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LEDcode BLE radio, Casambi-ready

AcuityBrands

## BLE wireless lighting control, Casambi-ready

The Casambi-ready LEDcode BLE radio is a single, digitally integrated, BLE radio LED driver package for wireless light control through Casambi and Bluetooth Low Energy (BLE) beaconing. The radio's LEDcode2 connection allows for easy, 2-wire digital integration with eldoLED LED drivers in a luminaire system. The radio/LED driver combination enables seamless integration in a Casambi BLE lighting control flood network. Integration and certification is easy thanks to the 2-wire, low voltage LEDcode2 connection.
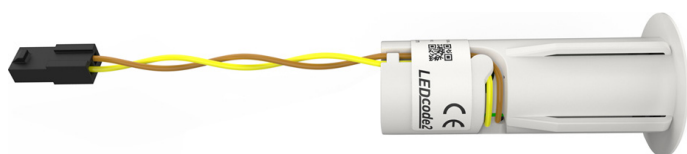
Product Offering

LEDcode BLE radio, Casambi-ready, internal antenna

| Part numbers (P/N): | **BT-L1C1** (Casambi Classic stack) |
| | **BT-L1E1** (Casambi Evolution stack) |
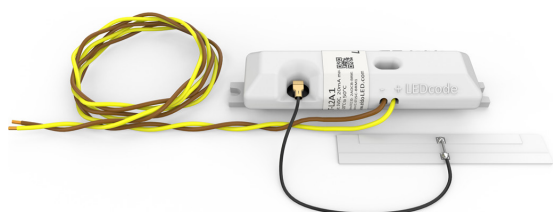
LEDcode BLE radio, Casambi-ready, with remote antenna

| Part numbers (P/N): | **BT-L2C1** (Casambi Classic stack) |
| | **BT-L2E1** (Casambi Evolution stack) |

LEDcode BLE radio, Casambi-ready, through-hole

Must be enclosed in a plastic junction box and connected through conduit if mounting external to the luminaire. Contact OEM Sales for use in new applications.

| Part numbers (P/N): | **BT-S1C1** (Casambi Classic stack) |
| | **BT-S1E1** (Casambi Evolution stack) |

Features & Benefits

Wireless control	Control your light with Bluetooth
Network stack	Support for Casambi Evolution and Casambi Classic
Firmware stack	The BLE radio hardware is capable of running the Casambi stack, including support for OTA firmware updates
IoT and Sensing	Hardware is capable of running Casambi supported beaconing and seamless integration into Casambi lighting - sensor network

Order number configurator

Example: BT-L1C1- 5400

B T - _ _ _ _ - _ _ _ _
     Part Number   Profile ID#
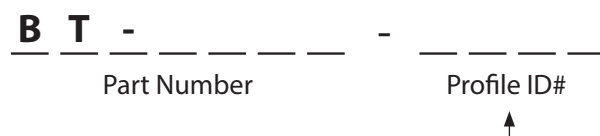
Profile ID#	Compatible Driver Family	Control Channels
5400	ECOdrive, SOLOdrive	One channel dimming of intensity
5402	DUALdrive	Two channel dimming of intensity
5403	DUALdrive with LightShape	Two channel control for dimming and CCT (in Kelvin, default range 3000K - 6500K)
5405	DUALdrive with LightShape	Two channel control for dimming and CCT (as %, default range 3000K - 6500K)

Warranty: General Terms and Conditions

Certifications

CE ®UL
E110912

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LEDcode BLE radio, Casambi-ready

Wireless control

The Casambi app can be downloaded and installed from the Apple App Store for iOS devices or from the Google Play Store for Android devices.

Input Control Characteristics

Control Channels	1 channel (Profile ID: 5400) 2 channels (Profile IDs: 5402, 5403, 5405)
Protocol	LEDcode2
Dimming range	100% - 0.1% (SOLOdrive and DUALdrive) 100% - 1% (ECOdrive)

Output Control Characteristics

Protocol	Bluetooth Low Energy 4.0
BLE Operating range	Line of sight < 25 meters Transmit power and environment will influence the actual range
Remote antenna	Pulse W3525B (BT-L2C1 and BT-L2E1)

Electrical Specifications

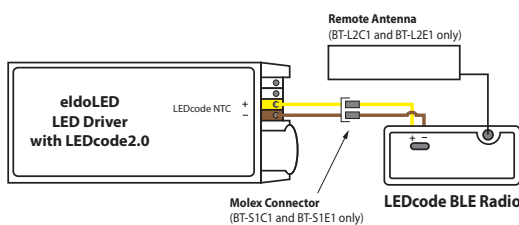|	
Bluetooth core version	4.0
Frequency range	2.402 GHz - 2.480 GHz
BTLE antenna	Single-band antenna
Input voltage range DC	4-6.5V
Maximum output power	4 dBm
Maximum input power	50 mW
Peak current	<15mA @ 3.6V
Polarity of LEDcode lines	Protected against incorrect wiring of the incoming LEDcode wires

Standards & Compliance

ENEC Safety	EN 62368-1:2014 EN 62479:2010
UL Management Equipment, Energy - Component	UL 916
Radiated emissions	47 CFR Part 15.247 RSS-210 Issue 9 August 2016 RSS-247 Issue 1 May 2015
Bluetooth	Bluetooth Qualification & Declaration ID: D037520
IC	6715C-BRM1
Surge Immunity	ANSI C63.4:2014
Restriction of Hazardous Substances	RoHS3
SVH-list substances	REACH Art.33
EMC	EN301 489-1 V2.2.0 EN301 489-17 V3.2.0
Radio Spectrum	EN300 328 V2.1.1

Environmental Conditions

Operating ambient temperature (Ta) range	-40 °C to +85 °C
Lifetime	100,000 hours

Wiring

Remote Antenna (BT-L2C1 and BT-L2E1 only)

eldoLED LED Driver with LEDcode2.0

LEDcode NTC

Molex Connector (BT-S1C1 and BT-S1E1 only)

LEDcode BLE Radio

Note: Wire length from BLE radio to LED driver should not exceed 3 meters if extending using other wiring.

Wiring Specifications

	BT-L1C1, BT-L1E1, BT-L2C1, BT-L2E1	BT-S1C1 and BT-S1E1	
	Radio	Radio	LED Driver Cable
Wire Type	solid copper, twisted brown and yellow wire	solid copper, twisted brown and yellow wire	stranded copper, twisted brown and yellow wire
Wire core cross section	0.52 mm² +/- 0.01 mm; AWG 20	0.33 mm² +/- 0.01 mm; AWG 22	0.52 mm² +/- 0.01 mm; AWG 20
Connector type	N/A	Molex 43640-0201 female	Molex 43645 male
Wire length	600 +/- 10 mm	100 +/- 10 mm	500 +/- 10 mm
Wire strip length	6.5 +/- 0.5 mm	6.5 +/- 0.5 mm	N/A
Cable end	N/A	N/A	Crimped-on end terminals

Mechanical Details

Models: BT-L1C1, BT-L1E1

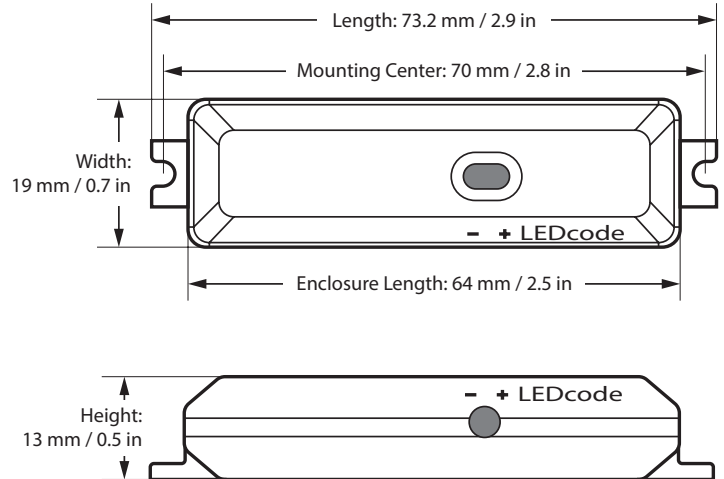|	
Mounting hole diameter	3.2 mm / 0.13 in
Mounting	M3, outer dimensions < 3.2 mm
Mounting torque	Not to exceed 100 Nm
Weight	10.4 g

Recommended Tools

Release of wires from LEDcode connector	WAGO. P/N: 206-859

Packaging

L x W x H box	470 x 345 x 150 mm
Weight (100 products)	2 kg
Products per box	Sets of 5 pcs (100 pcs max)
L x W x H - single-unit package	95 x 60 x 32 mm

BLE Radio

Models: BT-L2C1 and BT-L2E1

Mounting hole diameter	3.2 mm / 0.13 in
Mounting	M3, outer dimensions < 3.2 mm
Mounting torque	Not to exceed 100 Nm
Weight	10.4 g
Connector type (antenna)	I-PEX - U.FL
Weight (antenna)	3.3 g

Recommended Tools

|	
Extraction tool for U.FL connector	Hirose Connector P/N: U.FL-LP-N-2 HRS No. 331-0494-5
Insertion tool for U.FL connector	Hirose Connector P/N U.FL-LP-IN HRS No. 331-0334-9
Release of wires from LEDcode connector	WAGO. P/N: 206-859

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BLE Radio

Connector Cutout for External Antenna

External Antenna

External Antenna mounts with adhesive tape already on antenna (3M 4959 3mm VHB) No substitutions.

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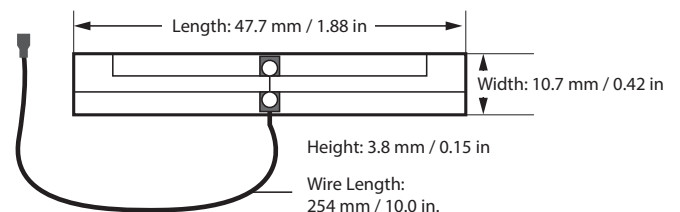
Mechanical Details Continued

Models: BT-S1C1 and BT-S1E1

Mounting	Fits in hole ø22 +/- 0.5 mm
Weight	12.2 g

Recommended Tools

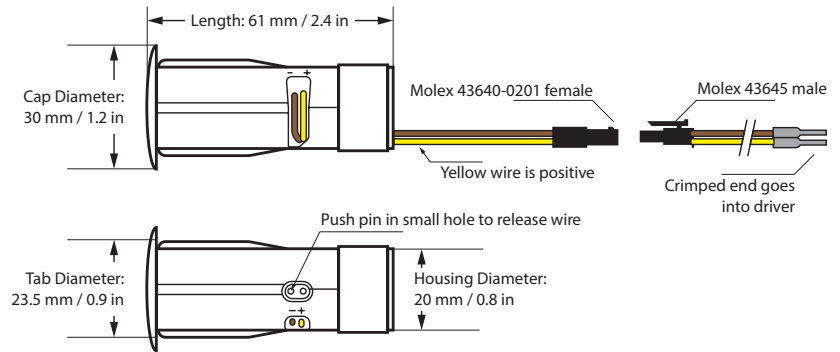|	
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Length: 61 mm / 2.4 in
Cap Diameter: 30 mm / 1.2 in
Molex 43640-0201 female
Molex 43645 male
Yellow wire is positive
Crimped end goes into driver

Push pin in small hole to release wire
Tab Diameter: 23.5 mm / 0.9 in
Housing Diameter: 20 mm / 0.8 in

Resources

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