LUTRON RRL-MWCL-WH Tape Light Solution Instruction Manual

LUTRON

Tape Light Solution
043611a
Installation Instructions

Contents

RRL-MWCL-WH Tape Light Solution

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:

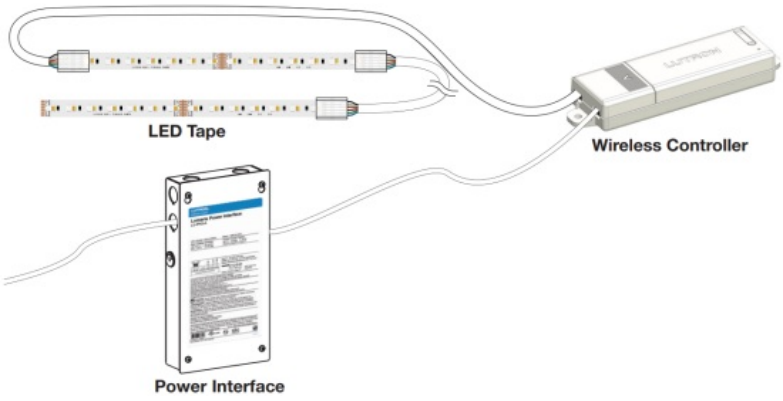
- For installation by a qualified electrician in accordance with all local and national electrical codes
- Use copper conductors only
- For indoor use only
- DO NOT install if product has any visible damage
- If moisture or condensation is evident, allow the product to dry completely before installation
- 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.

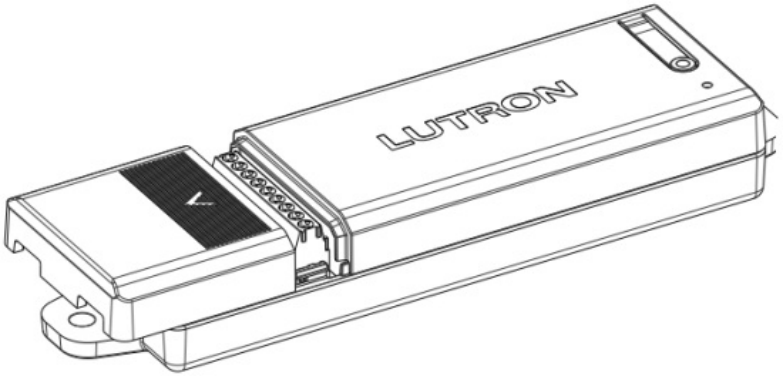
- LED Tape
- Power Interface
- Wireless Controller



Additional Information:
Click on the links below to be taken to the appropriate information.

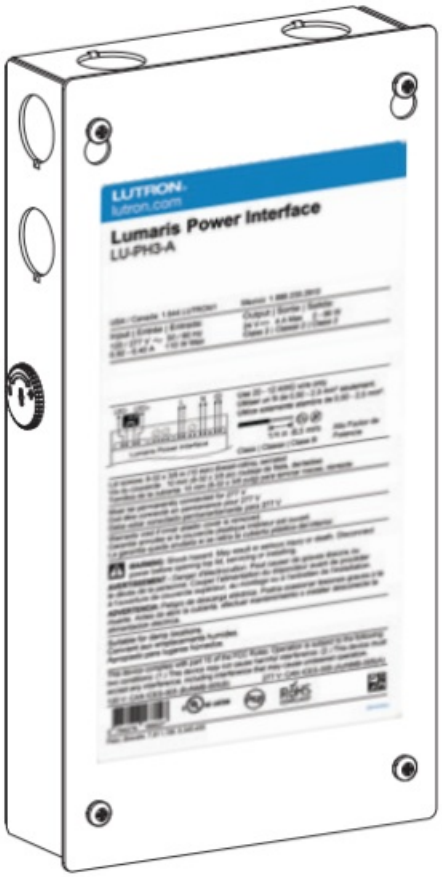
- Components
- Troubleshooting
- General Information / Contact Us
- Extrusion Install Guide

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

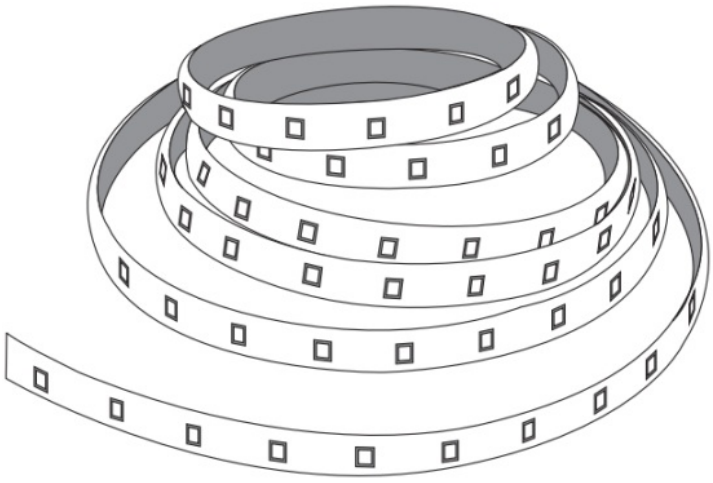


Power Devices
LU-PH3-A
Input: 120 / 277 V~ 50 / 60 Hz

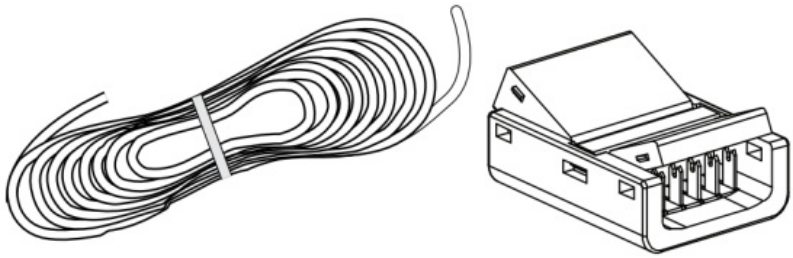
Output: 24 V ⎓ 96 W



LED Tape
LU-T05-RT-IN; LU-T30-RT-IN;



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



Cable

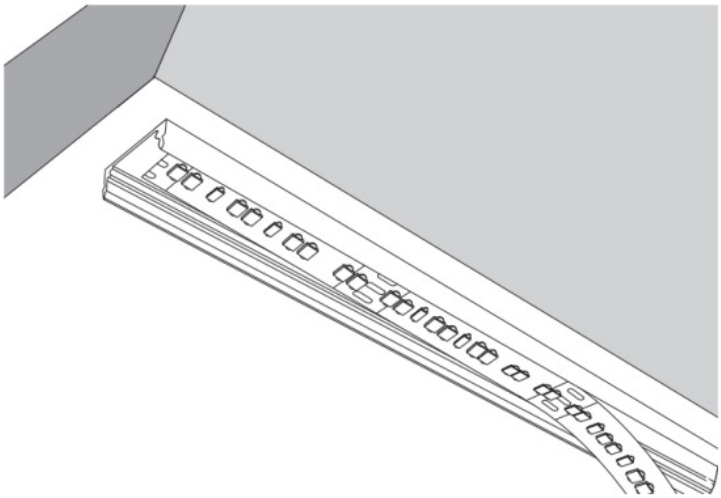
Connectors
Qty: 10

LED Tape Installation

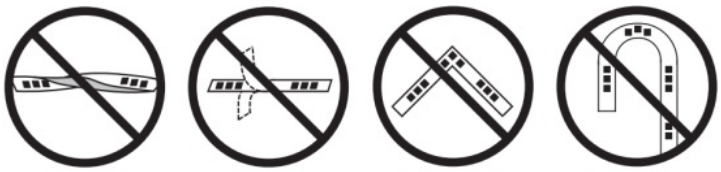
1. If installing the LED tape into an aluminum channel (optional), follow the mounting instructions on the Extrusion Install Guide prior to installing the tape.
2. Measure and cut the LED tape to the desired length at one of the marked locations, ensuring that the cut is perpendicular to the tape.

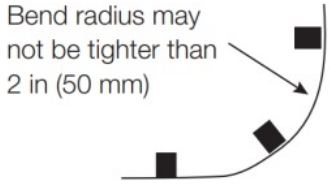
   Note: If using tape-to-wire connectors, DO NOT cut at the soldered pads. Connectors CANNOT be used at locations with soldered pads.

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).



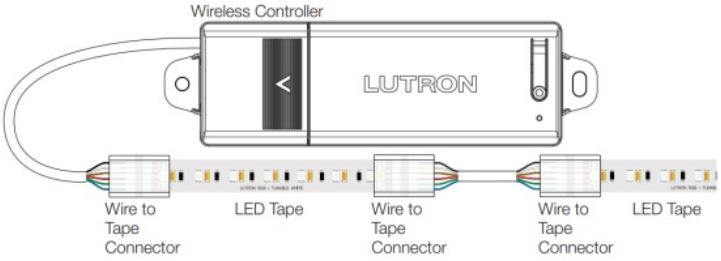


b. DO NOT twist or repeatedly bend the LED tape as this could cause damage to the connections in the tape itself.

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

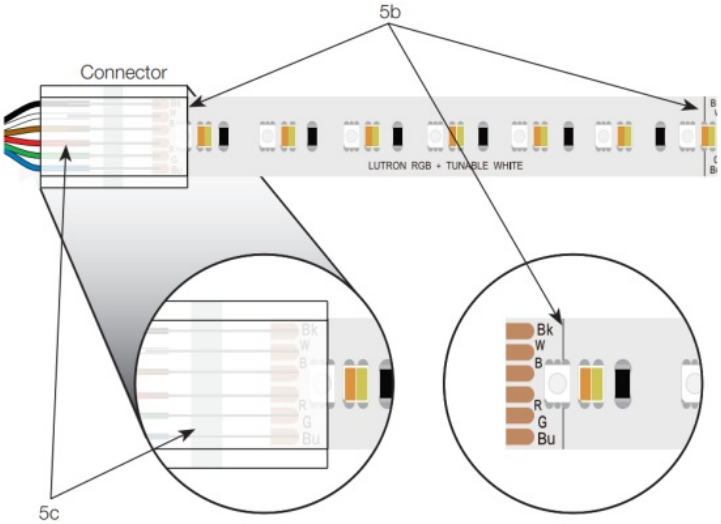
5. Join additional sections of LED tape to the series (optional).

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.

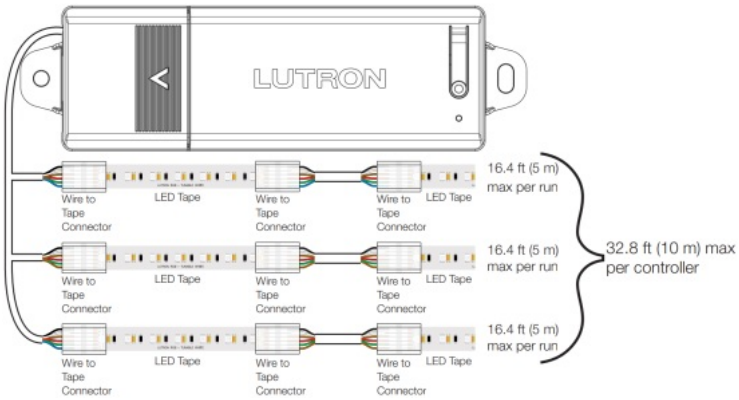
IMPORTANT: Align the edge of the connector with the printed line on the tape. Improper alignment of the connector may damage the LED tape.



c. Insert unstripped, Lutron provided, 22 AWG (0.25 mm²) 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
Bk	Black
W	White
B	Brown
R	Red
G	Green
Bu	Blue

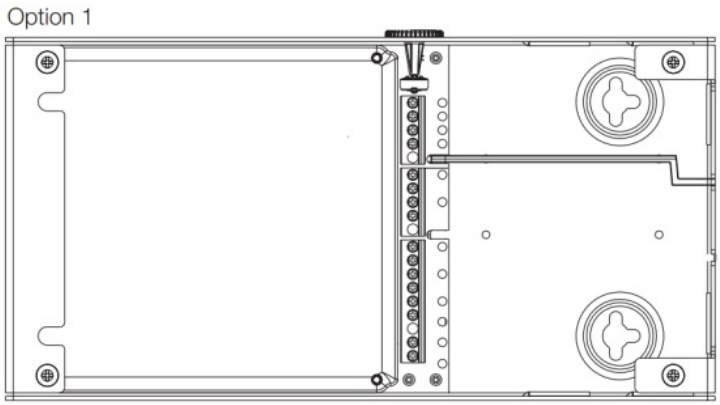
d. Only 16.4 ft (5 m) of tape may be wired in series for any run of tape. If more than 16.4 ft (5 m) of tape will be used (up to the controller's rating) multiple runs of tape should be wired in parallel.



Power Interface Installation

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

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.

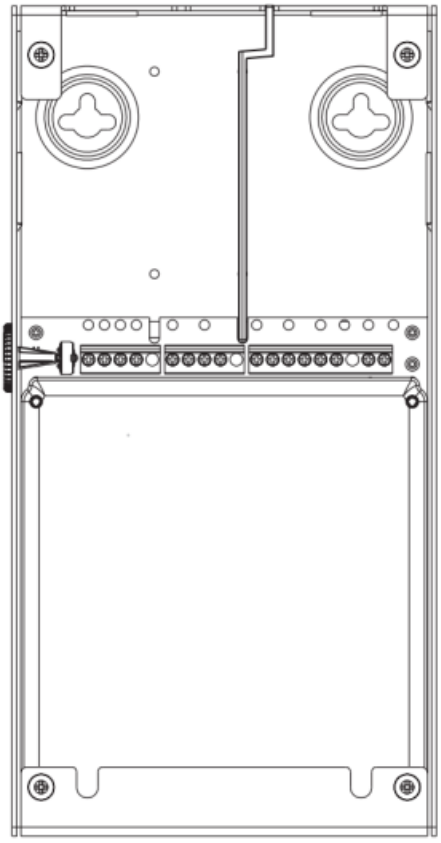
   Note: Consider the following when choosing a mounting location:

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

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

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

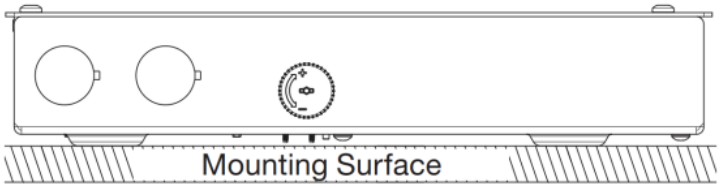
Option 2



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.

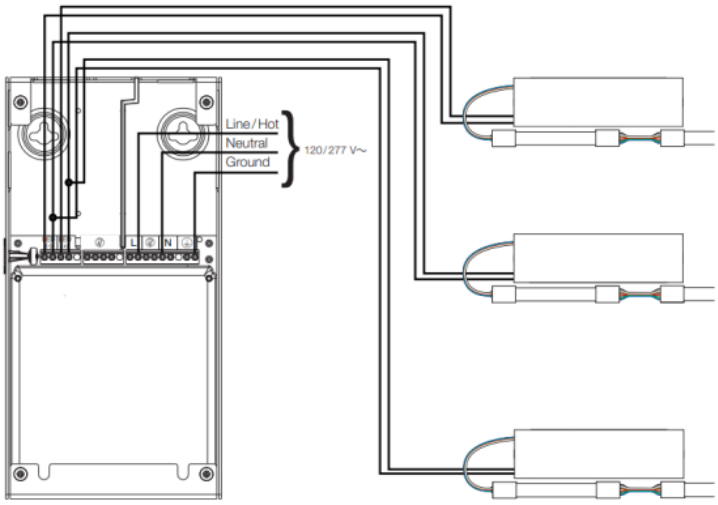
3. Open the necessary knockouts to pass wires into the wiring compartment.

Option 3



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.

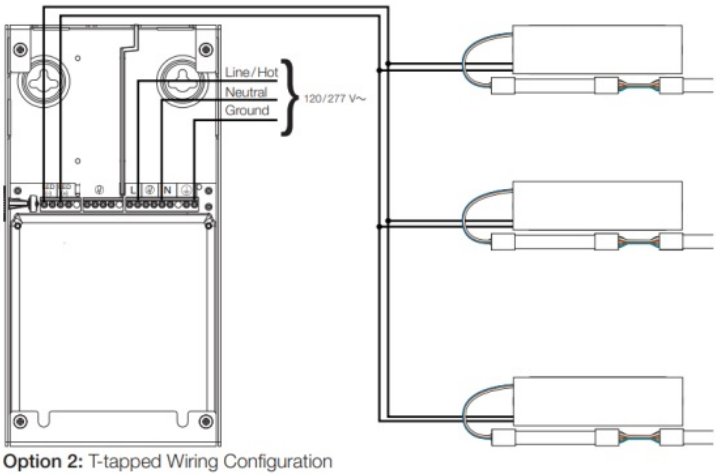
   a. If wireless controllers are programmed in separate zones and LED+ and LED- wires are in a T-tap configuration (Option 2), it may result in subtle interaction between controllers. Wiring in a homerun configuration (Option 1) will have limited interaction between controllers programmed in separate zones.



Option 1: Homerun Wiring Configuration

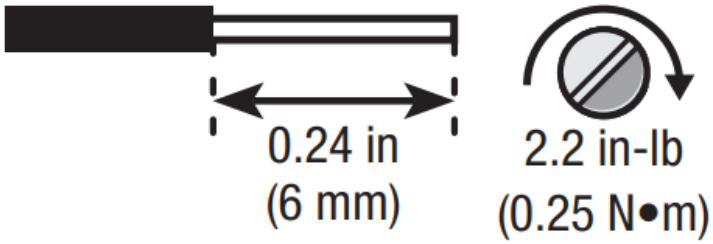
b. If wireless controllers are programmed in a single zone, LED+ and LED- wires can be wired either in a homerun or T-tap configuration (Option 1 or Option 2) without concern of interaction between controllers.

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 mm² to 0.50 mm²) wires. Wireless controller terminals accept 14 AWG to 22 AWG (2.5 mm² to 0.25 mm²) wires.



Option 2: T-tapped Wiring Configuration

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 blockLED+ and LED- terminals on the power interface accept one wire per terminal only.



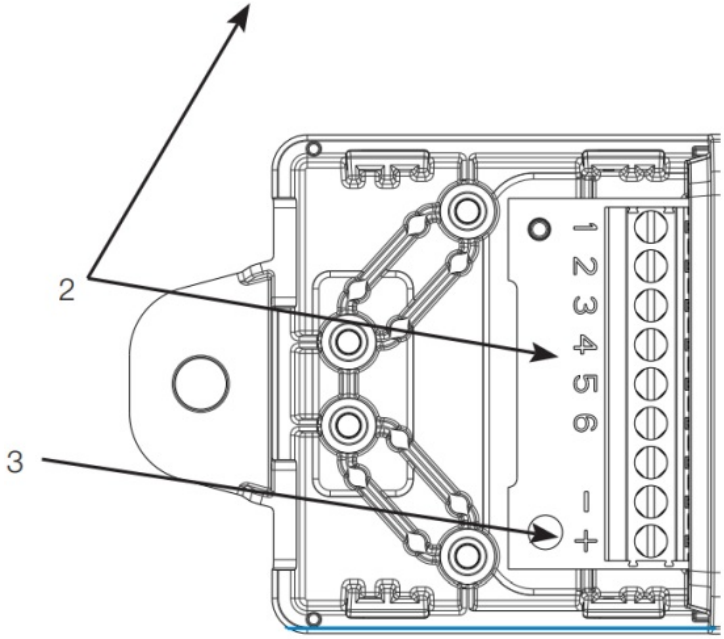
5. Complete installation of the wireless controller per the following section, then re-apply power.

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.



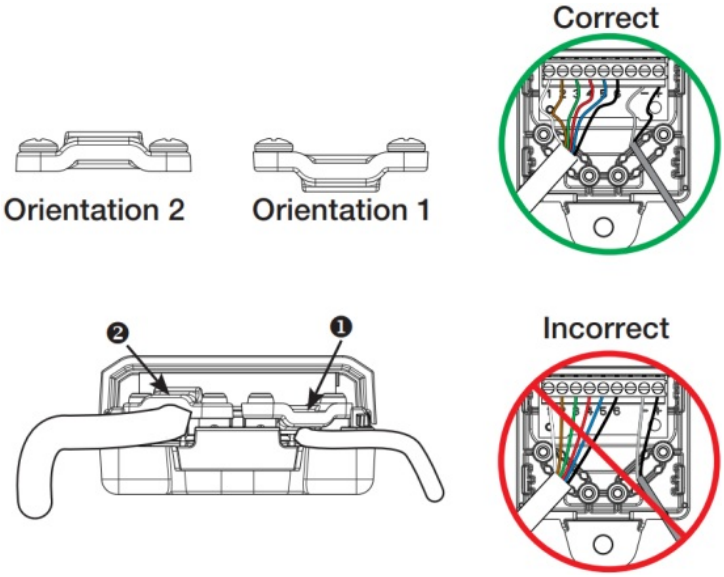
3. Connect the wires to the input terminal of the controller.

   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.

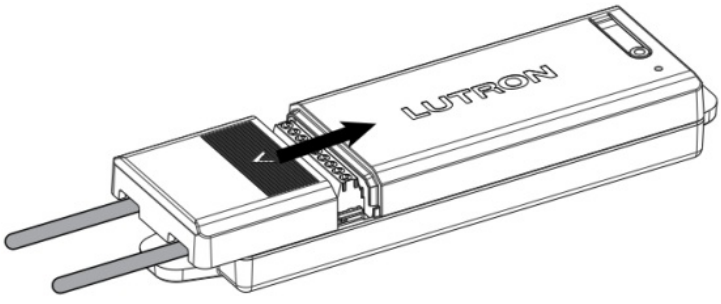
4. Install the strain relief and tighten the screws.

   Note: The strain relief is reversible. Orientation ① provides the best strain relief for most wire diameters. For some large wire applications, orientation ② 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).



5. Install the terminal cover.



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. 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.

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.

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

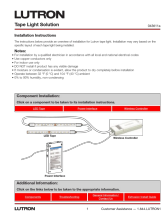
This Class B digital apparatus complies with Canadian ICES-005.
This equipment complies with FCC/ISED radiation exposure limits set for an uncontrolled environment. The user should avoid prolonged exposure within 7.9 in (20 cm) of the antenna, which may exceed the FCC/ISED radio frequency exposure limits.

Lutron Contact Numbers

WORLD HEADQUARTERS: USA Lutron Electronics Co., Inc. 7200 Suter Road Coopersburg, PA 18036-1299 TEL: +1.610.282.3800 FAX: +1.610.282.1243 support@lutron.com www.lutron.com/support	**UK AND EUROPE:** Lutron EA Limited 3rd Floor, 51 Lime Street London EC3M 7DQ United Kingdom TEL: +44.(0)20.7702.0657 FAX: +44.(0)20.7480.6899 FREEPHONE (UK): 0800.282.107 Technical Support: +44.(0)20.7680.4481 lutronlondon@lutron.com	**ASIA:** Lutron GL Ltd. 390 Havelock Road #07-04 King's Centre Singapore 169662 TEL: +65.6220.4666 FAX: +65.6220.4333 Technical Support: 800.120.4491 lutronsea@lutron.com
North & South America Customer Assistance USA, Canada, Caribbean: 1.844.LUTRON1 (1.844.588.7661) Mexico: +1.888.235.2910 Central/South America: +1.610.282.6701		**Asia Technical Hotlines** Northern China: 10.800.712.1536 Southern China: 10.800.120.1536 Hong Kong: 800.901.849 Indonesia: 001.803.011.3994 Japan: +81.3.5575.8411 Macau: 0800.401 Taiwan: 00.801.137.737 Thailand: 001.800.120.665853 Other Countries: +65.6220.4666

Lutron Electronics Co., Inc.
7200 Suter Road
Coopersburg, PA 18036-1299 U.S.A.
P/N 043611 Rev. A 09/2024

Documents / Resources


LUTRON
Tape Light Solution
Installation Instructions
Component Installation:
Additional Information:

LUTRON RRL-MWCL-WH Tape Light Solution [pdf] Instruction Manual RRL-MWCL-WH, HWL-MWCL-WH, LU-PH3-A, LU-T05-RT-IN, LU-T30-RT-IN, LU-WK1-6W, LU-CK1-6W, RRL-MWCL-WH Tape Light Solution, RRL-MWCL-WH, Tape Light Solution, Light Solution, Solution	

References

- Lutron Support Center | Lutron
- User Manual