80W Constant Voltage-LS Series

Features

- For luminaries of protection Class I, SELV, Independent
- Input Voltage 220-240VAC
- Protections: SCP/OLP/OVP/OTP
- Power Factor：≥0.95（Typ.）
- Efficiency：≥88%（Typ.）
- 5 years warranty
- IP67

Applications

- LED strips
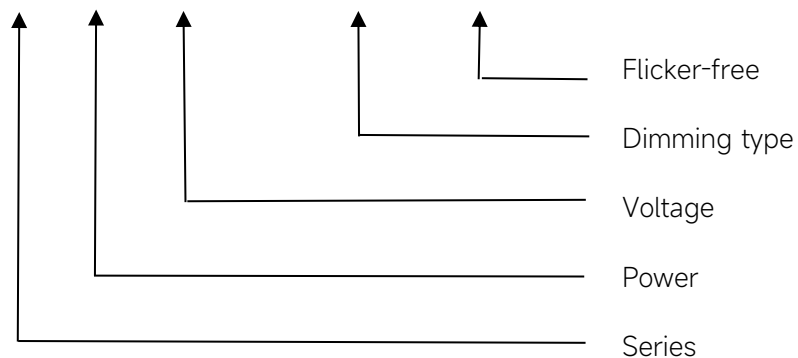
■Approve

CE CB ⟨K⟩ ⟨CC⟩ SELV EL

◆ Description

MS-80-24 IP67 DALI-2 LI is a 80W constant voltage LED driver that operates from 198-264Vac input with 24V output voltage. With it's compact dimensions from 207 x 50 x 30.5 mm. It is easy to integrate in LED strips products. To ensure trouble-free operation, protection is provided against output short circuit and over Load.

◆ Model code

MS-80-24 IP67 DALI-2 LI

- Flicker-free
- Dimming type
- Voltage
- Power
- Series

ASTRALUX

◆ Specification

Output	Constant Voltage	24VDC
	Current Range	0-3.33A
	Voltage Accuracy	±5%
	Output HF Voltage ripple(≥1KHz)	±1%
	Output LF Voltage ripple(≤120Hz)	±1%
	SVM	≤0.4
	Pst	≤1
	Efficiency(Typ.)	≥88% @Full load,230VAC
	EOFI	15%
Input	Rated input voltage	220-240V
	Range of input voltage	198-264VAC
	Maximum voltage	300VAC@1 h maximum,unit might not operate in this abnormal condition
	Range input voltage(VDC)	176-280VDC
	Frequency(Hz)	0/50/60 Hz
	Displacement factor	≥0.9
	Power Factor	0.95
	Input Current max	0.6A Max
	Start-up time	＜0.5S
	No Load Power	≤0.5W
	Standby Power	≤0.5W
	THD (Typ.)	＜15%
Dimming	Dimming	YES
	Dimming mode	DALI-2（IEC 62386-101,102,207,251,252,253）&Push Dimming (Corridor Function)
	Dimming depth	1%
	Dimming current range	1-100%
	dimming frequency	3KHz-20KHz
Protection	Over Load Protection	105-150%
		YES/Auto Resume
	Over Voltage Protection	＞25.2VDC
		YES/Auto Resume
	Short circuit Protection	YES/Auto Resume
	Over Temperature Protection	YES/Auto Resume
capability	Surge capability (L-N)	4KV
	Surge capability (L/N-Ground)	6KV
Environment	Operating Temperature	-20℃~+60℃
	Humidity	20%-90%RH
	Tc	90℃
	Storage Temperature	-30℃~+85℃
	Life time	＞50000h@Tc=85℃,230Vac, full load

|	Noise	≤35dB(A)@30cm
Surface	Dimension	207X50X30.5(LXWXH)mm
	material	metal case
Standards	Safety	IEC61347- 1, IEC61347-2- 13;EN61347- 1,EN61347-2- 13, EN62384;GB19510. 1, GB19510. 14;
	EMC	EN55015, EN61000-3-2, EN61000-3-3, EN61547;GB/T17743;GB17625. 1
	Energy Efficiency	Erp2.0 EU 2019/2020
	RoHS	RoHS (2011/65/EU) (EU)2015/863
DALI performance	EN 62386-101 (DALI-2) EN 62386-102 (DALI-2) EN 62386-207 (DALI-2,including part251,252,253), and below are parts implemented in detail. Part251: Bank 1(mandatory):Used to store information about luminaire factory, GTIN, luminaire identification number, production time, input voltage, input power, output voltage & current, CCT, CRI, light distribution type. Part252: Bank 202(mandatory):Used to store active power and active energy of drives. Bank203(optional):Used to store apparent power and apparent energy of drives. Bank204(optional):Used to store active power load side and active energy load side of drivers. Part253: Bank205(mandatory):Control gear diagnostics and maintenance: Control gear operating time, start counter, external supply voltage, external supply voltage frequency, power factor, failure condition counter, external supply undervoltage, external supply undervoltage counter, external supply overvoltage, external supply overvoltage counter, output power limitation, output power limitation counter, output current percent, temperature, thermal shutdown counter. Bank206(mandatory): Light source diagnostics and maintenance: light source start counter, Light source on time, voltage, current, overall failure condition(short circuit counter, open circuit counter), temperature, thermal shutdown counter. Bank207(mandatory): Luminaire maintenance data should be provided by the luminaire manufacturer: rated median useful life of luminaire, internal control gear reference temperature, rated median useful light source starts.	
Note	1.All parameters NOT specially mentioned are measured at 230VAC input , full load and 25℃ of ambient temperature. 2.Ripple & Noise are measured at 20MHz of bandwidth by using a 300mm twisted pair-wire terminated with a 0.1uF & 47 uF parallel capacitor. 3.Switch and dimmer are not recommended to connect between this product output and luminaries. 4.The DC input for this product is only used for emergency lighting and applies to functional and safety requirements，EMC is not considered. 5.This LED driver complies with the use regulations for IP67(and grade below). However if the actual application is possible to exceed the limit of IP67(such as bury driver in ground, long-term using under water, etc.), then additional protective measures are necessar.You can also consult the driver manufacturer.	

◆ Inrush Current

| I^{peak}	T$_{width}$	B10	B16	B20	C10	C16	C20
30.8A	**266μs**	9pcs	15pcs	19pcs	12pcs	20pcs	25pcs
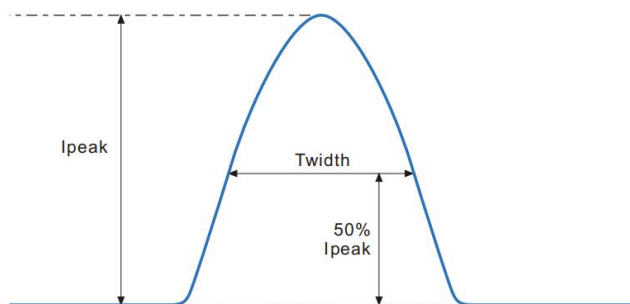
Remarks:

1.The number of drives mounted under different MCBs in the table is the maximum value. Please do not exceed this number during installation.

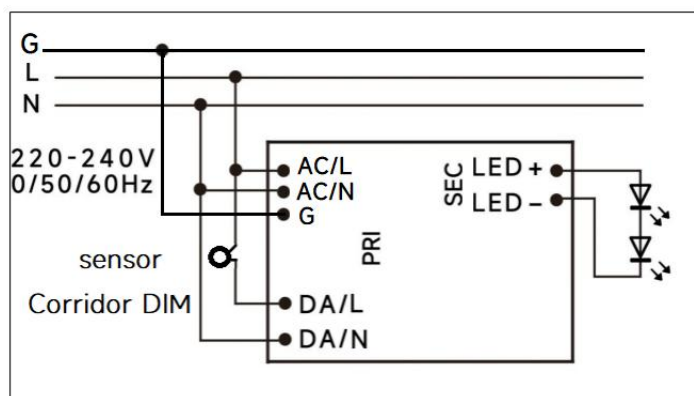2.Different brands and models of miniature circuit breakers, the number of drives mounted will be slightly different.

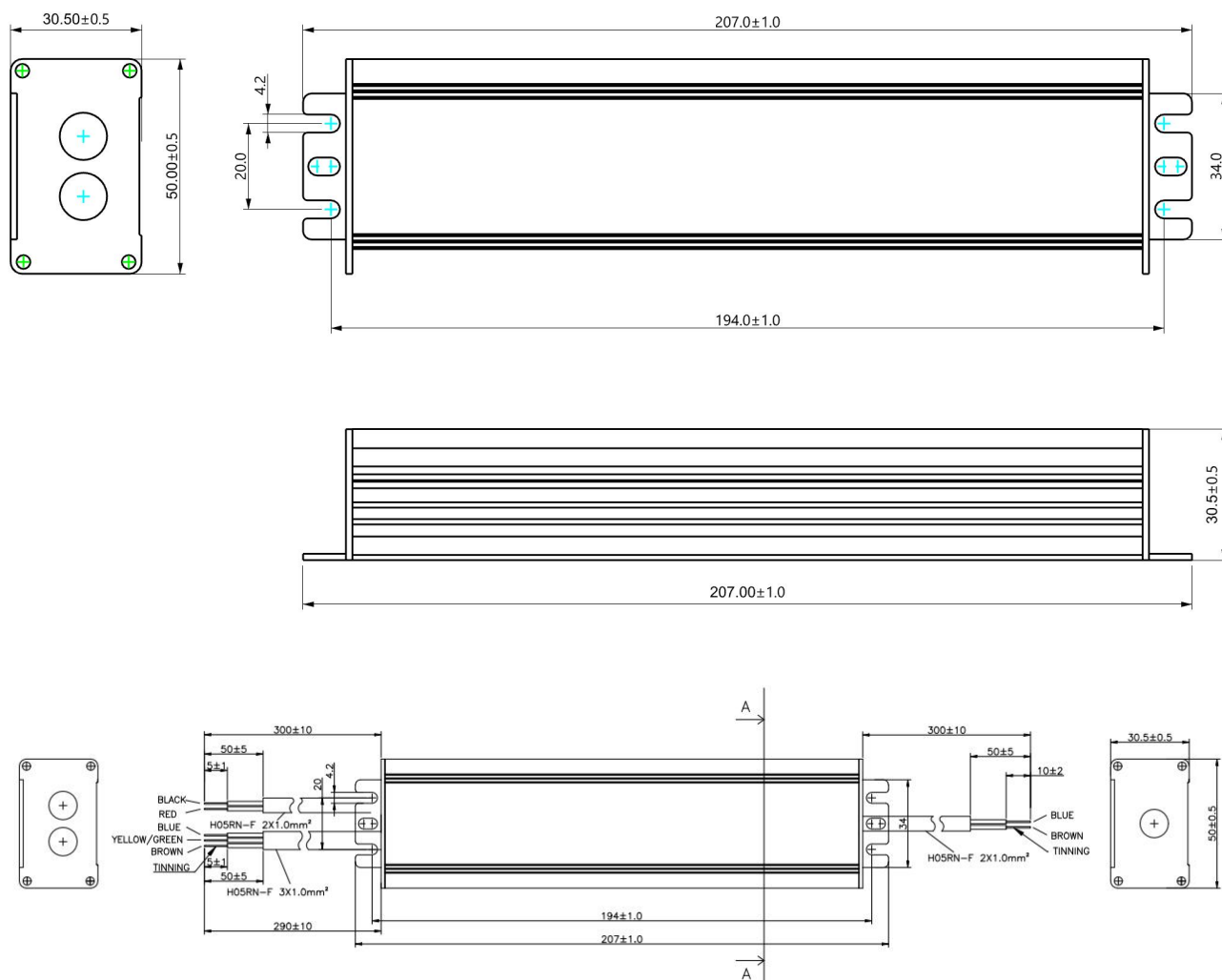## ◆ Wiring diagram
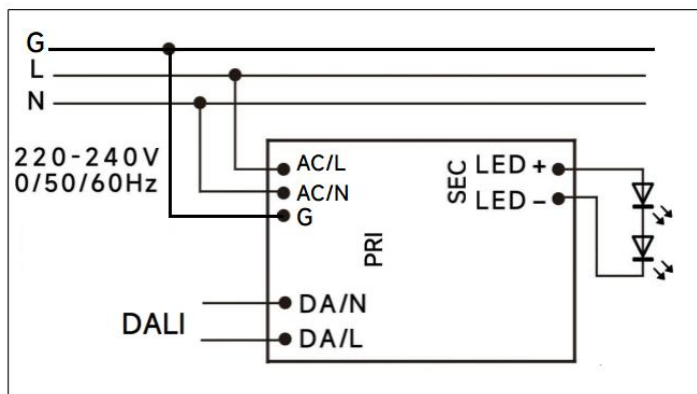
DALI dimming application
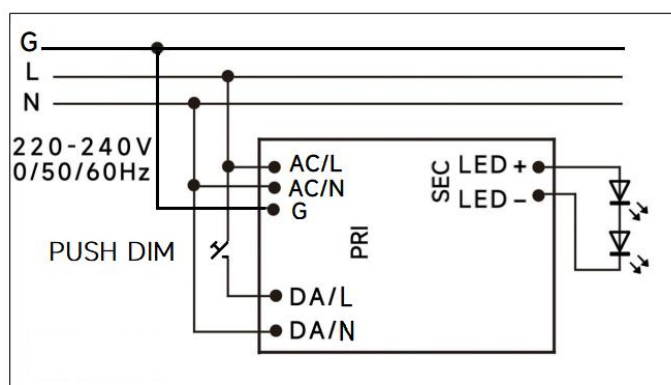
PushDIM dimming application


Corridor DIM dimming application

◆ 2D diagram

TYPE	Total Length	Outside Color	Inside Wires Color	Wire Model/Diameter
Input wire	0.3M	Black	Black for DA L Red for DA N	H05RN-F/2x1.0mm² （DALI）
	0.3M	Black	Brown for L Yellow/Green for PE Blue for N	H05RN-F/3x1.0mm² （L/N/PE）
Output wire	0.3M	Black	Brown for + Blue for -	H05RN-F/2x1.0mm²

◆ Curve for MS-80-24 IP67 DALI-2 LI
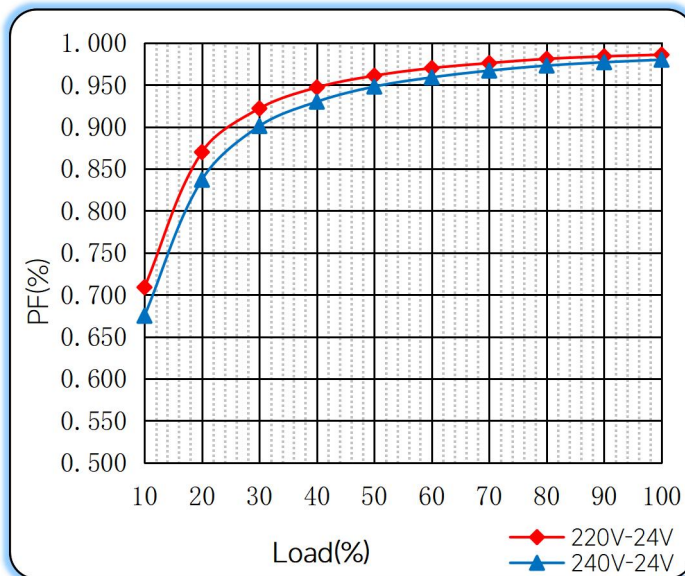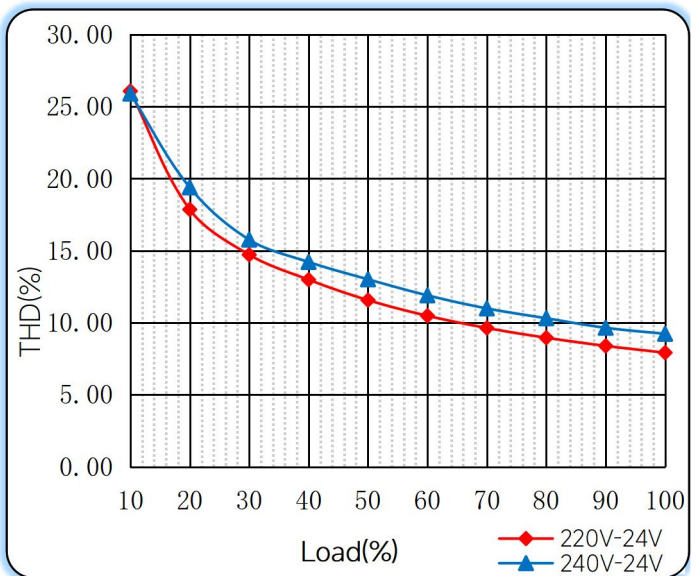
Lifetime vs. Temperature Curve
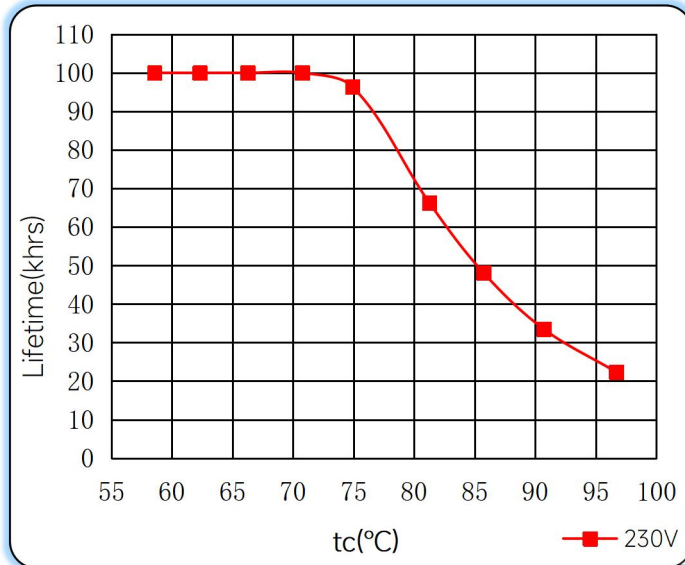
Efficiency vs. Load
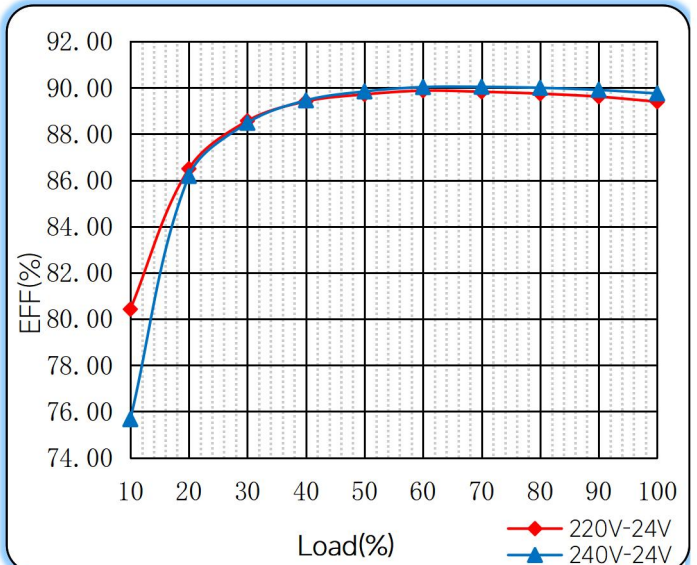

Power Factor Characteristics

THD vs. Load

◆ Push dimming operation

| Action	Action duration	Function
Short push	<0.5s	Turn on/off
Short push twice	<0.5s	LED on：Save current brightness level LED off： Delete saved level and turn on at 100% brightness
Short push five times	<3s	Quit Corridor mode
Long push	0.5-14s	Dimming up or down
Long push	15s-2mins	Sync all LEDs to be 100% brightness
Long push	>2mins	Enter Corridor mode - LED keep 100% brightness for 2mins. Then brightness will turn to be 10% within 32s if no action during 2mins 100% brightness.

Note:

1.The factory default brightness is at 100%.

2.Up to 30 drivers can perform the PUSH dimming at the same time when utilizing one common push button

3.The maximum length of the cable from the push button to the last driver is 200 meters.

◆ Corridor mode
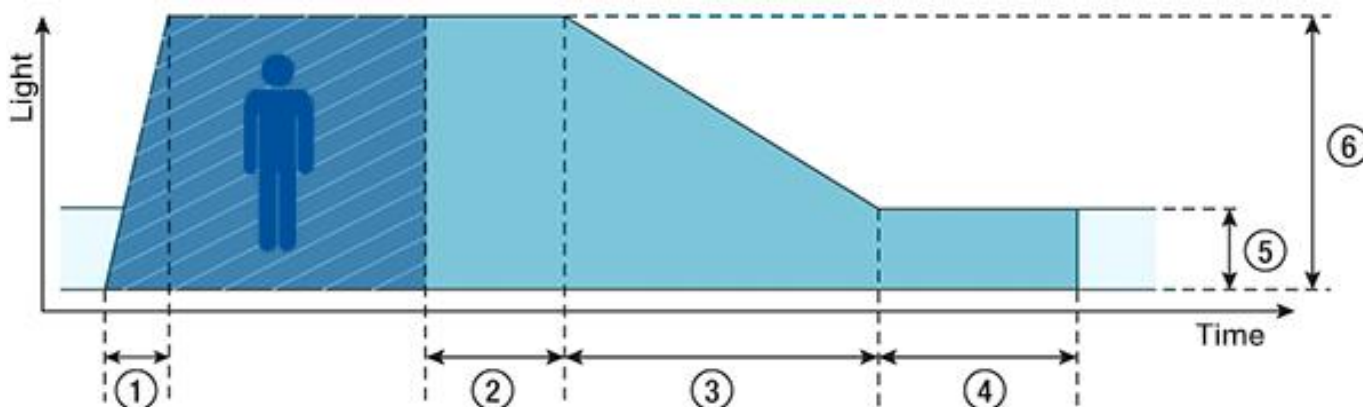
- ◆ **①Fade-in time(0.5s):** the time that starts as soon as the presence of a person is detected. During the fade-in time the luminous intensity is faded up to the presence value.

- ◆ **②Run-on time(120s):** the time that starts as soon as the presence of a person is no longer detected. If the presence of a person is detected again during the run-on time the run-on time is restarted from zero. If no presence is detected during the run-on time the fade time is started as soon as the run-on time expires.

- ◆ **③Fade time(32s):** the time during which the luminous intensity is faded from the presence value to the absence value.

- ◆ **④Switch-off delay（Never Off):** the time during which the absence value is held before the lighting is switched off. Depending on the profile selected the switch-off delay may have different values or may not be defined.

- ◆ **⑤Absence value(default: 10 %):** the luminous intensity when there is no person present.

- ◆ **⑥Presence value (default: 100 %):** the luminous intensity when persons are present.

◆ Operating window

Operating window 100%
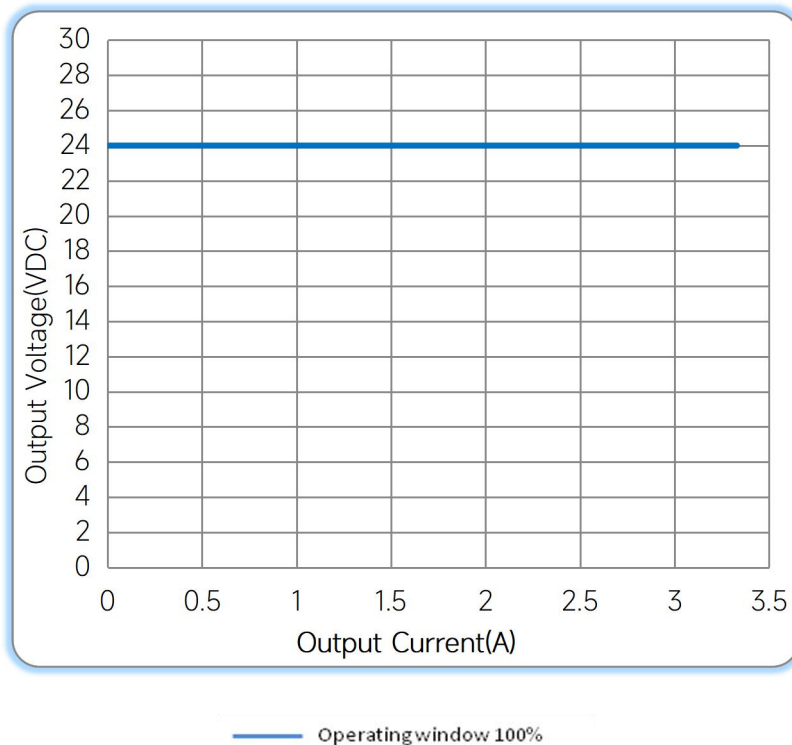
◆ Revision Updates

ITEM	BEFORE	AFTER	VERSION	DATE
Initial			A	2024/01/10
safety standard		IEC62384	B	2024/04/10
curves			C	2024/10/15

Remark:The final interpretation of the contents of the specification belongs to Astralux.

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