80W DALI DT8 NFC Enabled LED Driver(Constant Current)

DALI2 CE RoHS COMPLIANT RIPPLE FREE **SR-Data** 251/252/253

Important: *Read All Instructions Prior to Installation*

Function introduction

AC/DC power input

SVM <0.01   PstLM <0.02

DALI DIMMABLE DRIVER

GND
ACN/DC-
ACL/DC+
DA   PUSH DIM
DA   L ⟷ DA

0.5-1.5mm²
6-7mm

WW+
WW-
CW+
CW-

NFC

LED Output

DALI signal input
AC Push input

Product Data

Output	LED Channel	2
	DC Voltage	50-220V
	Current	350-700mA via NFC setting; Min.current gear lower to 0.1mA
	Current Accuracy	±3%@ full load
	Rated Power	Max. 80W
Input	Voltage Range	220-240VAC/VDC
	Frequency Range	0/50/60Hz
	Power Factor (Typ.)	> 0.98 @ 230VAC Full load
	Total Harmonic Distortion	THD ≤ 12% (@ full load / 230VAC)
	Efficiency (Typ.)	> 91% @ 230VAC full load
	AC Current (Typ.)	0.42A @ 230VAC
	Inrush Current (Typ.)	Max. 26.1A at 230VAC; 280μs duration
	Leakage Current	< 5mA /230VAC
	Standby Power Consumption	< 0.5W
	Anti Surge	L-N:1KV/ L-N-G: 2KV
Control	Dimming Interface	DALI Device Type 8 (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=90℃
	Working Humidity	10% ~ 95% RH non-condensing
	Storage Temp. & Humidity	-40℃ ~ +80℃, 10% ~ 95% RH
Safety & EMC	Safety Standards	EN61347-1, EN61347-2-13, GB/T 19510.1-2023, GB/T 19510.213-2023
	Withstand Voltage	I/P-FG: 1500VAC, I/P-DA: 1500VAC, O/P-DA: 1500VAC
	Isolation Resistance	I/P-FG: 100M Ohms / 500VDC / 25℃ / 70% RH
	EMC Emission	EN55015, EN61000-3-2, EN61000-3-3, GB 17625.1-2022, GB/T 17743-2021
	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	285x30x21mm (L*W*H)
	Warranty	5 Years

- In compliance with IEC 62386-101:2014, IEC 62386-102:2014, IEC 62386-207 Ed2, IEC 62386-209
- Built-in DALI-2 interface, DALI DT8 device
- Dimmable LED driver with linear metal housing. Max. output power 80W
- 350-700mA current selectable via NFC program tool. Min.current gear lower to 0.1mA
- DALI Address/Group/Scene setting via NFC program tool
- For luminaires of protection class I and protection class II
- High power factor and efficiency. Non-SELV rated driver
- To switch and dim LED lighting luminaries , Tunable White control
- Amplitude/CCR dimming, smooth and deep dimming
- Compatible with universal DALI masters that support DT8 commands
- DALI-251/252/253 Enabled，DALI data inside
- 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 2 channel output are assigned by DALI Master controller automatically, please refer to user manuals of compatible DALI Masters for specific operations.
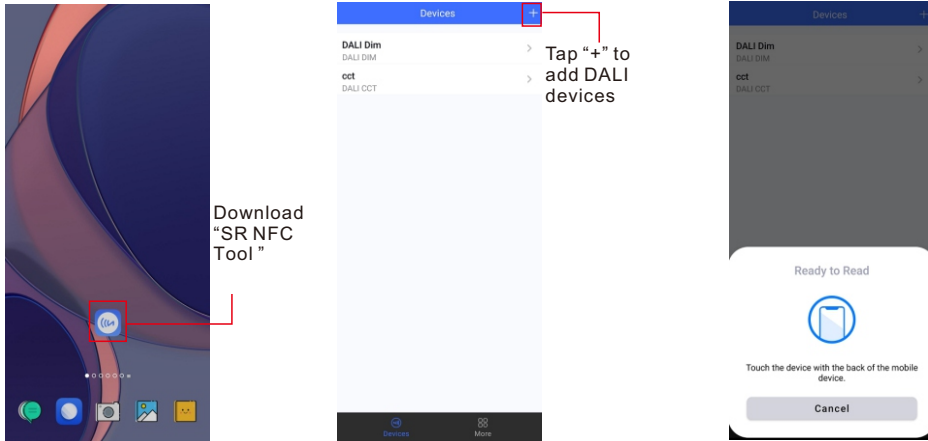
With NFC Programming devices

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 .

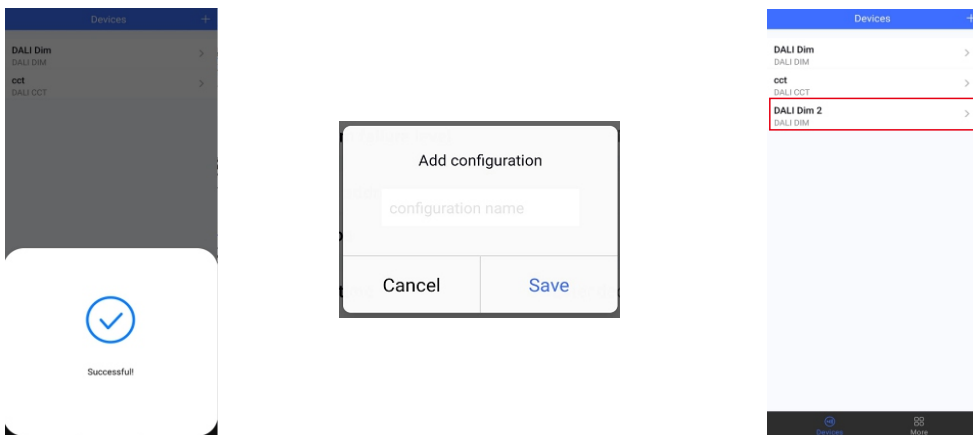**2) Please make sure your mobile phone has NFC function and enable it .**

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 "

Devices +

DALI Dim
DALI DIM
cct
DALI CCT

Tap "+" to
add DALI
devices

Devices +

DALI Dim
DALI DIM
cct
DALI CCT

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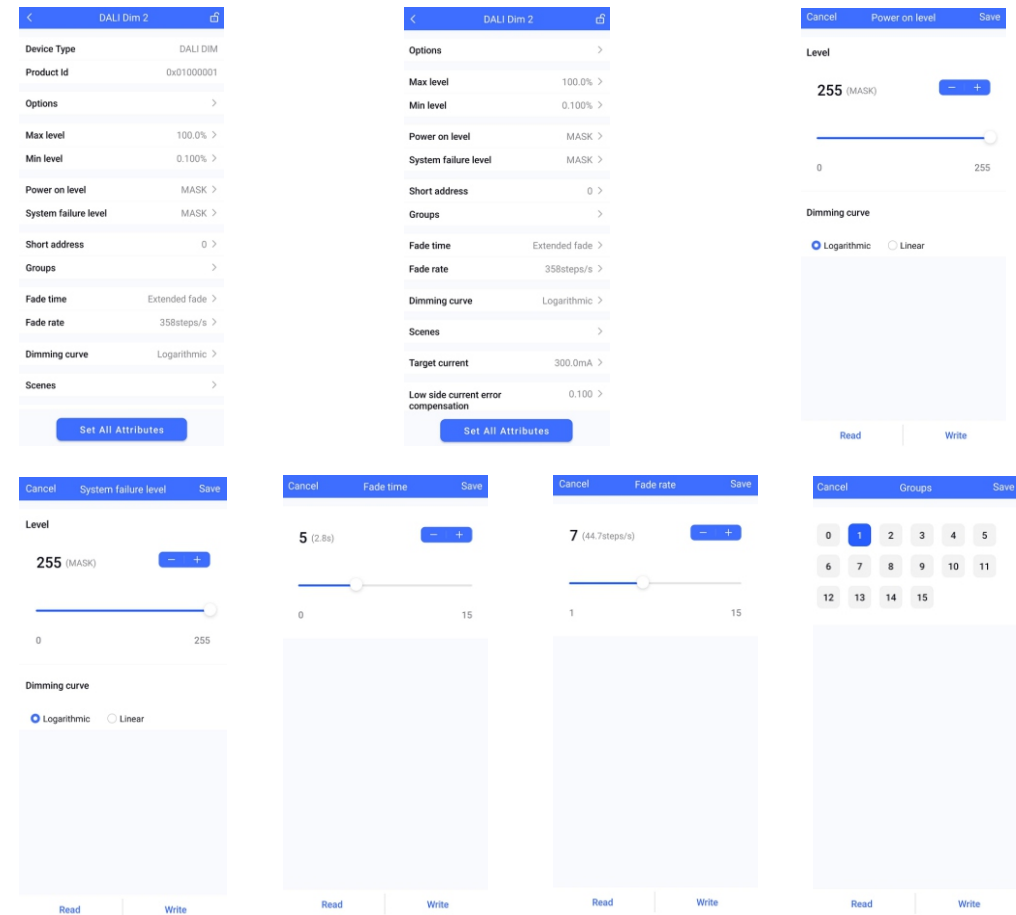
Step 2: Add device, and name it as you wish.

Devices +

DALI Dim
DALI DIM
cct
DALI CCT

Add configuration

configuration name

Cancel   Save

Successful!

Devices +

DALI Dim
DALI DIM
cct
DALI CCT
DALI Dim 2
DALI DIM

Step 3: Unlock device, enter parameters configuring page.

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

Locked

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

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

Set All Attributes

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/ gateway.
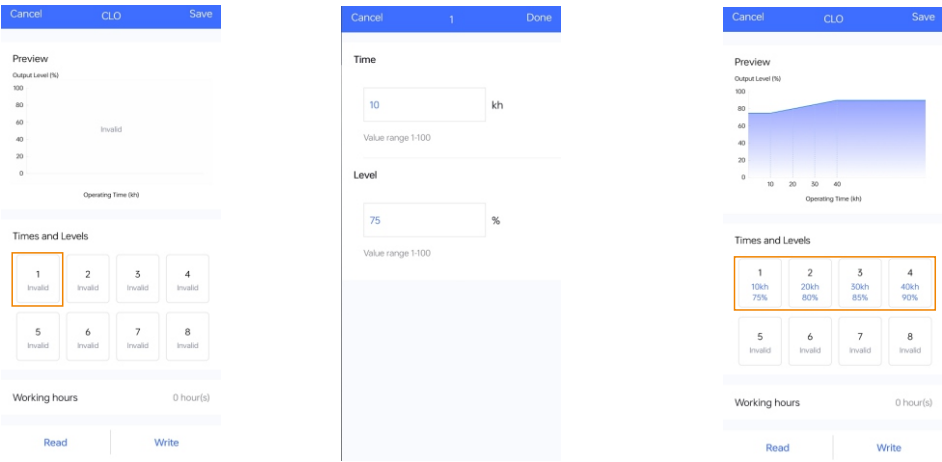
CLO FUNCTION INSTRUCTION

1.Open APP, and Find the CLO function
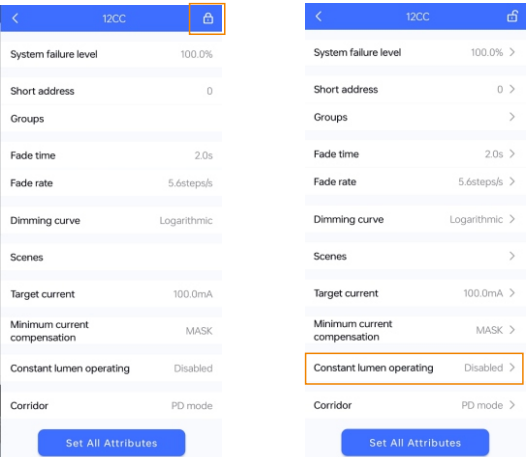
Read From the NFC Driver   Unlock it,and Click here to enter CLO settings

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.
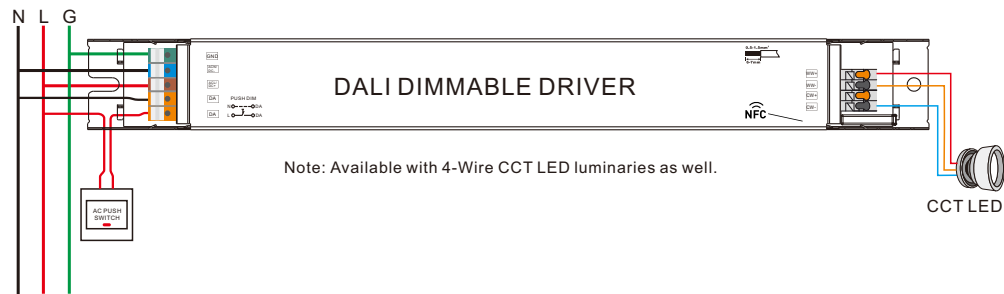
Additional Remarks
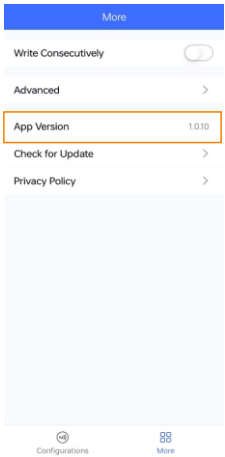
1. Please make sure your APP version is 1.0.10 or higher.

2. Please make sure NFC driver's firmware is available with CLO function.

Wiring Diagram

1. With DALI bus

1) With CCT LED luminarie

N L G

DALI DIMMABLE DRIVER

NFC

Note: Available with 4-Wire CCT LED luminaries as well.

CCT LED

DALI Bus

2. With PUSH dimmer

N L G

DALI DIMMABLE DRIVER

NFC

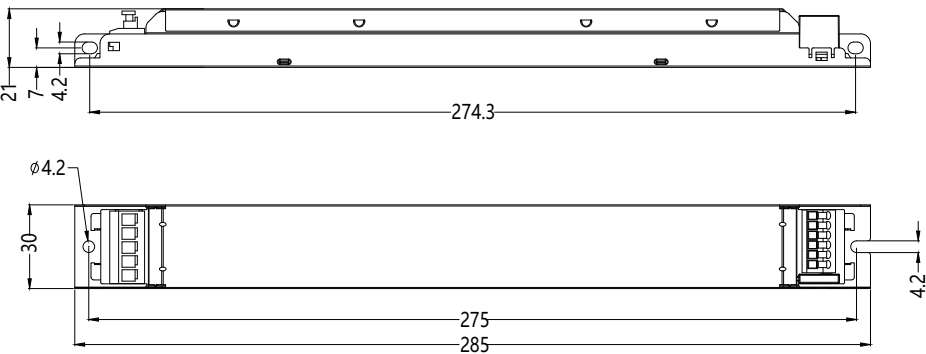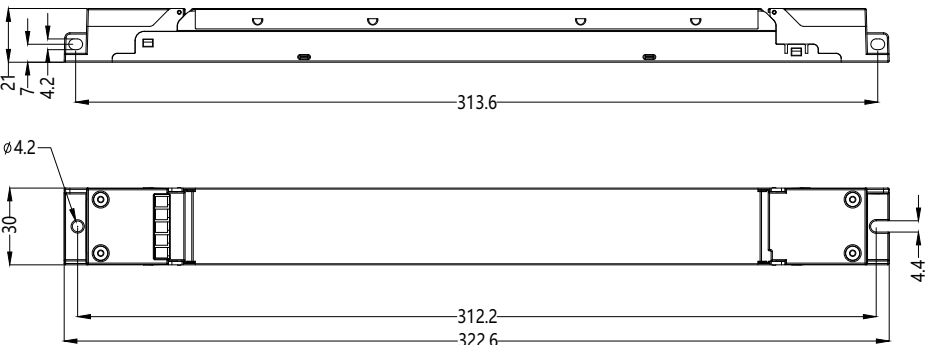Note: Available with 4-Wire CCT LED luminaries as well.

AC PUSH SWITCH

CCT LED
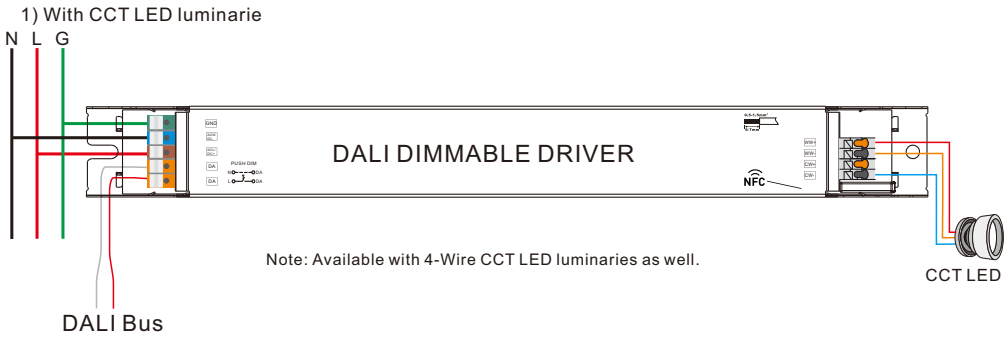
AC Push Function

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%.

3) Double click the button to switch between brightness mode and color temperature mode.

4) Press and hold down the button to change color temperature under color temperature mode.
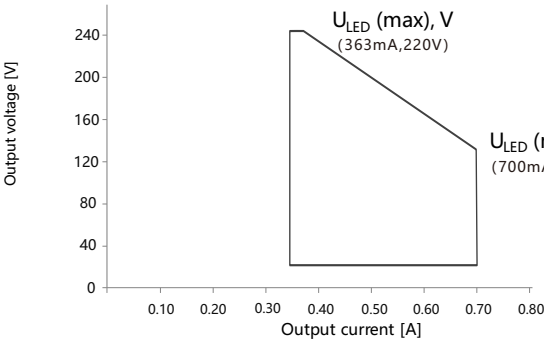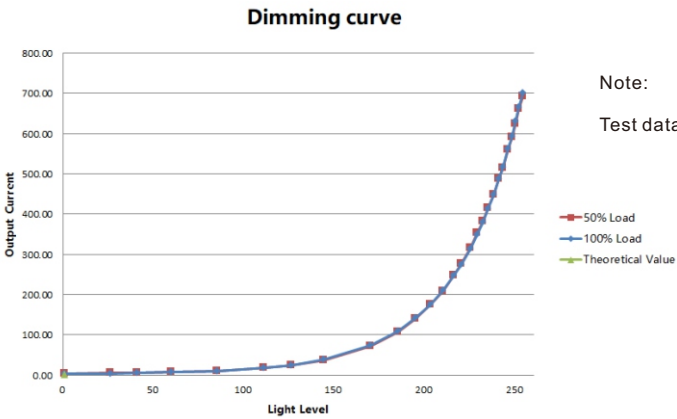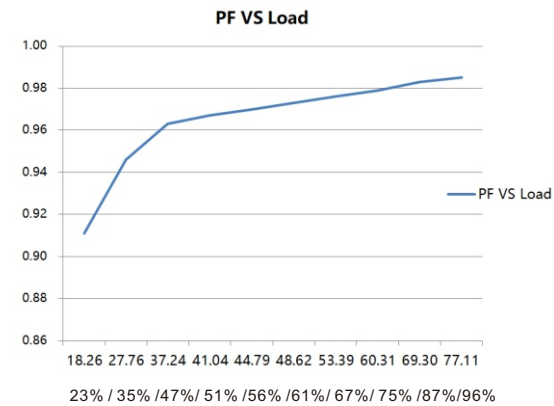
Product Dimension

Without End Cap

21 7 4.2

274.3

⌀4.2

30

275

285

4.2

With End Cap

21 7 4.2

313.6

⌀4.2

30

312.2

322.6

4.4

Operating window

U_{LED} (max), V
(363mA,220V)

U_{LED} (min), V
(700mA,114V)

Output voltage [V]

240
200
160
120
80
40
0

0.10 0.20 0.30 0.40 0.50 0.60 0.70 0.80

Output current [A]

Dimming Curve

Dimming curve

Output Current

800.00
700.00
600.00
500.00
400.00
300.00
200.00
100.00
0.00

0   50   100   150   200   250

Light Level

- 50% Load
- 100% Load
- Theoretical Value

Note:

Test data under 700mA gear

Driver Performance

PF VS Load

Note: Test data under 350mA gear

x-axis: 18.26 27.76 37.24 41.04 44.79 48.62 53.39 60.31 69.30 77.11
23% / 35% /47%/ 51% /56% /61%/ 67%/ 75% /87%/96%

Driver Performance

Efficiency VS Load

Note: Test data under 350mA gear

x-axis: 18.26 27.76 37.24 41.04 44.79 48.62 53.39 60.31 69.30 77.11
23% / 35% /47%/ 51% /56% /61%/ 67%/ 75% /87%/96%

Driver Performance

THD VS Load

Note: Test data under 350mA gear

x-axis: 18.26 27.76 37.24 41.04 44.79 48.62 53.39 60.31 69.30 77.11
23% / 35% /47%/ 51% /56% /61%/ 67%/ 75% /87%/96%
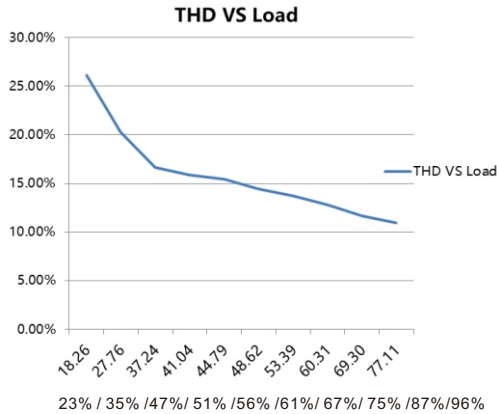
Expected Lifetime

Module Number	Output current	Ta	30 °C	40 °C	45 °C	•••	60 °C
SRPL-2305N-80CC350-700H	350 – 700 mA	Tc	42 °C	53 °C	60 °C	•••	90 °C(max)
SRPL-2309N-80CCT350-700H	350 – 700 mA	Lifetime	> 100,000 h	> 100,000 h	> 80,000 h		> 30,000 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	B10	B13	B16	B20	B25	C10	C13	C16	C20	C25	D10	D13	D16	D20	D25
			Max.quantity of LED Driver per MCB														
SRPL-2305N-80CC350-700H	26.1A	280μs	9	12	15	18	23	15	20	25	31	38	19	25	30	38	48
SRPL-2309N-80CCT350-700H	26.1A	280μs	9	12	15	18	23	15	20	25	31	38	19	25	30	38	48
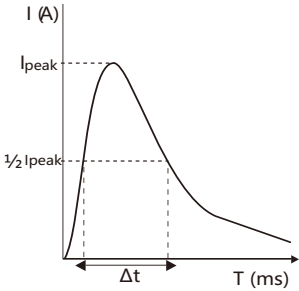
Note:

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

Update log

Date	Version	Update content	Update by
2024-3-21	V1.0	Initial Version	Romeo

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