

2.4G HC-X Driver(1/4□13-38W) V1.1.1

Category: LED Dimming Drivers and Accessories

Source model: 2.4G HC-X Driver(1/4□13-38W) V1.1.1

Internal reference: HOION-CTRL-103

Product Overview

2.4G Wireless Air Self-inspection Sync CCT Constant Current dimming Driver

Technical Details

Features

- 1) 1/4□Isolated driver
- 2) Adopting advanced PWM technology
- 3) Higher efficiency, high PF, non-flicker
- 4) Short-circuit protection, overvoltage protection
- 5) High-quality delicate & soft dimming effect(1/4□4096 levels)1/4□
- 6) Memory function
- 7) 2.4GHz wireless remote control, Air Self-inspection Sync control
- 8) Compatible with Freelighting APP control system, achieve WIFI intelligent control by your mobile phone.
- 9) Designed for constant current CW+WW LED Light Fixtures: like LED panel, LED ceiling lamps, LED down light etc.
- 10) Widely used for intelligent household/commercial indoor lighting, like mall, hotel, office indoor lighting design.
- 11) Certificate: CE/EMC/RED/RoHS
- 12) 3 years warranty

Technical Parameters

| Electrical performance tests based on condition of ambient temperature:25 ° C ± 10%, and 230VAC / 50HZ input

|
Factor |

Index |

38W |

25W

|
Input | Voltage range | 90-264VAC | 90-264VAC

| Frequency range | 47-63Hz | 47-63Hz

| $\frac{P}{P_{rated}}$ Rated Current | 0.23A(1/4□full load)1/4□ | 0.25A(1/4□full load)1/4□

| Surge current | 1/4□50A | 1/4□62A

| Standby power | ≤1.3W | ≤0.7W

| Efficiency | >85%(full load) | >83%(full load)

| Power factor1/4□PF1/4□ | ≥0.91 | 0.5

| Port | Three lines input1/4□L/N/FG1/4□ | Three lines input1/4□L/N/FG, FG as optional1/4□

|
Output | No-Load Voltage | 53V | 23V(1/4□12-21V 1/4□1/4□44V1/4□24V-42V1/4□

| Voltage range | 18V-42VDC | 12-21V or 24V-42VDC

| Led string | 6-12 LEDs | 5-6 LEDs or 9-12 LEDs

| Rated Current | 650mA-900mA | 300mA-1000mA /300mA-600mA

| Maximum power supply | 38W(1/4□CW+WW1/4□ | 25W(1/4□CW+WW1/4□

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| Current Accuracy | ±5% | ±5%

| PWM frequency | 3KHz | 1KHz

| Dimming level | 1024 | 1024

| Dimming range | 3-100% | 3-100%

| Camera effect | non-flicker | non-flicker

| Port | Three lines output, common anode | Three lines output, common anode

| Reliability | Power supply solution | isolated power supply | isolated power supply

| Ambient temperature Ta | -20℃~45℃ | -20℃~45℃

| Case temperature Tc | 85℃
(based on work environment temperature at 45℃, And Max power supply) | 85℃
(based on work environment temperature at 45℃, And Max power supply)

| Storage temperature | -40℃~85℃
(relative humidity 20%~90% non-condensing) | -40℃~85℃
(relative humidity 20%~90% non-condensing)

| Life time | 31000hours(based on work environment temperature 25℃±10%~230VAC input~Maximum power load~Case temperature 72℃) | 50000 hours(based on work environment temperature 25℃±10%~230VAC input~Maximum power load~Case temperature 65℃)

| Warranty | 3years | 3years

| Safety and

EMC | CE~LVD | EN61347-1~EN61347-2-13

| CE~EMC | EMI~EN55022~EN61000-3-3~
EMS~EN55024~EN61000-4-2~3,4,5,6,11~

| Withstand voltage | I/P-O-P:3.75KVAC (I/P-FG)1.5KVAC (O/P-FG) 1.5KVAC

| Insulation resistance | ≥100MΩ(based on environment temperature at25℃±10℃~relative humidity below 70%, applied voltage at 500VDC between: input and output, input and GND, output and GN, time is 60s.

| protection | Dustproof waterproof level | IP40 | IP40

| Overvoltage protection | Yes~Maximum 53V) | Yes~Maximum 44V)

| Short-circuit protection | Yes (Into the intermittent mode when short circuit, short circuit relieve automatically restore the output) | Yes (Into the intermittent mode when short circuit, short circuit relieve automatically restore the output)

| Others | Frequency of RF remote control | 2.4GHz | 2.4GHz

| Remote control distance | 30m | 30m

| Memory function | Yes | Yes

| G.W | 165g | 140g

| Product dimensions | L135*W45*H31mm | L115*W45*H31mm

| Packing dimensions | L140*W48*H35mm | L140*W48*H35mm

| Remark | the sum current of two channels for CCT driver don't exceed the maximum value of single channel current, that is, the maximum brightness is : 50%CW+50%WW.

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Case temperature TC and driver life curve

1 1/4 38W drivers

Figure 1 The life time for 38W drivers when Tc at 40℃ 1/4 50℃ 1/4 60℃ 1/4 70℃ 1/4 80℃ 1/4 90℃

2 1/4 25W drivers

Figure 2 The life time for 25W drivers when Tc at 40℃ 1/4 50℃ 1/4 60℃ 1/4 70℃ 1/4 80℃ 1/4 90℃

3KV Surge Testing

| Angel | Positive or Negative | Times | Pass/Fail

| 0 | + | 5 | Pass

| 0 | - | 5 | Pass

| 90 | + | 5 | Pass

| 90 | - | 5 | Pass

| 180 | + | 5 | Pass

| 180 | - | 5 | Pass

| 270 | + | 5 | Pass

| 270 | - | 5 | Pass

Main-product code and Parameters

1 1/4 38W regular models and parameters

| Models | Watt | Output current | Output voltage | Led string

| HCT/HCBT/HCWP86/HCWP120/HCBK-38-090 | 38W | 900mA | 18-42V DC | 6 1/2 12 LEDs

| HCT/HCBT/HCWP86/HCWP120/HCBK-36-085 | 36W | 850mA | 18-42V DC | 6 1/2 12 LEDs

| HCT/HCBT/HCWP86/HCWP120/HCBK-34-080 | 34W | 800mA | 18-42V DC | 6 1/2 12 LEDs

| HCT/HCBT/HCWP86/HCWP120/HCBK-32-075 | 32W | 750mA | 18-42V DC | 6 1/2 12 LEDs

| HCT/HCBT/HCWP86/HCWP120/HCBK-30-070 | 30W | 700mA | 18-42V DC | 6 1/2 12 LEDs

| HCT/HCBT/HCWP86/HCWP120/HCBK-27-065 | 27W | 650mA | 18-42V DC | 6 1/2 12 LEDs

2 1/4 25W regular models and parameters

| Models | Rated power | Rated current per channel | Voltage range | Led string

| HCT/HCBT/HCWP86/HCWP120/HCBK-25-060 | 25W | 600mA | 24-42V DC | 8 1/2 12 LEDs

| HCT/HCBT/HCWP86/HCWP120/HCBK-21-050 | 21W | 500mA | 24-42V DC | 8 1/2 12 LEDs

| HCT/HCBT/HCWP86/HCWP120/HCBK-19-045 | 19W | 450mA | 24-42V DC | 8 1/2 12 LEDs

| HCT/HCBT/HCWP86/HCWP120/HCBK-17-040 | 17W | 400mA | 24-42V DC | 8 1/2 12 LEDs

| HCT/HCBT/HCWP86/HCWP120/HCBK-15-035 | 15W | 350mA | 24-42V DC | 8 1/2 12 LEDs

| HCT/HCBT/HCWP86/HCWP120/HCBK-13-030 | 13W | 300mA | 24-42V DC | 8 1/2 12 LEDs

| HCT/HCBT/HCWP86/HCWP120/HCBK-21-100 | 21W | 1000mA | 12-21V DC | 4 1/2 6 LEDs

| HCT/HCBT/HCWP86/HCWP120/HCBK-19-090 | 19W | 900mA | 12-21V DC | 4 1/2 6 LEDs

| HCT/HCBT/HCWP86/HCWP120/HCBK-17-080 | 17W | 800mA | 12-21V DC | 4 1/2 6 LEDs

| HCT/HCBT/HCWP86/HCWP120/HCBK-15-070 | 15W | 700mA | 12-21V DC | 4 1/2 6 LEDs

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| HCT/HCBT/HCWP86/HCWP120/HCBK-13-060 | 13W | 600mA | 12-21V DC | 4 1/2 6 LEDs

Remark: Please confirm with Hoion for other parameters

Interface Specification

Three lines output, common anode

Wire specifications recommend

Input wire

three-core PVC plastic wire H05VV-F diameter =0.72mm VDE certificate core 3*1.0mm². 300/500V Stripping 11mm and tin dipping 3mm for the end of wire which is directly connect with the driver.

Output wire

three-core PVC plastic wire diameter =0.5mm. Stripping 11mm and tin dipping 3mm for the end of wire which is directly connect with the driver.

Product compatibility Remote control optional

| Item: HX-RFBT-2.4G 1 zone | Item: HX-RFBT10-2.4G (4 zone) | Item: HX-RFBT12-2.4G 1 zone |

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| Item: HX-RFBT15 1 zone | Item: HX-HWP86-CCT-4S 4 zone | Item: HX-HWP86-XSP 4 zone |

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| Item: HX-HWP86-SR PIR/Lux-sensor | Item: HX-WP86-AP (RF signal repeater) | Item: HX-TUYA-2.4G-CCT

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Typical Applications

- 1) Compatible with a variety of models of remote control at the same time, could be matched according to project situation
- 2)

Wireless-synchronization function

Receivers which with wireless-synchronization functions will transmit the control signals from the remote control and self-inspection the work statues for each other, so multiple receivers in same zone will wireless-sync-work completely, not only static mode but also dynamic mode, to achieve wired-like operation experience. The distance up to 20 meters between remote control to receiver, and up to 10 meters between 2 receivers. RF wireless signal repeater is suggested in over range distance or when the workable distance is shorter by the materials of space, the effective range up to 30 meters.

- 3) 1 zone remote typical application, multi drivers could be wireless-sync controlled by the same one remote control.
- 4) 4 zones remote typical application, multi drivers could be controlled in each zone. 4 zone could be respectively and allover controlled
- 5) With TUYA-2.4G converter module, it can realize mobile phone intelligent lighting system control

Tips:

- 1) If the lamp turned off by remote control, it also can restart the lamp directly by the AC power switch(No-flicker driver need to restart after turn off the power switch and discharge for 5s.
- 2) If the lamp is light up without any operation in 167 hours, the driver will turn off the lamp automatically. It will recount the time if there is any operation from power switch or remote control.
- 3) Memory function, each time power-on reserve the mode which stop in the last power-down.
- 4) For operations and precautions related to lighting system settings, please refer to the operating instructions of the relevant remote control.

Source reference: <https://www.hoionlighting.com/a/pics/ledkongzhiqi/2021/0416/292.html>