12W 2CH Zigbee NFC Enabled LED Driver(Constant Current)

zigbee certified product CE RoHS COMPLIANT RIPPLE FREE SELV ▢ ⌂ ☒

Important: *Read All Instructions Prior to Installation*

Function introduction

LED Output

Zigbee Dimmable Driver

NFC

AC/DC power input
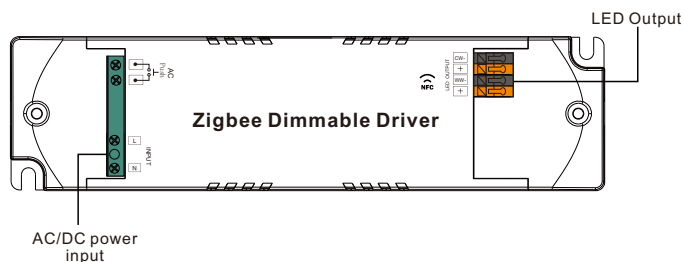
Product Data

Output	LED Channel	2
	DC Voltage	6-42V
	Current	100-700mA via NFC setting; Min.current gear lower to 0.1mA,Default 300mA
	Current Accuracy	±3%(±1%@Certain full load) @ full load
	Rated Power	Max. 12W
Input	Voltage Range	200-240VAC/200-240VDC
	Absolute Voltage Range	176-264VAC/176-280VDC
	Frequency Range	0/50/60Hz
	Power Factor (Typ.)	> 0.97 @ 230VAC Full load
	Total Harmonic Distortion	THD ≤ 10% (@ full load / 230VAC)
	Efficiency (Typ.)	> 80% @ 230VAC full load
	AC Current (Typ.)	0.1A @ 230VAC
	Inrush Current (Typ.)	Max. 3.96A at 230VAC; 80μs duration
	Leakage Current	< 5mA /230VAC
	Standby Power Consumption	< 0.5W
	Anti Surge	L-N:2KV
Control	Dimming Interface	Zigbee
	Dimming Range	0.01%-100%@ Max current
	Dimming Method	Amplitude/CCR dimming
	Dimming Curve	Linear/ Logarithmic optional

Protection	Short Circuit	Yes, remove the fault conditions and re-power the device
	Over Current	Yes, remove the fault conditions and re-power the device
	Over Temperature	Yes, remove the fault conditions and re-power the device
Environment	Working Temp.	-25℃ ~ +45℃
	Max. Case Temp.	TC=85℃ (Ta="45℃")
	Working Humidity	10% ~ 95% RH non-condensing
	Storage Temp. & Humidity	-40℃ ~ +80℃, 10% ~ 95% RH
Safety & EMC	Safety Standards	EN61347-1, EN61347-2-13
	Withstand Voltage	I/P-O/P: 3.75KVAC
	Isolation Resistance	I/P-O/P: 100M Ohms / 500VDC / 25℃ / 70% RH
	EMC Emission	En55015, EN61000-3-2, EN61000-3-3
	EMC Immunity	En61547, EN61000-4-2,3,4,5,6,8,11
Others	MTBF	191350H, MIL-HDBK-217F @ 230VAC full load and 25℃ ambient temperature
	Dimension	135x35x20mm (L*W*H)
	Warranty	5 Years

• Dimmable LED driver, ZigBee device based on ZigBee 3.0 protocol
• Dimmable LED driver. Max. output power 12W
• 100-700mA current selectable via NFC program tool. Min.current gear lower to 0.1mA
• Dimming curve/Power on state/Soft start/Soft off via NFC program tool.
• Class Ⅱ power supply, full isolated plastic case
• High power factor and efficiency
• PUSH DIM function enabled
• Able to On/Off and control LED lighting luminaries' brightness and color temperature
• Amplitude/CCR dimming, smooth and deep dimming
• ZigBee end device that supports Touchlink commissioning
• Can directly pair to a compatible ZigBee remote via Touchlink
• Supports find and bind mode to bind a ZigBee remote
• Supports zigbee green power and can bind max. 20 zigbee green power switches
• Compatible with universal ZigBee gateway products
• Waterproof grade: IP20, suitable for indoor LED lighting applications
• 5 years warranty

Safety & Warnings

• DO NOT install with power applied to the device.
• DO NOT expose the device to moisture.

Operation--Zigbee Network

**1.Do wiring according to connection diagram correctly.**

2.This ZigBee device is a wireless receiver that communicates with a variety of ZigBee compatible systems. This receiver receives and is controlled by wireless radio signals from the compatible ZigBee system.

3. Zigbee Network Pairing through Coordinator or Hub (Added to a Zigbee Network)

Step 1: Remove the device from previous zigbee network if it has already been added to, otherwise pairing will fail.

Step 2: From your ZigBee Controller or hub interface, choose to add lighting device and enter Pairing mode as instructed by the controller.

Step 3: power on the device, it will be set into network pairing mode (connected light flashes twice slowly), the network pairing mode will last until the device is added to a zigbee network.


Zigbee Dimmable Driver

4-Wire CCT LED
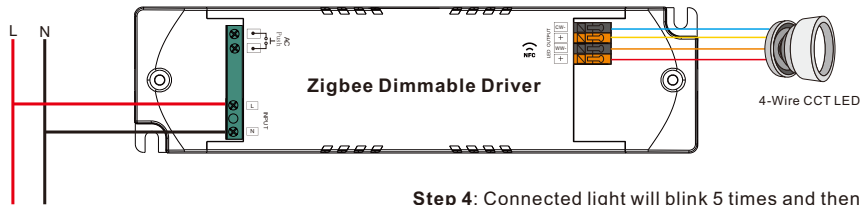
Step 4: Connected light will blink 5 times and then stay solid on, then the device will appear in your controller's menu and can be controlled through controller or hub interface.

4. TouchLink to a Zigbee Remote

Step 1: Method 1: re-power on the device 4 times to start Touchlink commissioning immediately, 180S timeout, repeat the operation.

Method 2: If the device is already added to a network, it will be set into Touchlink commissioning immediately, 180S timeout. Once timeout, re-power on the device to set it into touchlink commissioning again.


Zigbee Dimmable Driver

4-Wire CCT LED

Zigbee Remote
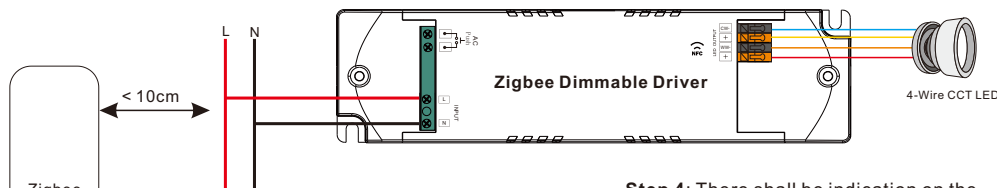
< 10cm

Step 4: There shall be indication on the remote for successful link and connected light will flash twice.

Step 2: Bring the remote or touch panel within 10cm of the lighting device.

Step 3: Set the remote or touch panel into Touchlink commissioning, please refer to corresponding remote or touch panel manual to learn how.

Note: 1) Directly TouchLink (both not added to a ZigBee network), each device can link with 1 remote.
2) TouchLink after both added to a ZigBee network, each device can link with max. 30 remotes.
3) To control by both gateway and remote, add remote and device to network first then TouchLink.
**4) After TouchLink, the device can be controlled by the linked remotes.**

5. Removed from a Zigbee Network through Coordinator or Hub Interface
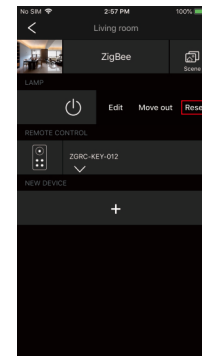
From your ZigBee controller or hub interface, choose to delete or reset the lighting device as instructed. The connected light blinks 3 times to indicate successful reset.

6. Factory Reset Manually

Step 1: Enable Pairing via NFC App or re-power on the device for 5 times continuously .


Zigbee Dimmable Driver

4-Wire CCT LED
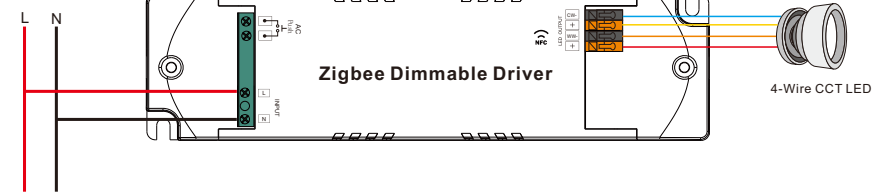
Step 2: Connected light will blink 3 times to indicate successful reset.

Note: 1) If the device is already at factory default setting, there is no indication when factory reset again .
2) All configuration parameters will be reset after the device is reset or removed from the network.

7. Find and Bind Mode

Step 1: Re-power on the device (initiator node) 3 times to start Find and Bind mode (connected light flashes slowly) to find and bind target node, 180 seconds timeout, repeat the operation.
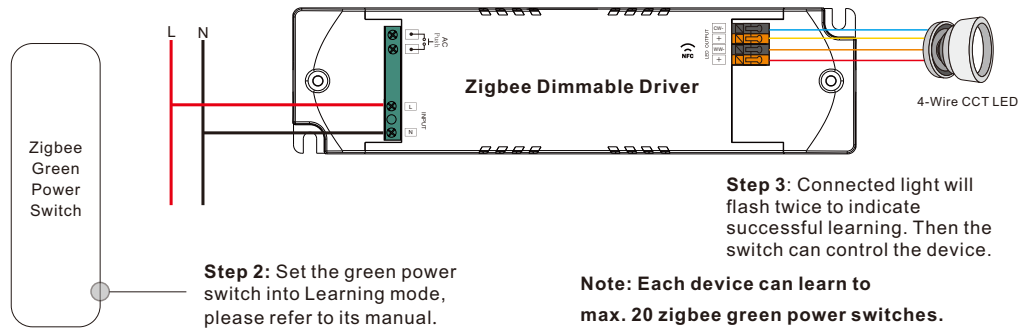

Zigbee Dimmable Driver

4-Wire CCT LED

Zigbee Remote
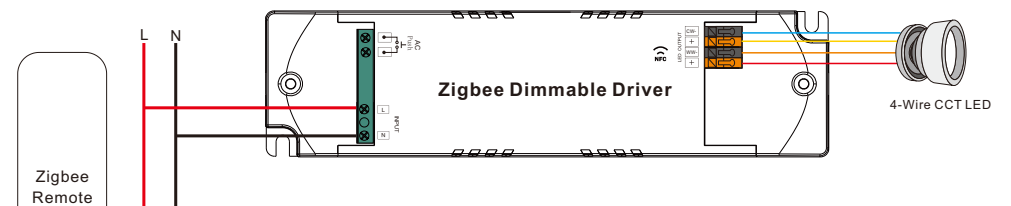
Step 2: Set the remote or touch panel (target node) into find and bind mode, and enable it to find and bind initiator, please refer to corresponding remote or touch panel manual.

Step 3: There shall be indication on the remote or touch panel that it bind the device successfully and can control it then.
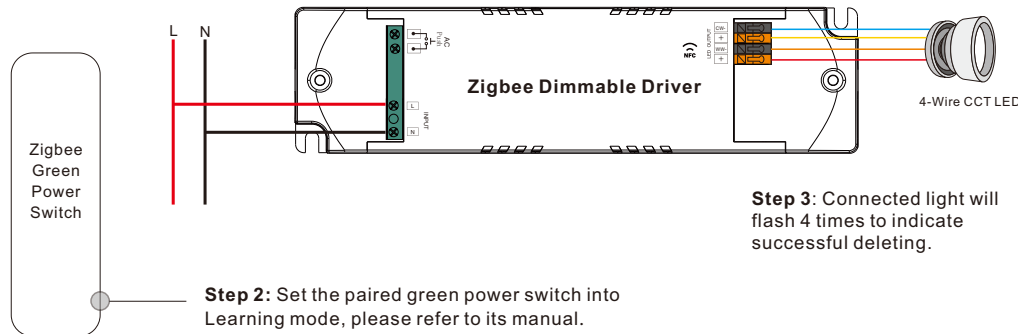
8. Learning to a Zigbee Green Power Switch

Step 1: Re-power on the device 4 times to start Learning to GP switch mode (connected light flashes twice), 180 seconds timeout, repeat the operation.

Zigbee Green Power Switch

L N

Zigbee Dimmable Driver

NFC

4-Wire CCT LED

Step 3: Connected light will flash twice to indicate successful learning. Then the switch can control the device.

Step 2: Set the green power switch into Learning mode, please refer to its manual.

Note: Each device can learn to

max. 20 zigbee green power switches.

9. Delete Learning to a Zigbee Green Power Switch

Step 1: Re-power on the device 3 times to start delete Learning to GP switch mode (connected light flashes slowly), 180 seconds timeout, repeat the operation.

Zigbee Green Power Switch

L N

Zigbee Dimmable Driver

NFC

4-Wire CCT LED

Step 3: Connected light will flash 4 times to indicate successful deleting.

Step 2: Set the paired green power switch into Learning mode, please refer to its manual.

10. ZigBee Clusters the device supports are as follows:

Input Clusters

• 0x0000: Basic   • 0x0003: Identify   • 0x0004: Groups   • 0x0005: Scenes   • 0x0006: On/off

• 0x0008: Level Control   • 0x0300: Color Control   • 0x0b05: Diagnostics
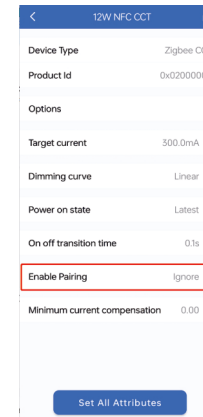
Output Clusters

• 0x0019: OTA

11. OTA

The device supports firmware updating through OTA, and will acquire new firmware from zigbee controller or hub every 10 minutes automatically.

Function setting Via "SR NFC TOOL"

Enter Zigbee Functions.

4 Different settings.

1) Enable Pairing

A. Enable the Zigbee NFC drivers enter the pairing mode and add it into the Zigbee network.

B. Factory reset. Enable the configured Zigbee NFC driver into configuring mode.

C. Besides, you can re-power the device 5 times to enable this section as well.

2) Ignore

A. Remember, once you need to write other parameters into the NFC driver, you should select this section, so as not to change the driver's state.

3) Pjoin or add GP

A. This section as known as " Enable Touchlink & GP mode".

B. Select this section and write it into the Zigbee NFC driver, the driver will enter Touchlink mode and GP Mode.

Note: You can both have Touchlink and GP functions as long as you matched with Touchlink function first.

C. Besides, you can re-power the device 4 times to enable this section as well.

4) Find & bind or delete GP

A. This section as known as " Enable Find&Bind / Delete GP ".

B. Select this section and write it into the Zigbee NFC driver, the driver will enter Find&Bind mode,and it will delete previous GP bonding .

C. Besides, you can re-power the device 3 times to enable this section as well.
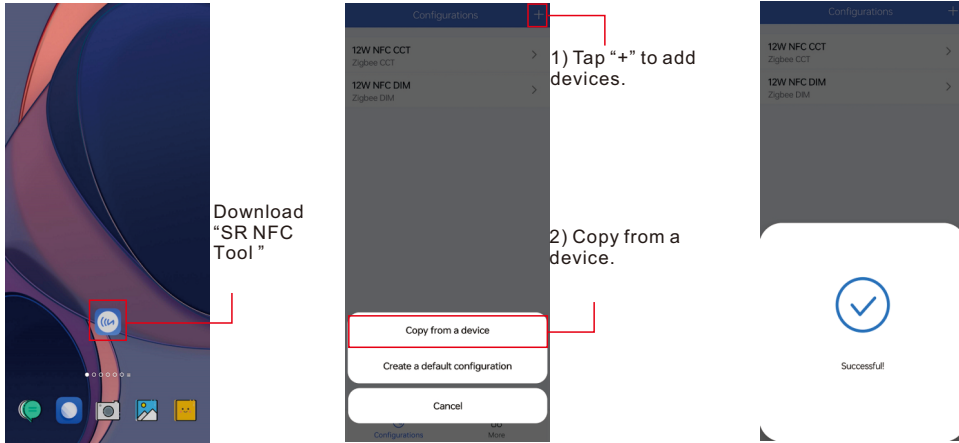
With NFC Programming devices

Note

1) Do wiring according to the wiring diagram .

2) Recommend setting parameters without power-on devices .

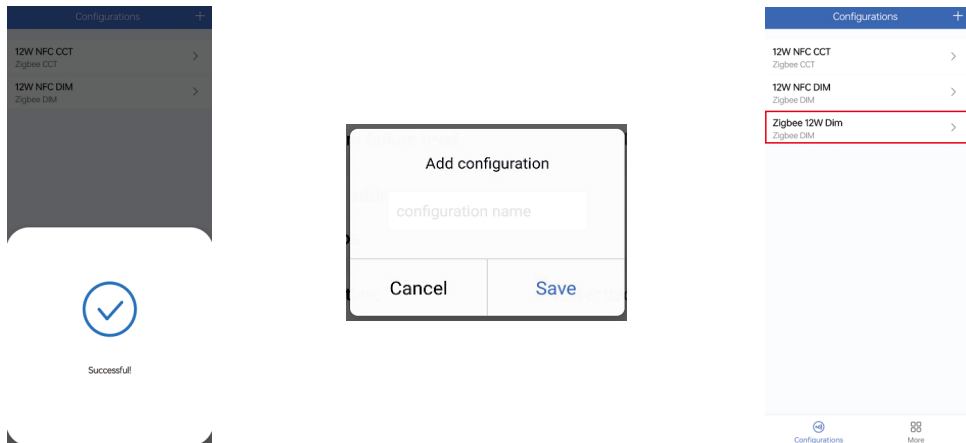**2) Please make sure your mobile phone has NFC function and enable it .**

Working with "SR NFC Tool" APP

Step 1: Download the APP (searching "SR NFC Tool" from App Store and Google Playstore) .
Then open the APP .

Download "SR NFC Tool "

1) Tap "+" to add devices.

2) Copy from a device.

Copy from a device
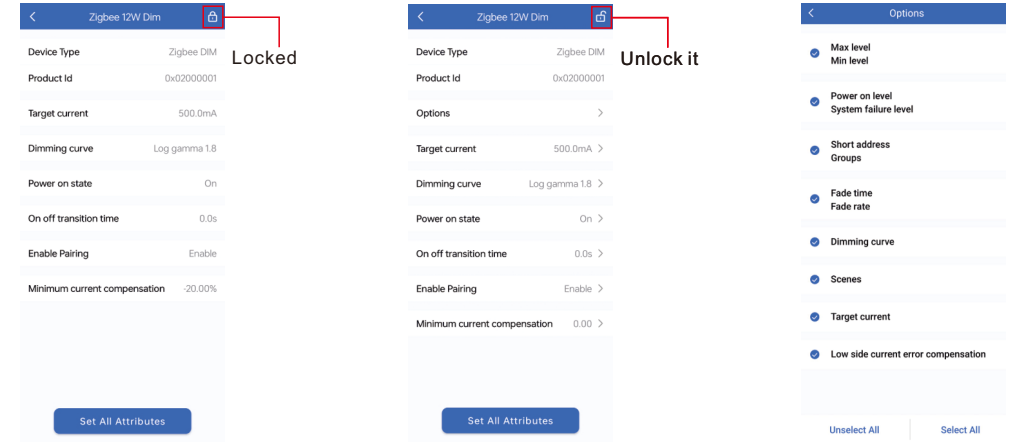
Create a default configuration

Cancel

Successful!

Note: 1. Please Make sure that you have enabled NFC function with your mobile phone/ tablet .
2. Please Make sure that the "NFC position" is matched.
3. Please do not power on the device before setting.
4. If you can't download "SR NFC Tool". Please contact with us.
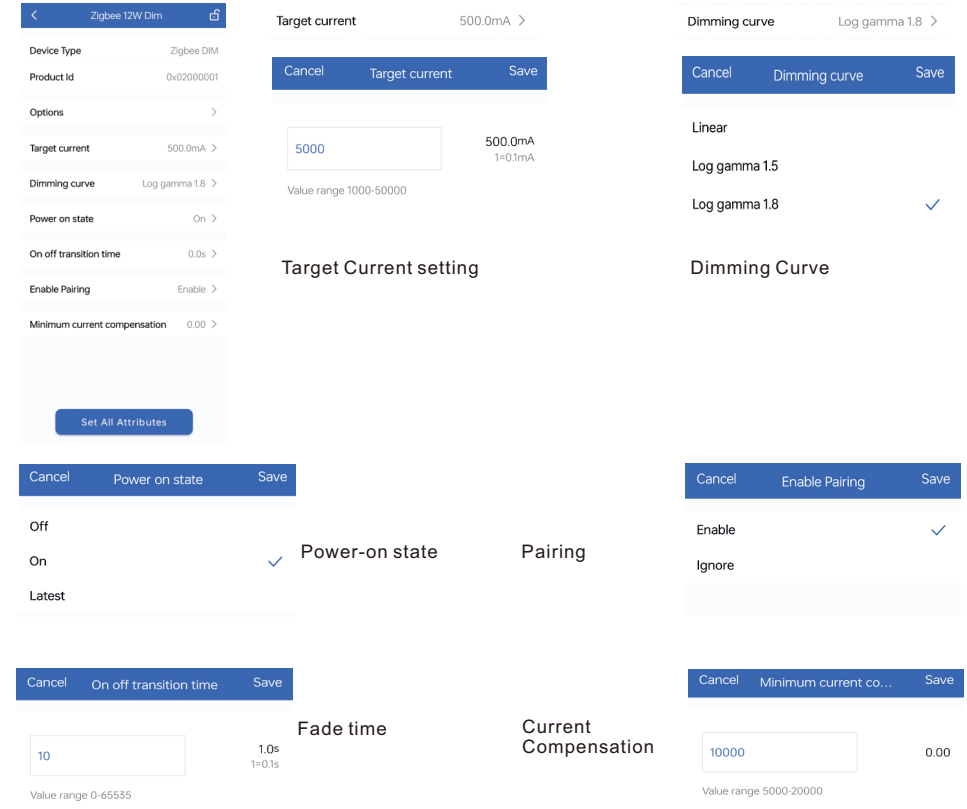
Step 2: Add device, and name it as you wish.

Add configuration

configuration name

Cancel   Save

Successful!

Step 3: Unlock device, enter parameters configuring page.

Locked

Unlock it

Options
- Max level / Min level
- Power on level / System failure level
- Short address / Groups
- Fade time / Fade rate
- Dimming curve
- Scenes
- Target current
- Low side current error compensation

Unselect All   Select All

Note: 1. You have to unlock the device then do some settings
2. Only when the corresponding function is selected, the function interface will be displayed.

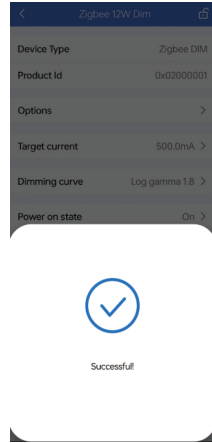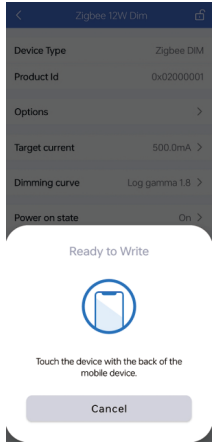**Step 4: Few parameter interface, you can choose the setting based on your requirements.**

Target current   500.0mA

Cancel   Target current   Save

5000   500.0mA
1=0.1mA

Value range 1000-50000

Target Current setting

Dimming curve   Log gamma 1.8

Cancel   Dimming curve   Save

Linear

Log gamma 1.5

Log gamma 1.8

Dimming Curve

Cancel   Power on state   Save

Off

On

Latest

Power-on state

Cancel   Enable Pairing   Save

Enable

Ignore

Pairing

Cancel   On off transition time   Save

10   1.0s
1=0.1s

Value range 0-65535

Fade time

Cancel   Minimum current co...   Save

10000   0.00

Value range 5000-20000

Current Compensation

Step 5: After setting, please save the selected configuration via NFC and power on the device.

Device Type   Zigbee DIM
Product Id   0x02000001
Options
Target current   500.0mA
Dimming curve   Log gamma 1.8
Power on state   On

Ready to Write

Touch the device with the back of the mobile device.

Cancel

Device Type   Zigbee DIM
Product Id   0x02000001
Options
Target current   500.0mA
Dimming curve   Log gamma 1.8
Power on state   On

Successful!

Tips

1. NFC function doesn't require any power driver.

2. Many functions can be configured by NFC. Kindly check your desired functions.

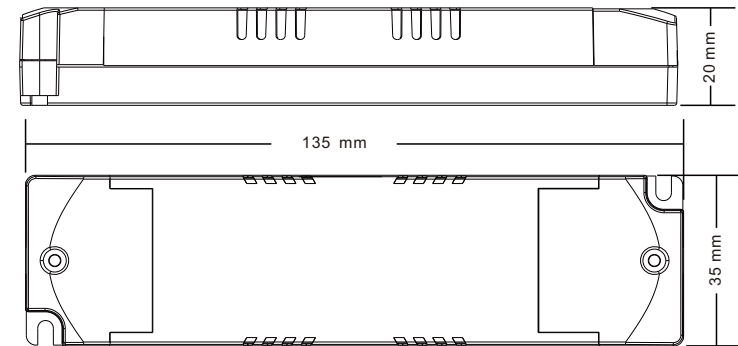**3. You can create a default profile with the "+" button.**
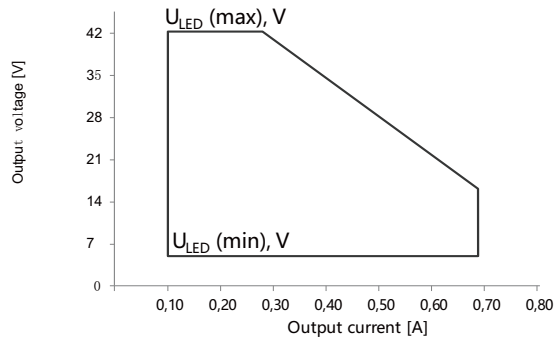
Wiring Diagram

Application 1（Without PUSH）

Zigbee Dimmable Driver

4-Wire CCT LED

Application 2（With PUSH）

Zigbee Dimmable Driver

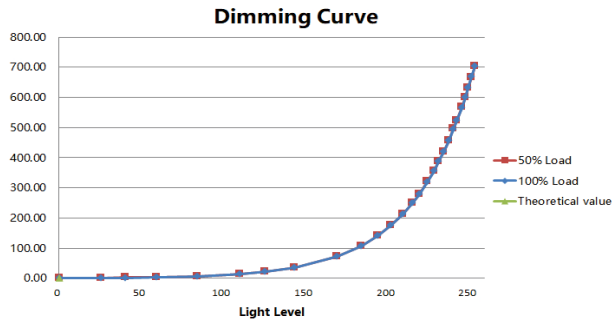4-Wire CCT LED
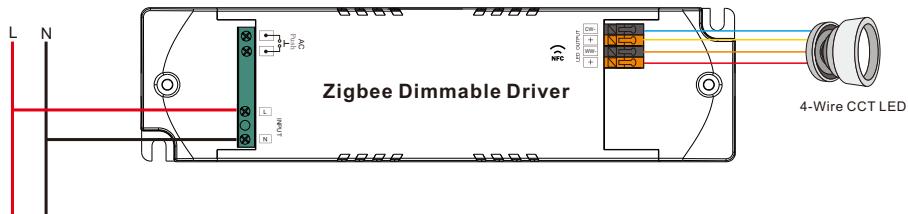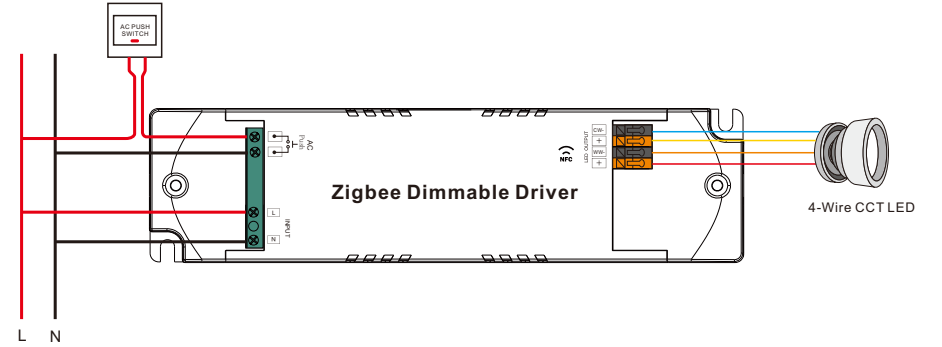
Product Dimension

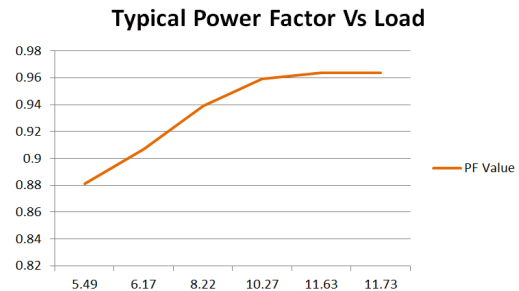20 mm

135 mm

35 mm

Operating window

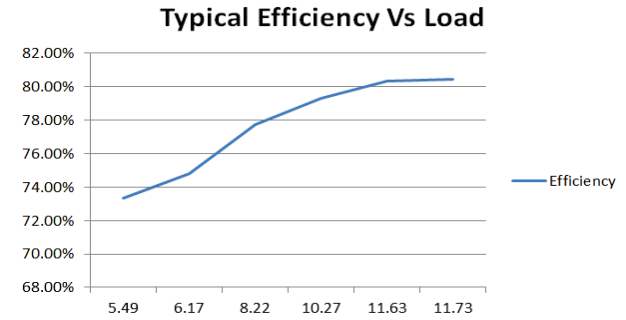

Dimming Curve

Note: Test data under 700mA gear

## Driver Performance

Note: Test data under 700mA gear

Driver Performance

Note: Test data under 700mA gear

MCB Load Quantity

Module Number	Ipeak	Twidth	Max.quantity of LED Driver per MCB													
			B10	B13	B16	B20	B25	C10	C13	C16	C20	C25	D10	D13	D16	D20	D25
SRP-ZG9105N-12CC100-700	3.96A	90μs	37	49	60	75	94	63	81	100	125	156	80	104	128	160	200
SRP-ZG9105N-12CCT100-700	3.96A	90μs	37	49	60	75	94	63	81	100	125	156	80	104	128	160	200
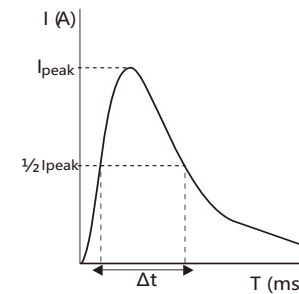
Note:

1. Those MCB parameters are based on ABB S200 series circuit breakers.

2. For different brands and models of miniature circuit breakers, the quantity of drivers will have difference.

3. Please do not exceed the above-mentioned quantity during on-site installation, and the specific load quantity shall be subject to on-site installation.

4. When the installation environment temperature of MCBs exceeds 30℃ or when multiple MCBs are installed side by side, the number of mounted drives will be reduced, which requires recalculation.

5. Type C MCB's are strongly recommended to use with LED lighting

Update log

Date	Version	Update content	Update by
2023-9-28	V1.0	Initial Version	Romeo

Note: Subject to change without notice. Please contact us if you have any questions.