



**BLE wireless lighting control, Casambi-ready**

eldoLED Quality of Light, wireless lighting control through Casambi, and Bluetooth Low Energy (BLE) beaconing from one digitally integrated BLE radio-LED driver package! 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, lowvoltage LEDcode2 connection.

**Product offering**



Product name LEDcode BLE radio, Casambi-ready

Part number (P/N) BT-L1C1



Product name LEDcode BLE radio, Casambi-ready, with remote antenna

Part number (P/N) BT-L2C1



Product name LEDcode BLE radio, Casambi-ready, through-hole

Part number (P/N) BT-S1C1

# LEDcode BLE radio, Casambi-ready

## Features & benefits

Wireless control	Control your light with Bluetooth
Network stack	Casambi
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 a Casambi lighting - sensor network.  For optimal performance, the BLE radios work best with Casambi Classic networks.

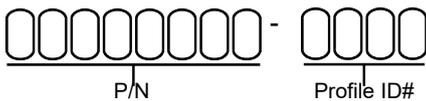
## Compatibility

This product is LEDcode2 only and compatible with all eldoLED DALI and LEDcode-only product versions with the LEDcode2 interface. 0-10V products with LEDcode are not compatible. To verify if your eldoLED product is LEDcode2 enabled, please check the product datasheet section "Controls characteristics, Control protocol" if LEDcode2 is listed.

## Warranty

Warranty period [General Terms and Conditions](#)

## Order number configurator



P/N	Part number of product
Profile ID#:	<p>Casambi fixture ID*</p> <p>Profile ID 5400: One channel dimming of intensity</p> <p>Profile ID 5402: Two channel dimming of intensity</p> <p>Profile ID 5403: LightShape Tunable White, two channel control for dimming and CCT (in Kelvin)</p> <p>Profile ID 5405: LightShape Tunable White, two channel control for dimming and CCT (as %)</p>

## LEDcode BLE radio, Casambi-ready

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### Input control characteristics

Control channels	1 SOLOdrive & ECOdrive, 2 DUALdrive & Lightshape
Protocol	LEDcode2
Dimming range	100% - 0.1% for SOLOdrive and DUALdrive 100% - 1% for ECOdrive

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### Output control characteristics

Protocol	Bluetooth Low Energy 4.0
BLE operating range	Line of sight <25 meter Transmit power and environment will influence the actual range
Approved remote antenna BT-L2C1	Pulse: W3525B

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### 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

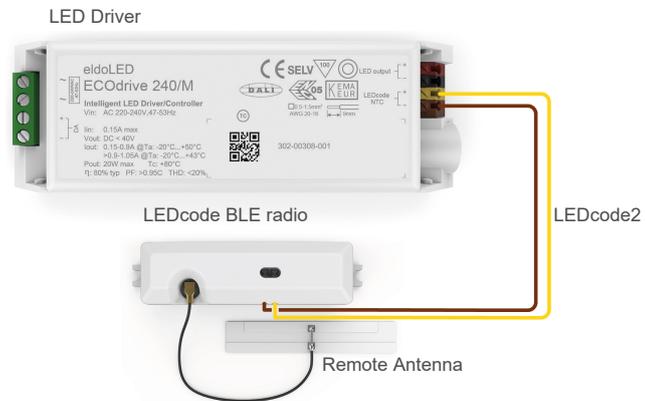
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**Wiring specifications LEDcode BLE radio (with remote antenna)**

Wiring diagram BT-L1C1



Wiring diagram BT-L2C1



Wire type	solid copper, twisted brown and yellow wire
Wire core cross section	0.52 mm <sup>2</sup> +/-0.01mm; AWG 20
Wire length	600 +/- 10 mm
Wire strip length	6.5 +/- 0.5 mm

## Wiring specifications BLE radio LEDcode cable

Wiring diagram BT-S1C1



Wire type	solid copper, twisted brown and yellow wire
Wire core cross section	0.33 mm <sup>2</sup> +/-0.01mm; AWG 22
Connector type	Molex 43640-0201 female
Wire length	100 +/- 10 mm
Wire strip length	6.5 +/- 0.5 mm

## Wiring specifications LED driver cable

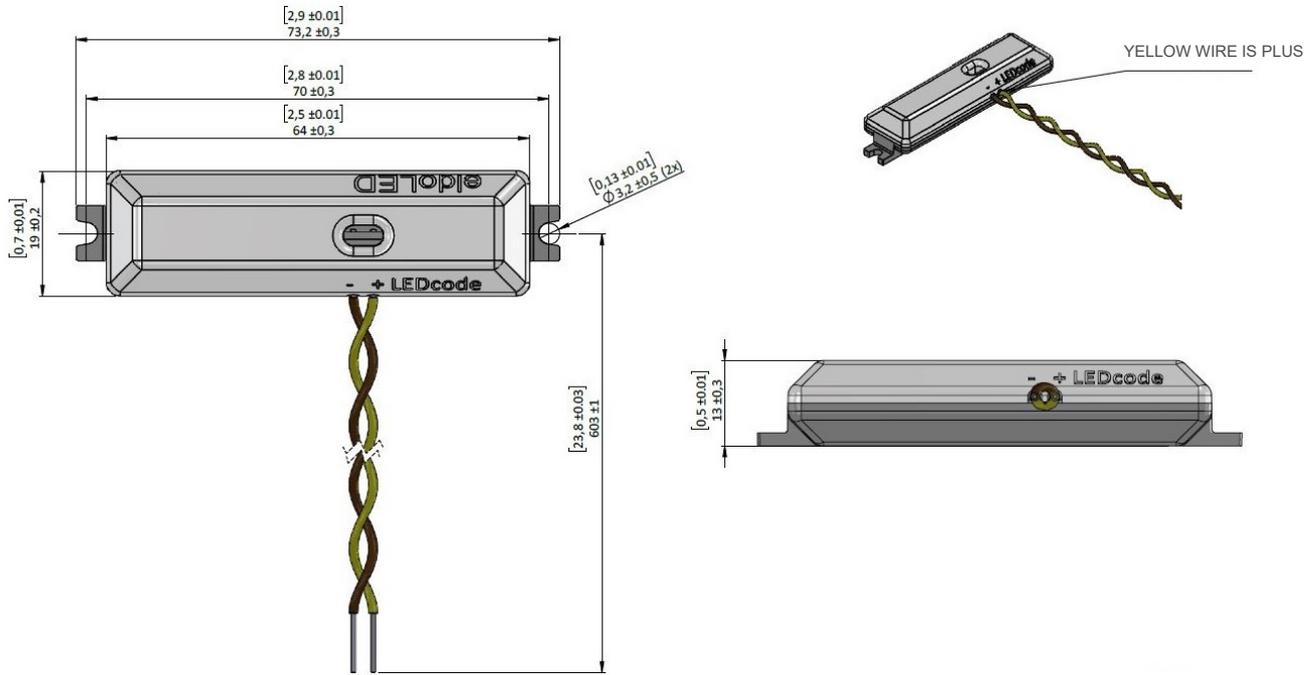
Wire type	stranded copper, twisted brown and yellow wire
Wire core cross section	0.52 mm <sup>2</sup> +/-0.01mm; AWG 20
Connector type	Molex 43645 male
Wire length	500 +/- 10 mm
Cable end	Crimped-on end terminals

## NOTE

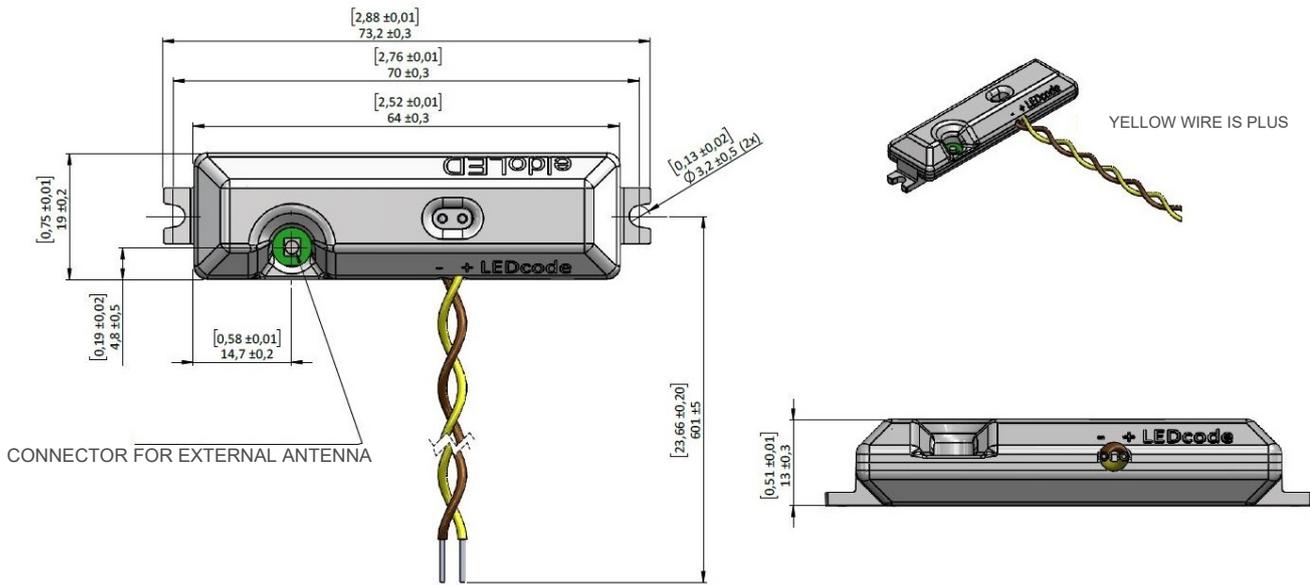
Wire length from BLE radio to LED drive	3 meter maximum if extending or using other wiring
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BLE radio module mechanical details

P/N: BT-L1C1



P/N: BT-L2C1



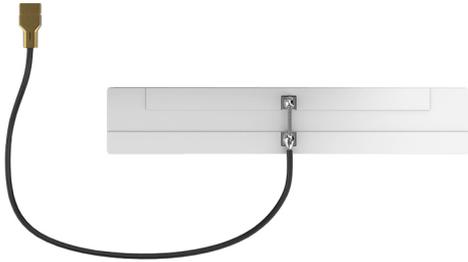
Length	Nominal: 73.2 mm / 2.9 inch Maximum: 73.5 mm / 2.91 inch
Width	Nominal: 19 mm / 0.7 inch Maximum: 19.2 mm / 0.71 inch
Height	Nominal: 13 mm / 0.5 inch Maximum: 13.3 mm / 0.51 inch
Center to center mounting hole distance	70 mm / 2.8 inch tolerance: +/- 0.3 mm / 0.01 inch
Mounting hole diameter	3.2 mm / 0.13 inch tolerance: +/- 0.5 mm / 0.01 inch
Mounting	M3, outer dimensions <3.2mm
Mounting torque	not to exceed 100 Nm
Weight	10.4 g

## LEDcode BLE radio, Casambi-ready

### Packaging

Length x Width x Height box	470 x 345 x 150 mm
Weight (100 products)	2 kg
Products per box	Sets of 5 pcs (100 pcs max)
Length x Width x Height Single unit package	95 x 60 x 32 mm

### Remote antenna mechanical details



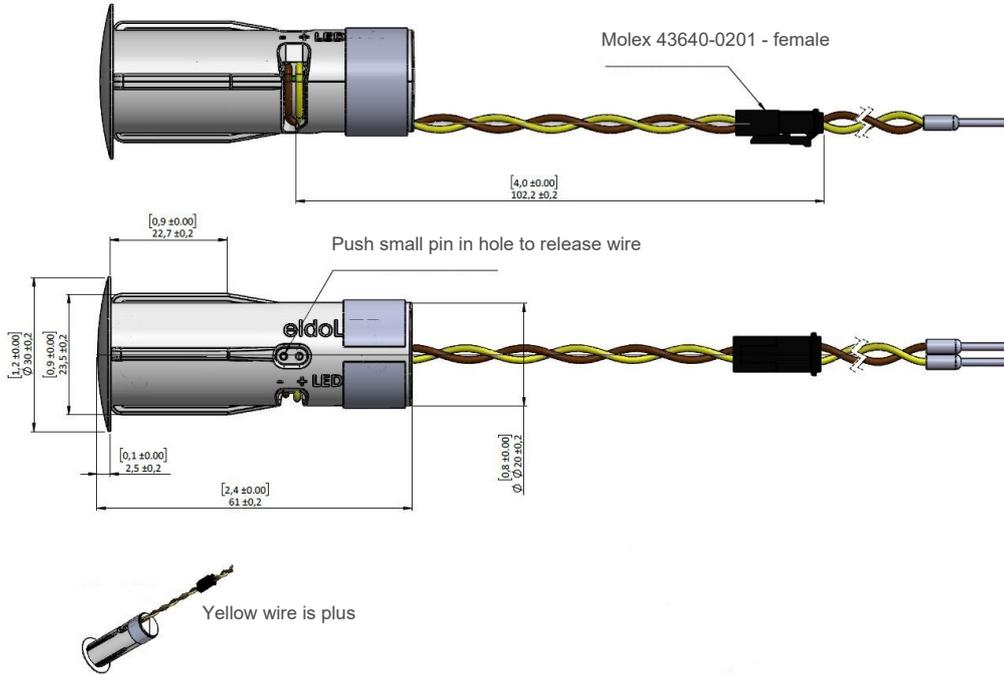
Length	typical 47.7 mm / 1.88 inch
Width	typical 10.7 mm / 0.42 inch
Height	typical 3.8 mm / 0.15 inch
Wire length	typical 254 mm / 10.0 inch
Connector type	I-PEX - U.FL
Weight	3.3 g
Mounting	With adhesive tape (already on antenna - 3M 4959 3mm VHB) No substitutions

### Tools LEDcode BLE radio (with remote antenna)

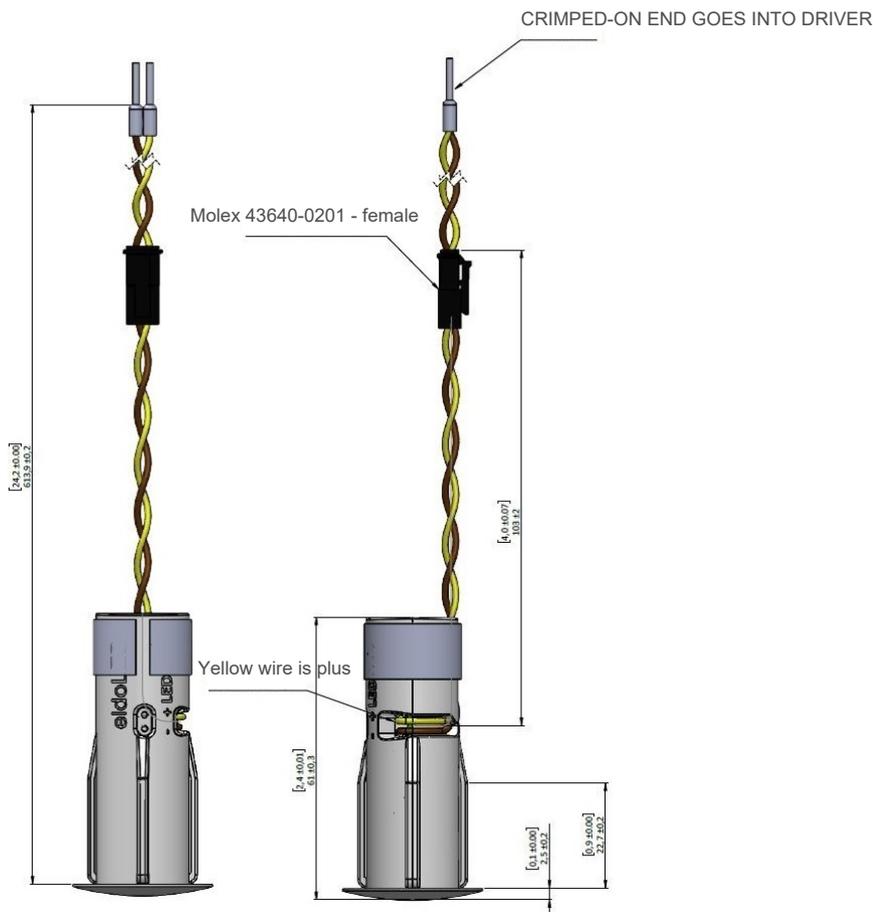
Extraction tool for U.FL connector (BT-L2C1)	Hirose Connector P/N: U.FL-LP-N-2 HRS No. 331-0494-5
Insertion tool for U.FL connector (BT-L2C1)	Hirose Connector P/N: U.FL-LP-IN HRS No. 331-0334-9
Release of wires from LEDcode connector	WAGO. P/N: 206-859

**LEDcode BLE radio, through-hole mechanical details**

P/N: BT-S1C1



Length	Nominal: 61.0 mm / 2.4 inch Maximum: 61.2 mm / 2.41 inch
Diameter	Nominal: 30 mm / 1.2 inch Maximum: 30.2 mm / 1.21 inch
Weight	12.2 g
Mounting	Fits in hole $\varnothing 22 \pm 0.5$ mm



## Packaging

Length x Width x Height box	470x345x150 mm
Weight (including 100 products)	2.2 kg
Products per box	Sets of 5 pcs (100 pcs max)
Length x Width x Height Single unit package	95x60x32 mm

## Tools

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

Operating ambient temperature (Ta) range	-20 °C to +50 °C
Lifetime	100,000 hours

**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
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 (Directives 2011/65/EU-2015/863/EU)
SVHC-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

**Certifications**



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**Europe, Rest of World**

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