



## Dual Casambi-to-Constant Current (CC) 25mA-700mA 2-Channel LED Driver



### Product Description

casCCDrive is a Bluetooth controllable, Casambi enabled, two channel constant current (CC) LED driver that allows driving CC LEDs directly under dimming control of a Casambi network without the need for a separate LED driver. The casCCDrive is connected between a 12-48 VDC Class 2 power supply and can generate LED voltages up to 2VDC below the input power supply voltage at a maximum of 700mA. In addition a single digital, dry contact (no external voltages!), programmable input OR output is supported with 3-way operation modes.

casCCDrive implements up to two Casambi luminaire channels, making it an ideal partner for tunable white (TW) applications. Multiple casCCDrive devices can be used in the same network to control different fixtures, channels or zones, since the two channels of control can be mapped using the Casambi mobile application. Two channels are 0-100% dimming capable.

casCCDrive can be configured with the Casambi app which can be downloaded free of charge from the Apple App Store and the Google Play Store. Different Casambi enabled products can be used from a simple single luminaire direct control to a complete and full featured light control system where many units automatically form a mesh network.

### Technical Data

#### Input

Voltage range: 12-48 VDC, Class 2  
 No-load input current: 30 mA, max 2Amps

#### Constant Current (CC) Outputs

Positive and Negative connections, two channels  
 25-700mA source current per channel max, 25mA step setpoints.

Top LED Vf voltage is limited to ~2V under input DC power level, to allow for driver voltage "headroom". An example is if your total LED voltage string is a total of 24V nominal forward voltage, make sure to connect at least a 26V input voltage. It is OK to go higher up to the maximum input voltage of 48VDC.

Connect Anode and Cathode directly to the LED load. Both channels must have independent wiring, do not connect/share wiring across the two channels together, these are independent LED driver channels and require independent wires to the LED for each channel.

#### Radio transceiver

Fanstel BT840 Radio Module  
 Operating frequencies: 2.401-2.483 Ghz  
 Maximum output power: typ. +3.4dBm  
 -103 dBm RX sensitivity in long-range mode

#### Antenna Options

Both internal (shown above) and external antenna models are available

#### Operating conditions

Ambient temperature, ta: -13...+113°F (-25...+45°C)  
 Max. case temperature, tc: +167°F (+75°C)  
 Storage temperature: -13...+167°F (-25...+75°C)  
 Max. relative humidity: 0...80%, non-cond.

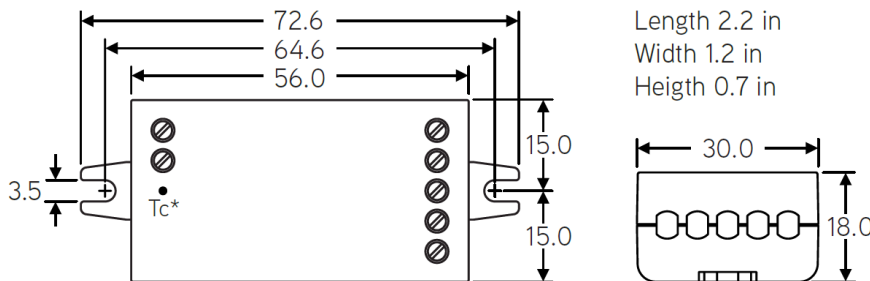
#### Connectors

Wire range, solid & stranded: 0.5 - 1.5 mm  
 14 - 22 AWG, Wire strip length: .25" (6 - 7 mm)  
 Tightening force: 0.4 Nm / 2.6 Lb-in

### Typical Connection Diagram



### Mechanical Data



Dimensions are in mm.

\* Tc point is on bottom side

Dimensions: 2.2 x 1.2 x 0.7 inch  
 72.6 x 30.0 x 18.0 mm  
 Weight: 0.8 oz (23 g)

### Certifications

FCC ID: X8WBT40F  
 TELECC: 201-210217/01

Conforms to UL STD 916  
 Certified to CSA STD C22.2#205



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**\*\*RATED FOR INDOOR USE ONLY\*\***

## Installation

Connect a Class 2 power supply with 2A of input current input connector of the casCCDrive. Make sure not to use a constant current LED driver and make sure that the cable polarity is correct. The product has two constant current output connections, do not tie to ground, LEDs must be connected to their respective Anode and Cathode pins. Connect directly to LEDs with constant current inputs, and instantly control of your Casambi lighting network **without** any other LED driver. Note that multiple Casambi Profiles are present to give your luminaire identifiable operation. Single sliders and tunable-white are supported. Set your current in the Vendor Parameters in 25mA steps, up to 700mA per channel.

Anode and Cathode are not designed to be connected together across the two channels. Run separate wires to each LED, from each output channel, with no connection between the two LED channels. Use at least a 20gauge wire between the casCCDrive and the LED to lower voltage loss, however long runs should not affect performance EXCEPT that the headroom between input voltage and output LED forward voltage may need to be increased to accommodate the wire voltage drop. It is OK to run the input voltage higher than the headroom, for example a 24V nominal LED forward voltage can be illuminated with 36 or 48VDC input voltage to the casCCDrive.

Top LED Vf voltage is limited to ~2V under input DC power level, to allow for driver voltage "headroom". An example is if your LED is a 24V nominal forward voltage, make sure to connect at least a 26V input voltage. It is OK to go higher up to the maximum input voltage of 48VDC.

Connect Anode and Cathode directly to the LED load. Both channels must have independent wiring, do not connect/share wiring across the two channels together, these are independent LED driver channels and require independent wires to the LED for each channel.

## Range

The range between two casCCDrive's or between a casCCDrive and a smart phone can vary depending on obstacles and surrounding material. In open air the range between two casCCDrive can be in excess of 200 ft, but if the unit is encapsulated into a metal structure, the range can be only few feet. Therefore, thorough testing is high suggested. Casambi uses mesh network technology so each casCCDrive acts also as a repeater. When testing the network, it is important to test that each unit can be controlled from any point of the network covered area. casCCDrive should not be placed in a metal enclosure, such as metal junction boxes. Metal will attenuate radio signals which are crucial to the operation of the product. If the product will have to be installed into a junction box, make sure to use a plastic junction box. casCCDrive is an ETL Listed Open-Type device which means that it will have to be used together with a Class 2 power supply with maximum output power of 100 VA. The product can be installed outside of junction box. Make sure to comply with National Electric Code in installation and when selecting installation wires.

## Compliance Statement

This device complies with part 15 of the FCC Rules. 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.

## Warning

Changes or modifications not expressly approved by DMX Engineering and Design LLC could void the user's authority to operate the equipment.

## FCC Interference Statement

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 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.

## Radiation Exposure Statement for Canada

This device complies with Industry Canada's licence-exempt RSSs. Operation is subject to the following two conditions:

- (1) This device may not cause interference
- (2) This device must accept any interference, including interference that may cause undesired operation of the device.

This equipment is exempt from the routine RF exposure evaluation requirements of RSS-102. This equipment should be installed and operated with a minimum distance of 20 cm between the antenna and the user or bystanders.

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.

Ce matériel n'est pas sujet à l'évaluation habituelle d'exposition RF selon RSS102. Ce matériel devrait être installé et exploité en gardant une distance minimale de 20 cm entre l'antenne et l'utilisateur ou les spectateurs.

