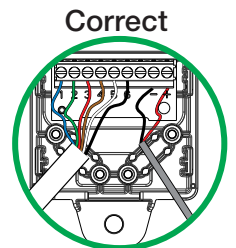
Note: When installing the strain relief, the cable sleeve should be positioned under the strain relief and the wires should be positioned such that they are not pulled tight.
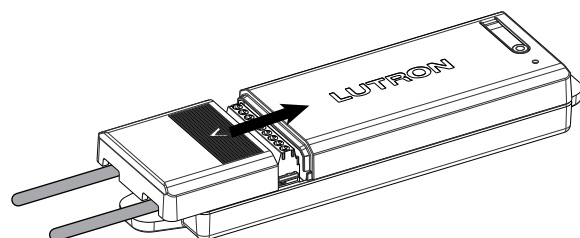
Orientation 1   Orientation 2

Correct

Incorrect
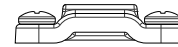
5. Install the terminal cover.

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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 green rapidly. If the status LED is red, refer to the troubleshooting section on page 10.

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.

Returning the Wireless Controller to Factory Settings

Note: Returning a wireless controller to its factory settings will remove the wireless controller from the system and erase all programming.

1. Triple tap the button on the wireless controller. **DO NOT** release after the third tap.

2. Keep the button pressed on the third tap until the status LED starts to flash slowly (approximately 3 seconds).

3. Immediately release the button and triple tap the button again. The status LED on the wireless controller will flash quickly. The wireless controller has now been returned to its factory settings.

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 in 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 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:

www.lutron.com/warranty or call 1.844.LUTRON1 for a printed copy

Customer Assistance

For questions concerning the installation or operation of this product, call **Lutron Customer Assistance.** Please provide exact model number when calling **+44.(0)20.7702.0657 (UK & Europe)**

Hereby, Lutron Electronics Co., Inc. declares that the radio equipment type RRLE-MWCL-WH and HWLE-MWCL-WH are in compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address: www.lutron.com/cedoc