TRONIX

10W DALI DT6 NFC Round LED Driver(Constant Current)
Article number: 215-273

DALI2 · CCC · CE · RoHS COMPLIANT · RIPPLE FREE · SELV · F · 110 · ⊗ · ✕

DALI Signal Input

220-240VAC Mains Input/ DC input

DALI DT6 Constant Current Driver

NFC

LED Output
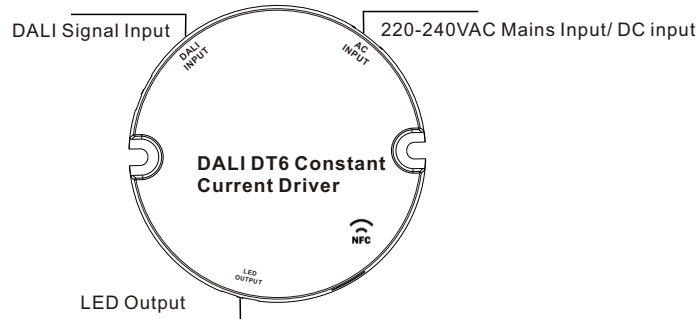
Product Data

Output	LED Channel	1
	DC Voltage	3-42V
	Current	100-500mA via NFC tool; Min.current gear lower to 0.1mA, default 250mA
	Current Accuracy	±3%(±1%@Certain full load) @ full load
	Rated Power	Max. 10W
Input	Voltage Range	220-240VAC/220-240VDC
	Absolute Voltage Range	198-264VAC/198-264VDC
	Frequency Range	0/50/60Hz
	Power Factor (Typ.)	> 0.95 @ 230VAC Full load
	Total Harmonic Distortion	THD ≤ 8% (@ full load / 230VAC)
	Efficiency (Typ.)	>80% @ 230VAC full load
	AC Current (Typ.)	0.1A @ 230VAC
	Inrush Current (Typ.)	Max. 3.16A at 230VAC; 72μs duration
	Leakage Current	< 5mA /230VAC
	Standby Power Consumption	< 0.5W
	Anti Surge	L-N:2KV
Control	Dimming Interface	DALI Device Type 6 (DALI consumption < 2mA)/ AC Push
	Dimming Range	0.01%-100%@ Max current
	Dimming Method	Amplitude/CCR dimming
	Dimming Curve	Linear/ Logarithmic optional

Protection	Short Circuit	Yes, recovers automatically after fault condition is removed
	Over Current	Yes, recovers automatically after fault condition is removed
	Over Temperature	Yes, recovers automatically after temperature drop
Environment	Working Temp.	-25℃ ~ +60℃
	Max. Case Temp.	Tc=85℃
	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	φ57x24mm (D*H)
	Warranty	5 Years

• In compliance with IEC 62386-101:2014, IEC 62386-102:2014, IEC 62386-207 Ed2
• Built-in DALI-2 interface, DALI DT6 device
• Dimmable LED driver. Max. output power 10W
• 100-500mA current selectable via NFC program tool. Min.current gear lower to 0.1mA
• DALI Address/Group/Scene setting via NFC program tool.
• Class Ⅱ power supply, full isolated plastic case
• High power factor and efficiency
• ON/OFF and Dimming control
• Amplitude/CCR dimming, smooth and deep dimming
• Compatible with universal DALI masters that support DT6 commands
• CLO function for a further upgraded experience
• CD(Corridor Mode): auto light on when someone enters
• IP20 rating, 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

With DALI master

1. DALI Address
1 DALI address for 1 channel output are assigned by DALI Master controller automatically, please refer to user manuals of compatible DALI Masters for specific operations.
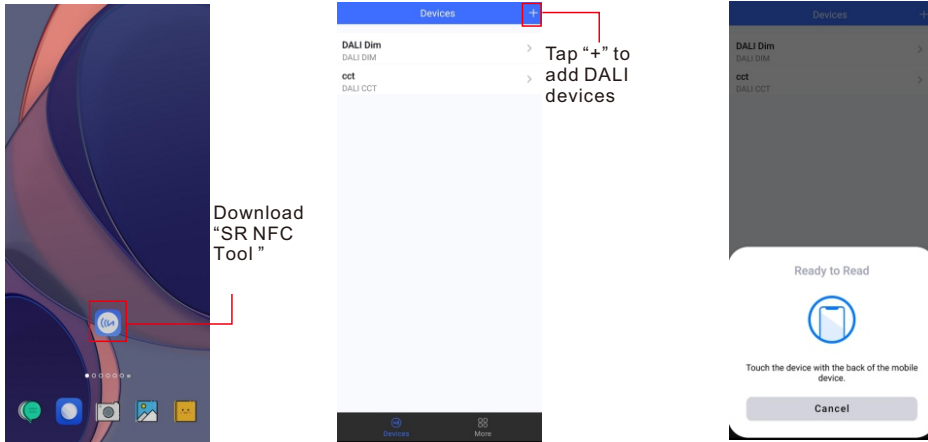
With NFC Programming devices

Note

1) Do wiring according to the wiring diagram and power on the DALI system .

2) Recommend setting parameters without power-on the DALI devices .

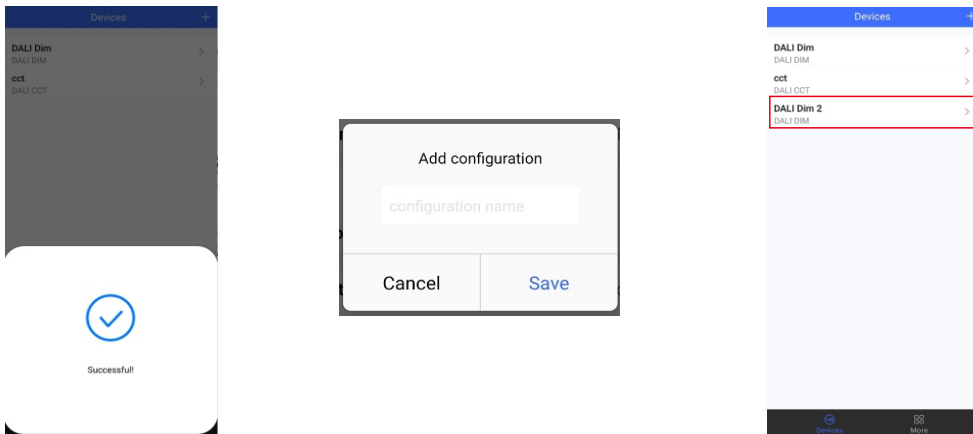**2) Please make sure your mobile phone has NFC function and enable it .**

Working with "SR NFC Tool" APP

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

Download "SR NFC Tool "

Tap "+" to add DALI devices

Ready to Read

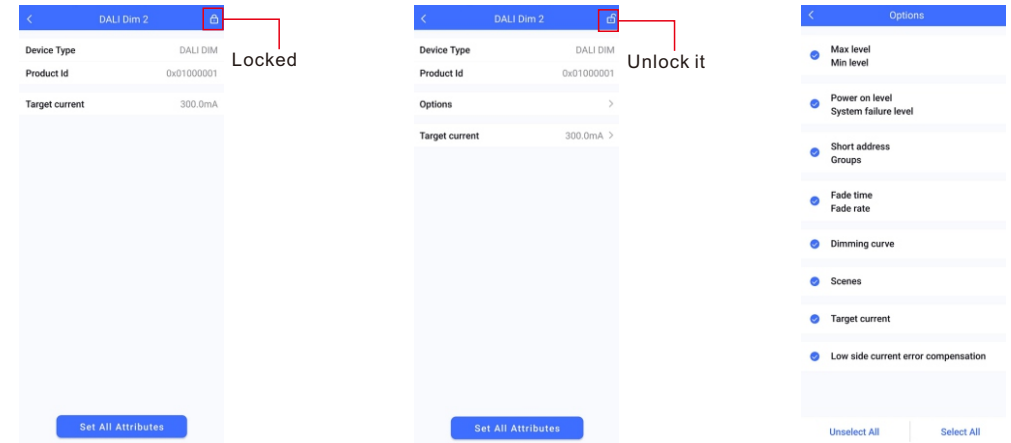Touch the device with the back of the mobile device.

Cancel

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.

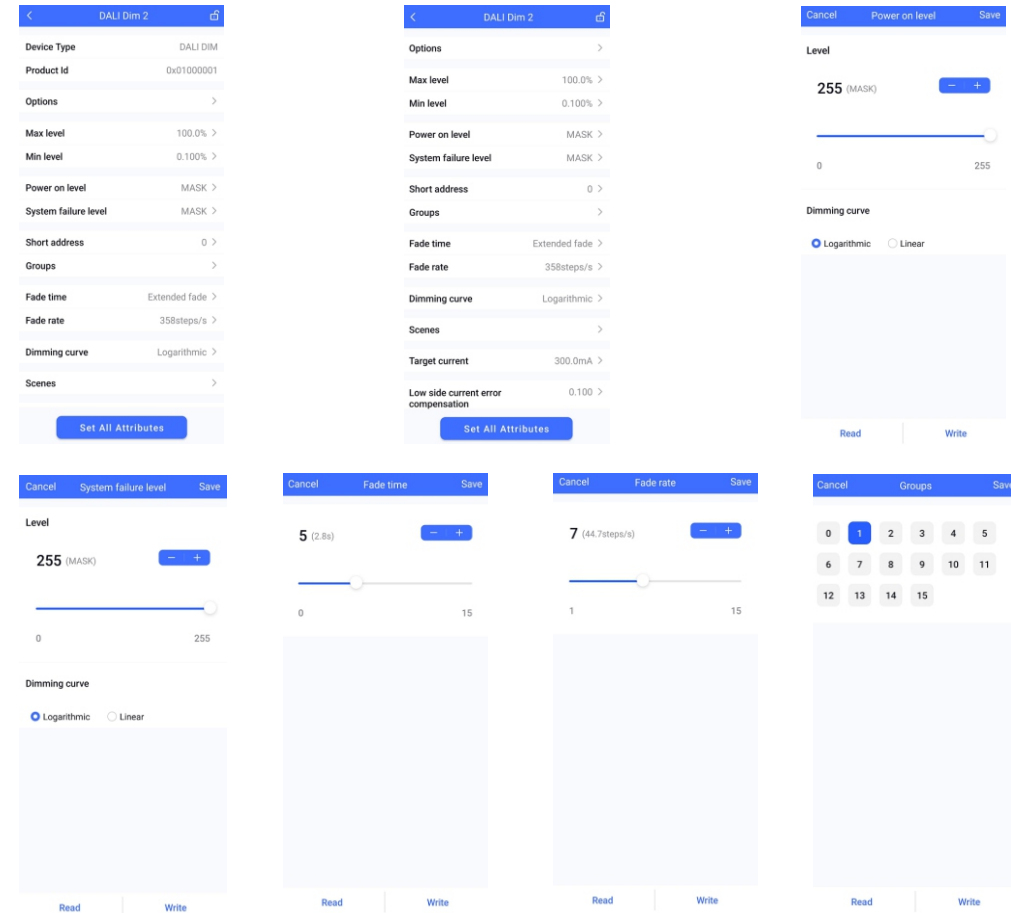**Step 2: Add device, and name it as you wish.**

Add configuration

configuration name

Cancel   Save

Successful!

Step 3: Unlock device, enter parameters configuring page.

Locked

Unlock it

DALI Dim 2	
Device Type	DALI DIM
Product Id	0x01000001
Target current	300.0mA

Set All Attributes

DALI Dim 2	
Device Type	DALI DIM
Product Id	0x01000001
Options	>
Target current	300.0mA >

Set All Attributes

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.

DALI Dim 2	
Device Type	DALI DIM
Product Id	0x01000001
Options	>
Max level	100.0% >
Min level	0.100% >
Power on level	MASK >
System failure level	MASK >
Short address	0 >
Groups	>
Fade time	Extended fade >
Fade rate	358steps/s >
Dimming curve	Logarithmic >
Scenes	>

Set All Attributes

DALI Dim 2	
Options	>
Max level	100.0% >
Min level	0.100% >
Power on level	MASK >
System failure level	MASK >
Short address	0 >
Groups	>
Fade time	Extended fade >
Fade rate	358steps/s >
Dimming curve	Logarithmic >
Scenes	>
Target current	300.0mA >
Low side current error compensation	0.100 >

Set All Attributes

Cancel   Power on level   Save

Level

255 (MASK)   − +

0   255

Dimming curve

○ Logarithmic   ○ Linear

Read   Write

Cancel   System failure level   Save

Level

255 (MASK)   − +

0   255

Dimming curve

○ Logarithmic   ○ Linear

Read   Write

Cancel   Fade time   Save

5 (2.8s)   − +

0   15

Read   Write

Cancel   Fade rate   Save

7 (44.7steps/s)   − +

1   15

Read   Write

Cancel   Groups   Save

0	1	2	3	4	5
6	7	8	9	10	11
12	13	14	15		

Read   Write

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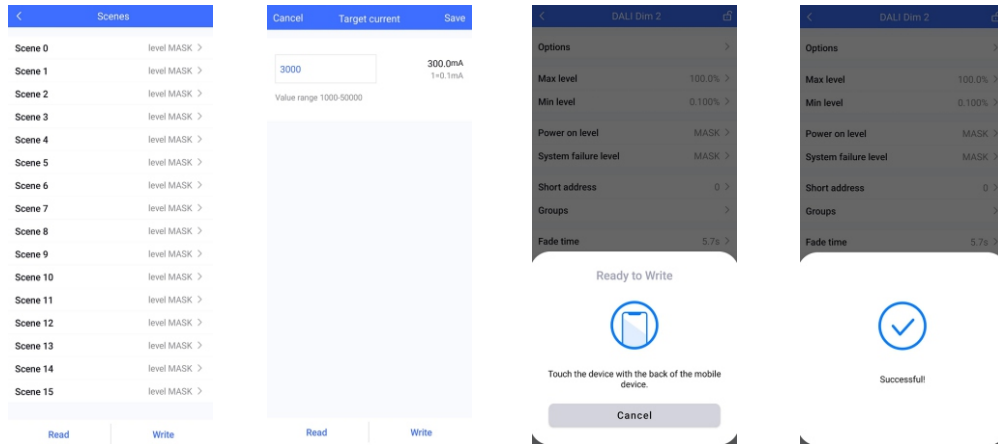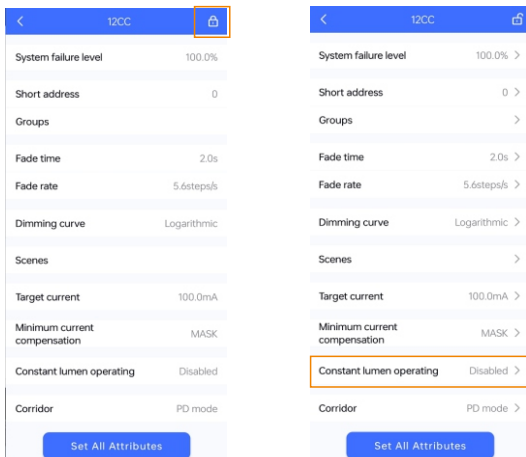

Tips

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

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

3. All of our DALI drivers are in the best performance within our DALI master/ DALI IoT gateway.

Note:　Within Our NFC tech design, you shall probably have one of the largest NFC sensing area. The More sensitive you're able to touch, the more convenient you can have.

CLO AND CORRIDOR DIM(CD) FUNCTION INSTRUCTION

1.Open APP, and Find the CLO/CD functions

Read From the NFC Driver　　Unlock it,and Click here to enter CLO settings

Enable or Disable CLO function
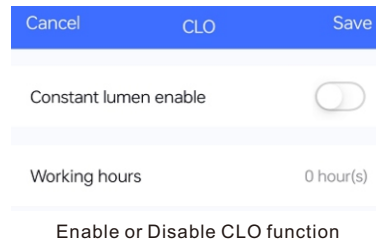
2.Enter CLO Setting homepage
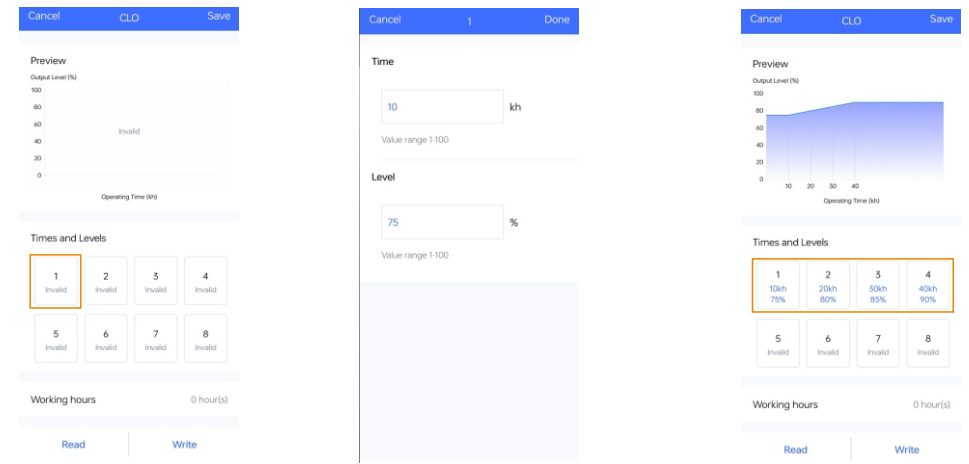
Enable CLO function

Click "1",and set its time and level

Set your desired time and levels.
Graphic display

Tips:

Working hours : Ability to calculate the working hours of a single driver.

3.Corridor dim(CD) function
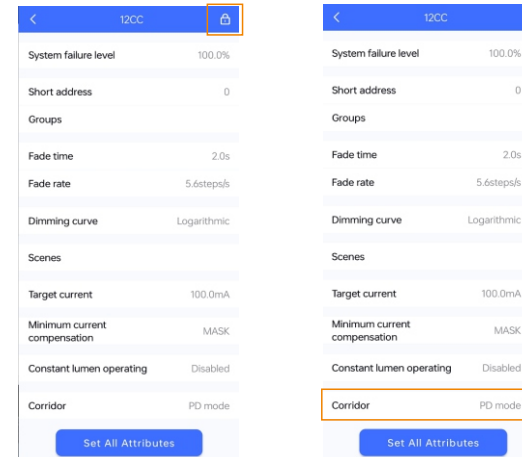
Read From the NFC Driver　　Unlock it,and Click here to enter Corridor mode
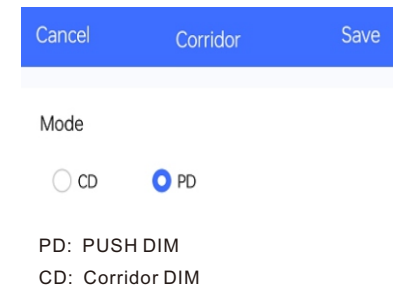
PD: PUSH DIM

CD: Corridor DIM

4.Enter CD Setting homepage

Enter CD mode

Set your desired time and levels.
Graphic display

Tips:

1. You should select either CD mode or PD mode, but not both.
2. Under CD mode, you can realize it with normal (3rd party) AC sensor.
3. Default mode: PD mode.

Additional Remarks

1. Please make sure your APP version is 1.0.10 or higher.
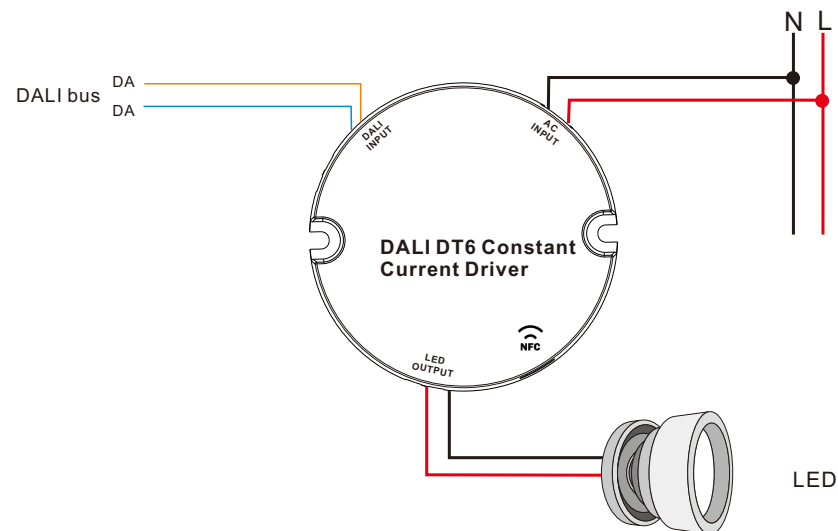**2. Please make sure NFC driver's firmware is available with CLO / CD functions.**
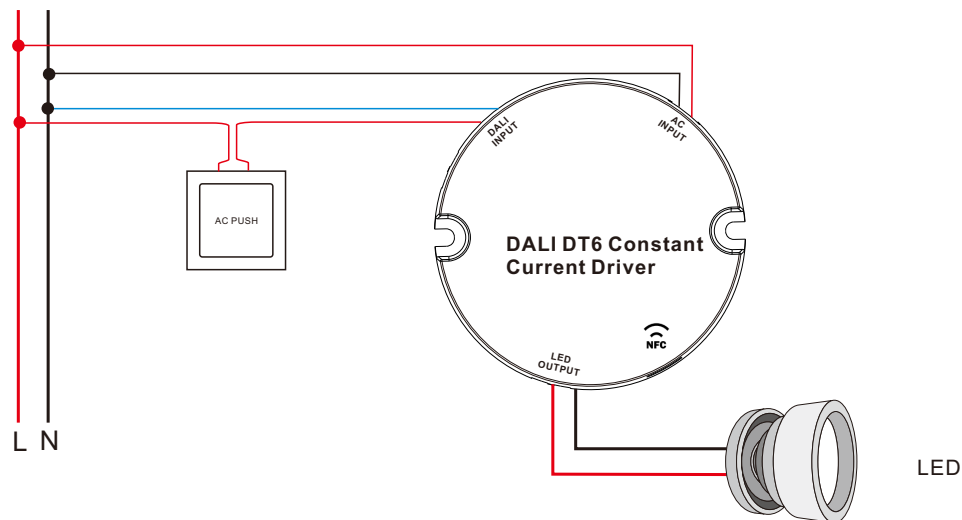
Product Dimension

57mm

24mm
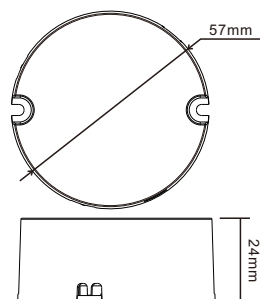
Wiring Diagram

1. With DALI bus

N L

DALI bus
DA
DA

DALI DT6 Constant
Current Driver

LED

2. With PUSH dimmer

AC PUSH

DALI DT6 Constant
Current Driver

L N

LED
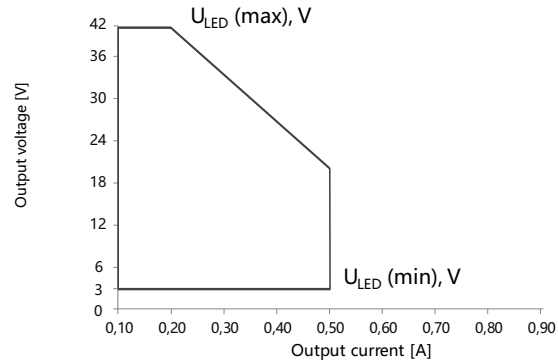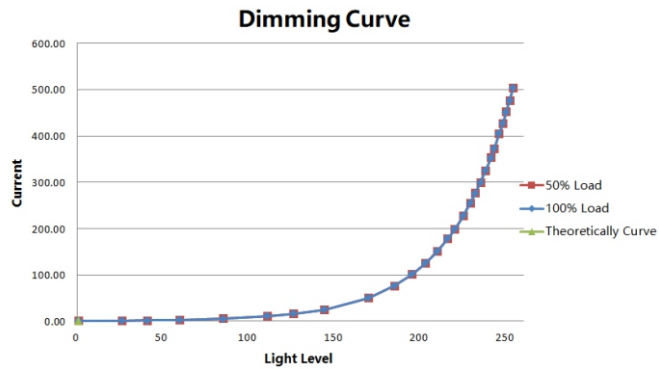
AC Push Function

1) Click the button to switch ON/OFF
2) Press and hold down the button to increase or decrease light intensity to desired level and release it, then repeat the operation to adjust light intensity to opposite direction. The dimming range is from 1% to 100%.
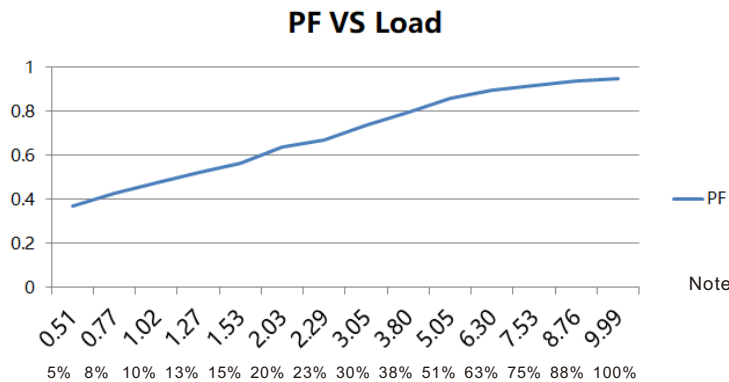
Operating window

Output voltage [V]

U_{LED} (max), V

U_{LED} (min), V

Output current [A]

Dimming Curve

Dimming Curve

Current

Light Level

- 50% Load
- 100% Load
- Theoretically Curve

Note: Test data under 500mA gear

Driver Performance

PF VS Load

— PF

Note: Test data under 250mA gear

5% 8% 10% 13% 15% 20% 23% 30% 38% 51% 63% 75% 88% 100%

Driver Performance

Eff VS Load （%）

— Eff （%）

5% 8% 10% 13% 15% 20% 23% 30% 38% 51% 63% 75% 88% 100%
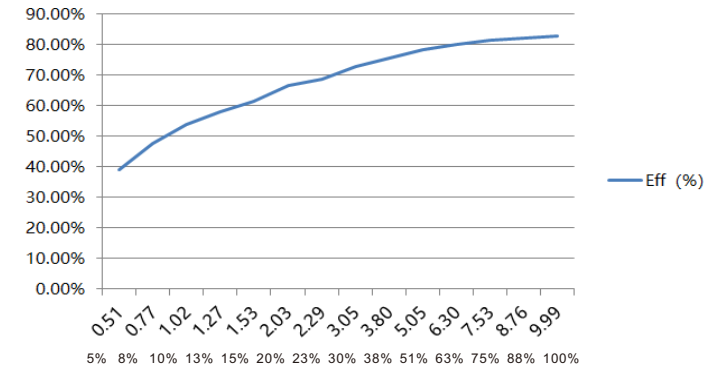
Note: Test data under 250mA gear

Driver Performance

THD VS Load （%）

— THD （%）

5% 8% 10% 13% 15% 20% 23% 30% 38% 51% 63% 75% 88% 100%
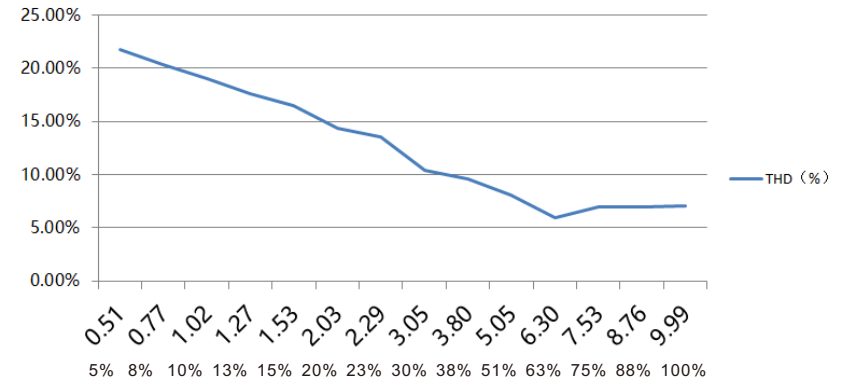
Note: Test data under 250mA gear

Expected Lifetime

Module Number	Output current	Ta	30 °C	40 °C	45 °C	•••	60 °C
		Tc	50 °C	60 °C	70 °C	•••	85 °C
215-273	100 – 500 mA	Lifetime	> 100,000 h	> 80,000 h	> 60,000 h		> 40,000 h

The LED driver is designed for a lifetime stated above under reference conditions .

The relation of tc to ta temperature depends also on the luminaire design.

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
215-273	3.16A	72μs	60	78	96	120	150	70	91	112	140	175	80	104	128	160	200
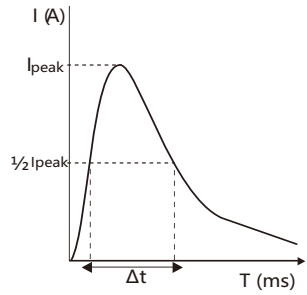
Note:

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°C 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