Rayrun HDN15CB Programmable Constant Current LED Driver Instructions

Contents

Rayrun HDN15CB Programmable Constant Current LED Driver

Feature

- Output current set from App
- 100% non-flicker DC dimming
- Current trim fine-tuning
- Fading time adjustable
- Dimming curve adjustable
- Single color / CCT in one model
- Very low standby power
- Premium low-brightness performance

Introduction

This product is a 15W programmable constant current LED driver. Model HDN15CB-E is for single color and HDN15CB-B can be used for CCT or single color. It is Casambi ready and all features are programmable.
The output channel, rated current, fading time and trim level features are all adjustable from the Casambi app. These features allow customer to apply in various applications with multiple options.
The advanced full DC dimming scheme is implemented, and it's 100% physically flicker free in the whole dimming range. It also has very good low brightness performance, to build an elegant low brightness environment and on/off dimming experience.

Setting output current and channel

The rated output current of HDN15CB is from 200mA to 700mA, it needs to be set from the Casambi app. To set the current and output mode, please make sure the driver is unpaired and powered on. On the Casambi app, click on the driver icon and select 'Change profile' option on the pop up manual (Fig.1]. The rated current and working mode can be selected in the list (Fig.2).

The HDN15CB-B model can be configured as CCT or single color model, once be configured as single color model, user can connect lighting fixture to both warm white and cool white channel.

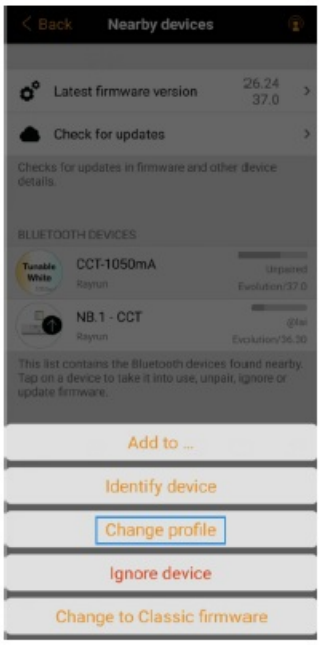


Fig.1

Fig.2

The max output voltage varies with the rated output current. The following table lists the max output voltage and power with different current setting.

Rated current	200mA	250mA	300mA	350mA	400mA	500mA	600mA	700mA
Max output Volt.	50V	50V	50V	42.9V	37.5V	30V	25V	21.4V
Max power	10W	12.5W	15W					

Automatic LED adaption

This driver verifies the load character on each power on. It will run a load adaption process once the change of load is detected. During the adaption process, the lighting fixture will dim up and down for about 10 seconds. After this process, the driver will match the LED feature and maintain a 0-100% full-range physical non-flickering DC dimming. Normally this adaption process happens on the power on moment once the lighting fixture is changed with the brightness is higher than 30%. For HDN15CB-B, the warm white and cool white must have same voltage and current feature for proper adaption and working. If two channels' voltage and current does not match, the CCT adaption will fail and the driver will only work in single color mode with limited function.

CAUTION: The factory default current is set to minimum value to ensure the safety of initial installation. Please do not set the LED current higher than its rated value, otherwise the lighting fixture can be permanently damaged.

Advanced feature – Current trimming

To fine tune the LED driving current, please pair the driver first and double-click on the driver icon to open the setting page. On the setting page please click on the 'Current trim' item in the PARAMETERS section (Fig.31. The output current can be trimmed from 100% to 50% of the rated current at 5% step (Fig.4).

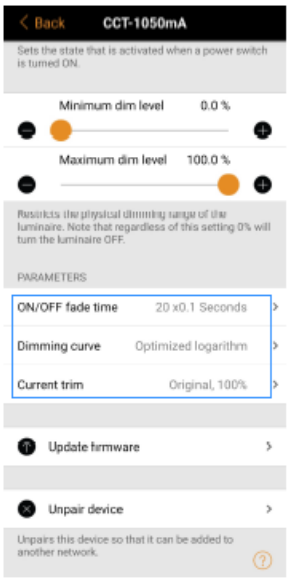


Fig.3

Fig.4

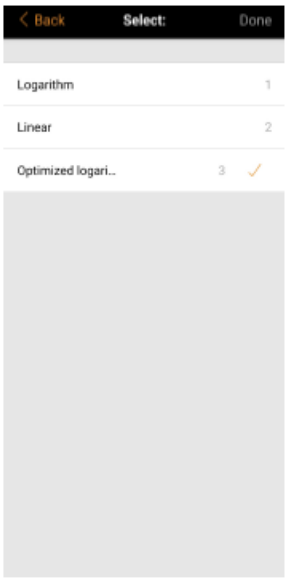


Fig.5

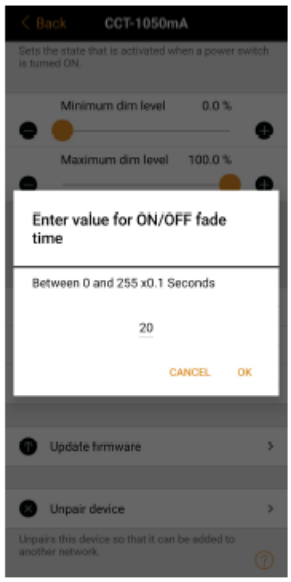


Fig.6

Advanced feature – Change dimming curve

- The dimming curve defines the trend of light output strength versus brightness level (0-100%] shown on the app. Please pair the driver first and open the setting page on the app, from the PARAMETERS section, the Dimming curve can be changed from Logarithm to linear and Optimized logarithm (Fig.5).
- The Linear curve will result in even light output power versus the brightness level set on app, but for human eye sensing, the light output change is relatively small at high brightness level.
- The Logarithm curve will result in strong brightness change at high brightness level and this will make the brightness adjustment more visible and logical for human eye.
- The Optimized logarithm curve is between linear and logarithm, results in a balanced brightness adjustment effect.

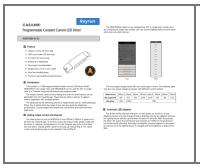
Advanced feature – ON/OFF fade time adjust

The on/off fade time can be adjusted on the settings page. Please pair the driver first and open the setting page on the app, from the PARAMETERS section, the ON/OFF fade time can be adjusted from 0-25.5 seconds. Users can adjust it by entering value between 0-255 with the step of 0.1 seconds (Fig.6).

Specification

Model	HDN15CB-B	HDN15CB-E
Function	2-in-1 (CCT/Single Color)	Single Color
Rated max power	15W	
Input power	AC 180-240V	
Power Factor	>0.9 at rated load	
Efficiency	>85% at full load	
Output voltage	0-50V DC	
Rated output current (mA)	200, 250, 300, 350, 400, 500, 600, 700	
Fade time	0-25.5 seconds adjustable	
Output current trim	100% to 50% with 5% step	
Dimming method	Full DC dimming	
Standby power consumption	<0.5W	
Working temperature	-20~50°C	
Case temperature	Max 90°C	
Dimension (WHL)	31.5 x 24 x 125.5mm	

Documents / Resources

	Rayrun HDN15CB Programmable Constant Current LED Driver [pdf] Instructions HDN15CB Programmable Constant Current LED Driver, HDN15CB, Programmable Constant Current LED Driver, Constant Current LED Driver, Current LED Driver, LED Driver, Driver

References

- User Manual