



Project: _____
 Reference Type: _____
 Item Code: _____
 Date: _____
 Notes: _____

CBU-TED-LR

Bluetooth-controlled trailing edge dimmer.



WARNING
 Cancer and Reproductive Harm
www.P65Warnings.ca.gov



Warning!
 Hazardous voltages. Risk of electric shock or fire. Only qualified professionals should make the connections. Disconnect the mains power supply and verify its absence prior to installation.

DISPOSAL INSTRUCTIONS

This electrical product must not be disposed of as unsorted municipal waste. Please dispose of this product correctly: Regulations governing hazardous waste identification, classification, generation, management and disposal, found in title 40 CFR parts 260 through 273, should be observed.

PRODUCT DESCRIPTION

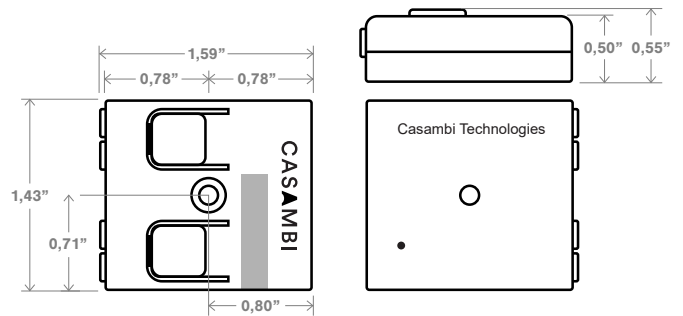
CBU-TED-LR is a Bluetooth-controlled, long-range, Casambi-enabled, trailing-edge dimmer for incandescent lamps, dimmable LED lamps and dimmable LED control gear. With Casambi's CBU-TED-LR compatible dimmable load can be easily converted to become a part of a Casambi mesh radio network.

CBU-TED-LR can control up to 50 W at 120 VAC. It features an overcurrent and over temperature protection.

CBU-TED-LR can be controlled with the Casambi App, available for iOS and Android devices, as well as with traditional wall switches. The Casambi App can be downloaded free of charge from the Apple App Store and Google Play Store.

Different Casambi-enabled products can be used from a simple one-luminaire direct control setup to a complete and full-featured lighting control system, in which up to 250 units automatically form an intelligent mesh network.

DIMENSIONS (INCH)



*t_c point is on bottom side • | Mounting hole diameter 3,5mm
 ■ Antenna location

CERTIFICATIONS

FCC ID: 2ALA3-CBUTEDLR
 IC: 22496-CBUTEDLR
 UL: 5LE6 / E494741



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TECHNICAL DATA

Input

- Voltage range: 120 VAC
- Frequency: 60 Hz
- Max. mains current: 0.43 A
- No-load standby power: < 0.3 W

Output

- Dimming method: trailing-edge phase control
- Max. output power: 50 W @ 120 VAC
- Max. output current: 0.43 A
- Min. load requirement: 1 W
- Max. load inrush current: 10 A, 100 ms

Radio Transceiver

- Operating frequencies: 2.402...2.480 Ghz
- Maximum output power: +8 dBm

Operating conditions

- Ambient temperature, ta: -4°F... +113°F (-20°... +45°C)
- Max. case temperature, tc: +167°F (+75°C)
- Location of tc point: Refer to the drawings
- Storage temperature: -13°F... +167°F (-25°C to +75°C)
- Max. relative humidity: 0...80%, non-condensing

Mechanical data

- Dimensions: 1.59" x 1.43" x 0.55"
(40,4 x 36,3 x 14,0 mm)
- Weight: 0.53 oz (15 g)
- Degree of protection: IP20 (indoor use only)

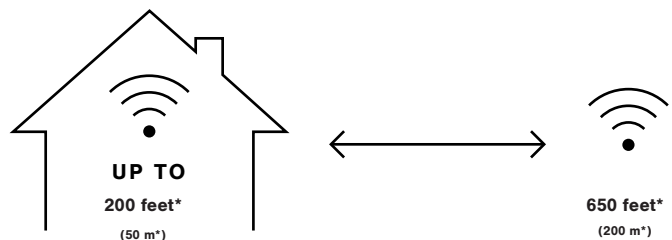
Wire Connections

- Wire range, solid: 0,5–1,5 mm², 16–20 AWG
- Wire strip length: 6-8 mm

RANGE

The range between two CBU-TED-LR units or between a CBU-TED-LR and a smartphone can vary a lot depending on the design of a product in which the antennas are housed and on the environment in which they operate. Long-range capabilities can reach approximately 650 feet (200 meters) with a good line of sight connection between nodes. However, if the unit is encapsulated in a metal structure, the range can be only a few feet. Therefore, thorough testing is highly recommended.

Casambi uses mesh network technology, which means that each CBU-TED-LR also acts as a repeater. When testing the network, it is important to test that each unit can be controlled from any point in the network-covered area.



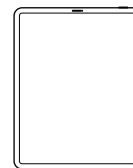
*The wireless range of a Casambi unit is dependent on several factors; how it has been integrated into a luminaire, where it has been installed; taking into consideration surrounding obstacles such as walls and other building materials that may block signals.

COMPATIBLE DEVICES



Compatible devices: Android and iOS Operating Systems.

We support the latest OS versions for Android and iOS, and their last two major versions respectively.



Tablets



Smartphones



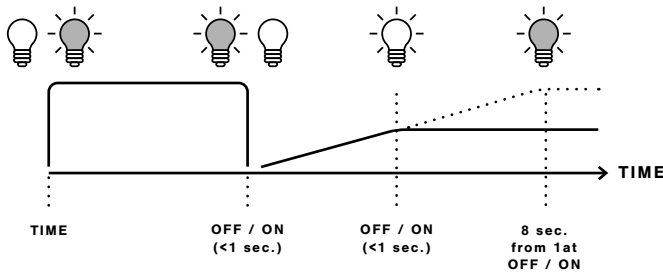


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CASAMBI MESH-NETWORK COMPATIBILITY

There are different radio modes that can be selected when creating a network in the Casambi App: 'Balanced', 'Better Performance' and now 'Long Range' options. The CBU-TED-LR enables long-range capabilities only when the long-range radio mode has been selected and all the other devices within the network are long-range capable. It will revert to the shorter, standard range when deployed in networks set to 'Balanced' or 'Better Performance' modes.

DIMMING WITHOUT APP



1. Turn lights on from a wall switch.
2. Quickly flick the wall switch off (max. 1sec.) and back on. The light level starts to increase gradually.
3. Flick the switch again at the desired dim level. The selected level is saved automatically.
4. If the second flick is not done within 8 seconds, the light intensity reaches its maximum level.
5. Flicking the switch can also be used to switch between predefined scenes.



Warning!

Using CBU-TED-LR with maximum load will make it hot. Make sure to place the product in well-ventilated space and away from any flammable material.

INSTALLATION

Make sure that the mains voltage is switched off before making any connections. Use 0,5–1,5 mm² solid conductor electrical wires. Strip the wire 6–8 mm from the end. Press the buttons on top of the dimmer case and insert the wires into the corresponding terminals. Make sure to connect the input and output correctly. The input connector is marked with letters L and N, while the output connector is marked with the letter N and a symbol with a wave and an arrow. If you install the dimmer in a heat-sensitive environment (e.g. inside a luminaire or in a ceiling outlet box above a luminaire), make sure that the ambient temperature does not exceed the specified maximum value. Using the dimmer in a heat-sensitive environment may limit the maximum output power.

When the Smart Switching feature is enabled with the Casambi App, the CBU-TED-LR can control the connected luminaire according to the mains switching sequence.

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 the 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.

Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

This device complies with Industry Canada's license-exempt RSSs. 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 of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

- (1) l'appareil ne doit pas produire de brouillage;
- (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.




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TYPE OF LOAD

- Incandescent and high voltage halogens
- Dimmable LED bulbs (C) 1)
- Dimmable CFL bulbs (C) 1)
- Trailing edge dimmable LED drivers 1)
- Low voltage halogens with electronic transformers
- High voltage AC LED modules 1)
- Wire wound transformers, electric motors and other inductive loads
- Non-dimmable fluorescent lamps, LED and CFL bulbs

MAX. LOAD

- 50 W
- 50 W
- 50 W
- 50 W
- 50 W
- 50 W
- Not allowed
- Not allowed



Never connect inductive loads, such as iron core transformers. This could cause permanent damage to the dimmer. Do not mix different types of loads.

1) Dimming quality depends solely on the load electronics.
 Do not mix different types of bulbs or loads.
 Some luminaires may flicker at low dimming

1) Dimming quality depends solely on the load electronics. Do not mix different types of bulbs or loads. Some luminaires may flicker at low dimming levels.

WARNING!

- Using CBU-TED-LR with maximum load will make it hot.
- Make sure to place the product in well-ventilated space and away from any flammable material.
- Maximum allowable ambient temperature must be observed.
- Changes or modifications not expressly approved by Casambi Technologies Oy could void the user's authority to operate the equipment.



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FIXTURE PROFILES

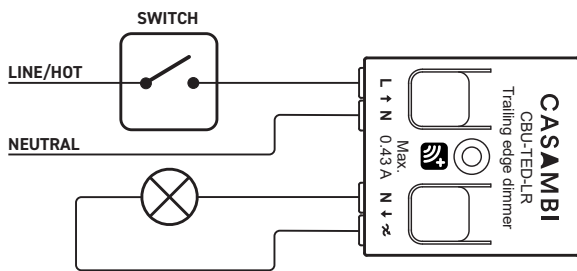
Profile#	Profile name / in app description	Description	Wiring
526*	CBU-TED	Trailing edge phase cut dimmer for 50/60Hz load. Light level is controllable with a slider in the Casambi App. Dimming curve is optimized by Casambi for majority of use cases.	1
11766	CBU-TED (Linear)	Trailing edge phase cut dimmer for 50/60Hz load. Light level is controllable with a slider in the Casambi App. Dimming curve in this profile is linear.	1
8123	CBU-TED (Log)	Trailing edge phase cut dimmer for 50/60Hz load. Light level is controllable with a slider in the Casambi App. Dimming curve in this profile is logarithmic.	1
3534	CBU-TED Presence	CBU-TED-LR acting as a presence sensor or Bluetooth enabled switch. The fixture provides presence information to mesh network when the CBU-TED-LR is powered up.	2A, 2B

* Default profile

WIRING DIAGRAMS

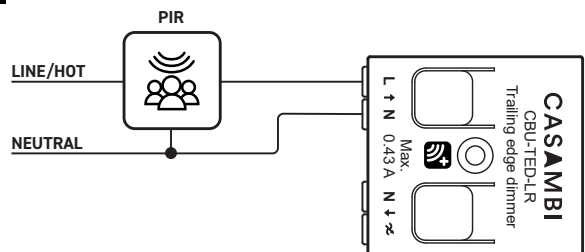
Each CBU product can operate in various roles according to the chosen profile. It is possible to change the profile of an unpaired device using the Casambi App. Above are listed the fixture profile options for the CBU-TED-LR.

1.



Max. load inrush current = 10A, 100ms

2A.



2B.

