

44W ECO DALI + PUSH Dimming power supply



Features

- For luminaries of protection Class I, II, SELV, built-in/independent (With side caps)
- Input Voltage 220-240VAC
- Protections: SCP/OLP/OVP/OTP
- Power Factor :0.97
- Efficiency : 89%
- Support DALI-2,Push Dimming
- 5 years warranty

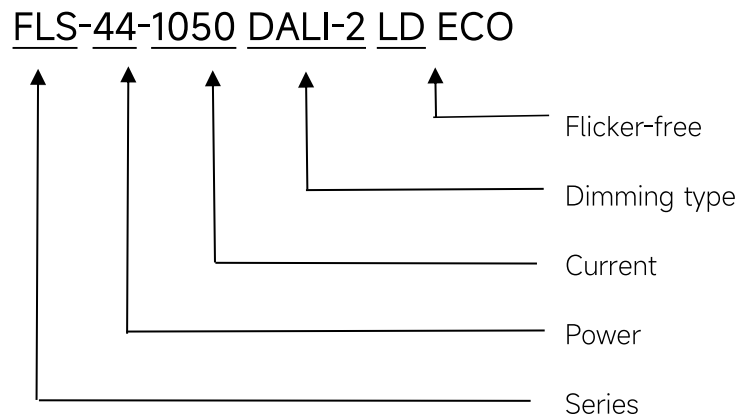
Applications

- LED panel、Spot light、Down light

◆ Description

FLS-44-1050 DALI-2 LD ECO is a 44W constant current LED driver with 700 to 1050mA output current and a forward voltage range from 24 to 42VDC. The output current is adjustable by DIP Switch. With it's dimensions from 97 x 43 x 30 mm. It is easy to integrate in LED panel, spot and down light products. To ensure trouble-free operation, protection is provided against output short circuit and over Load.

◆ Model code



◆ Specification

	Constant Current (mA)	700	750	800	850	900	950	1000	1050
Output	Voltage Range	24-42VDC							
	Unload voltage Max.	59VDC							
	Current Accuracy	±7%							
	Output HF current ripple(≥1KHz)	±5%							
	Output LF current ripple(≤120Hz)	±3%							
	SVM	≤0.01@Full Load							
	P _{st}	≤0.05@Full Load							
	Efficiency(Typ.)	89%@Full Load,230VAC							
	Input	Rated input voltage	220-240VAC						
Range of input voltage		198-264VAC							
Rated input voltage(DC)		198-280VDC							
Frequency(Hz)		0/50/60 Hz							
Displacement factor		≥0.9							
Power Factor		>0.97@Full Load,230VAC							
Input Current		0.25A max.							
Start-up time		< 0.5S							
No Load Power		≤0.5W							
Standby Power		≤0.5W							
Network standby power		≤0.5W							
THD (Typ.)		6%@Full Load,230VAC							
Dimming	Dimming	YES							
	Dimming mode	DALI-2 (IEC 62386-101,102,207) & Push Dimming (Corridor Function)							
	Dimming depth	1%							
	Dimming current range	1 ~100%							
Protection	Over Load Protection	103-120% YES/Latch off							
	Over Voltage Protection	> 59VDC YES/Latch off							
	Short circuit Protection	YES/Latch off							
	Over Temperature Protection	YES/Auto Resume							
Environment	Operating Temperature	-20°C~+50°C							
	Humidity	20%-90%RH							
	T _c	90°C							
	Storage Temperature	-40°C~+80°C							
	Lifetime	>50000h,@T _c =90°C							
Surface	Dimension	97X43X30mm (With side caps :131X43X30mm)							

standards	EN 61347-1; EN61347-2-13; EN62384; EN55015; EN61000-3-2 ; EN61000-3-3; EN 61547;	
Others	ErP	EU 2019/2020
	RoHS	RoHS (2011/65/EU) (EU)2015/863
Note	<p>1.All parameters NOT specially mentioned are measured at 230VAC input , full load and 25°C of ambient temperature.</p> <p>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.</p> <p>3.The DC input for this product is only used for emergency lighting and applies to functional and safety requirements, EMC is not considered.</p> <p>4.Data are typical values obtained from test samples.</p> <p>5.Switch and dimmer are not recommended to connect between this product output and luminaries.</p>	

◆ Parameter

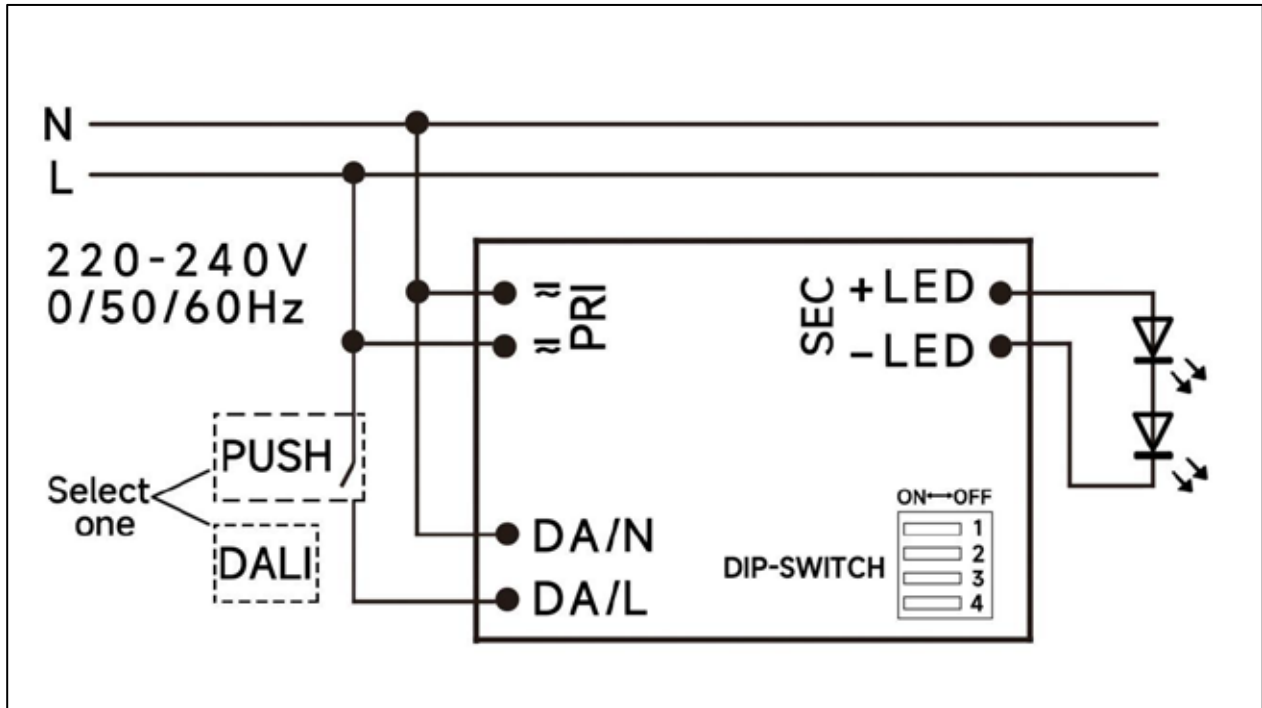
Number	Output	Switch position			
	Current(mA)	1	2	3	4
1	700	--	--	--	ON
2	750	ON	--	--	ON
3	800	--	ON	--	ON
4	850	ON	ON	--	ON
5	900	--	--	ON	ON
6	950	ON	--	ON	ON
7	1000	--	ON	ON	ON
*8	1050	ON	ON	ON	ON

* Factory default

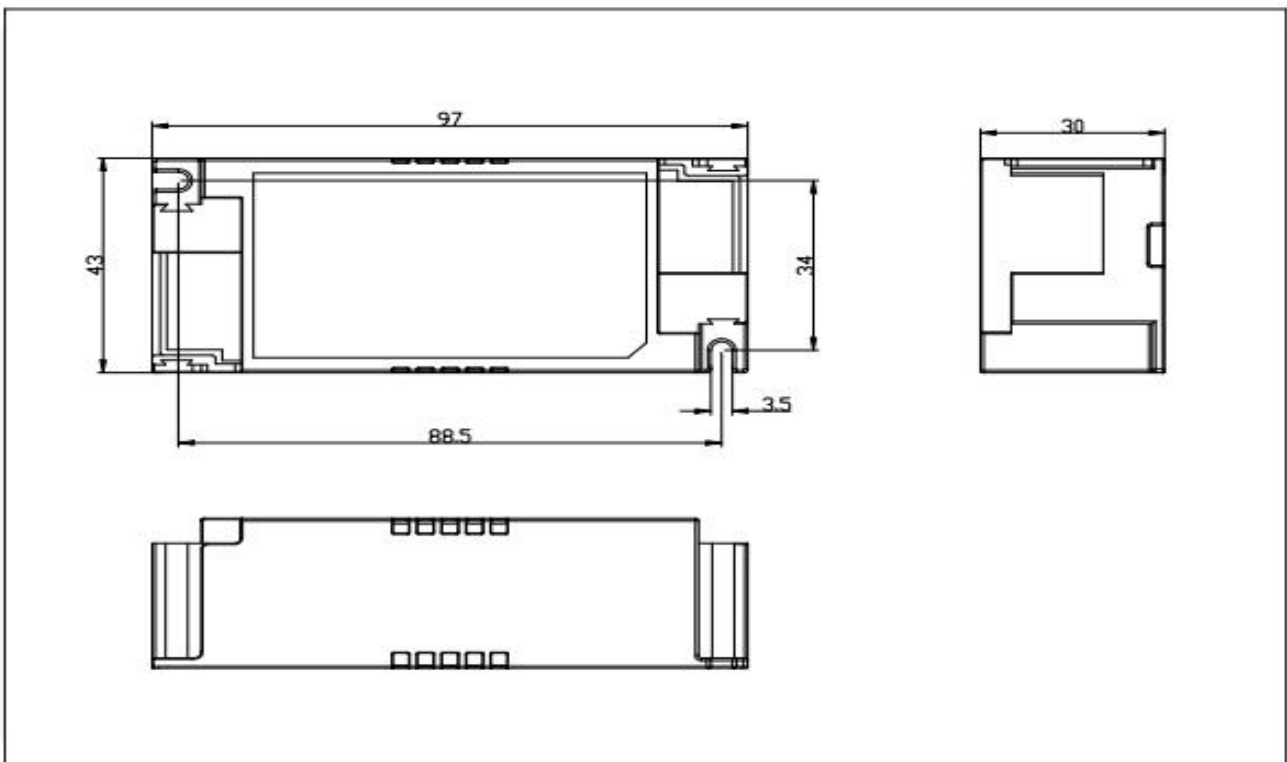
◆ Circuit Breaker

I _{peak}	T _{width}	B10	B16	B20	C10	C16	C20
8.84A	37.42μs	22pcs	32pcs	38pcs	27pcs	41pcs	47pcs

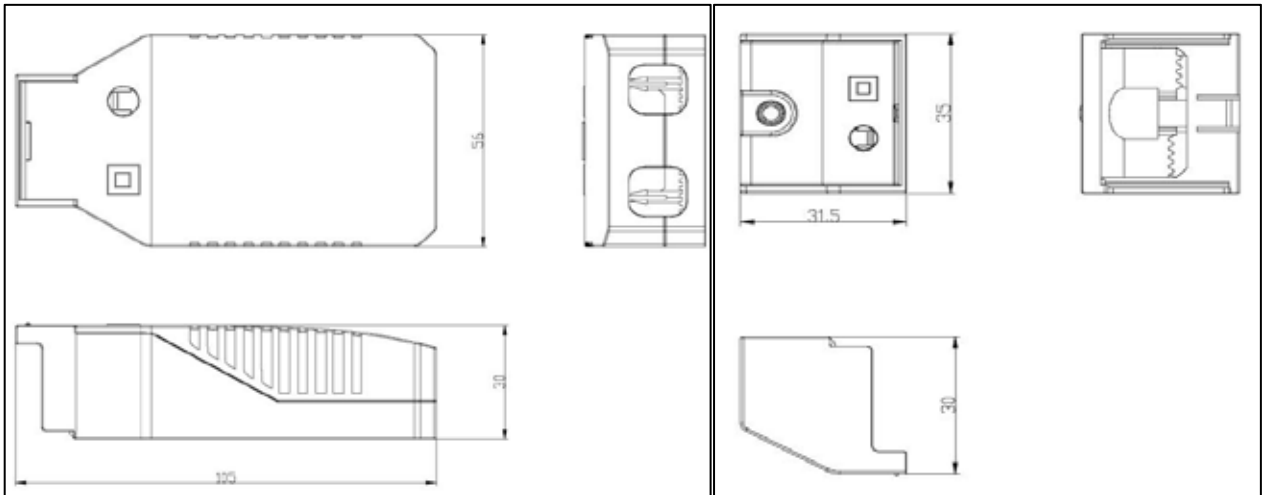
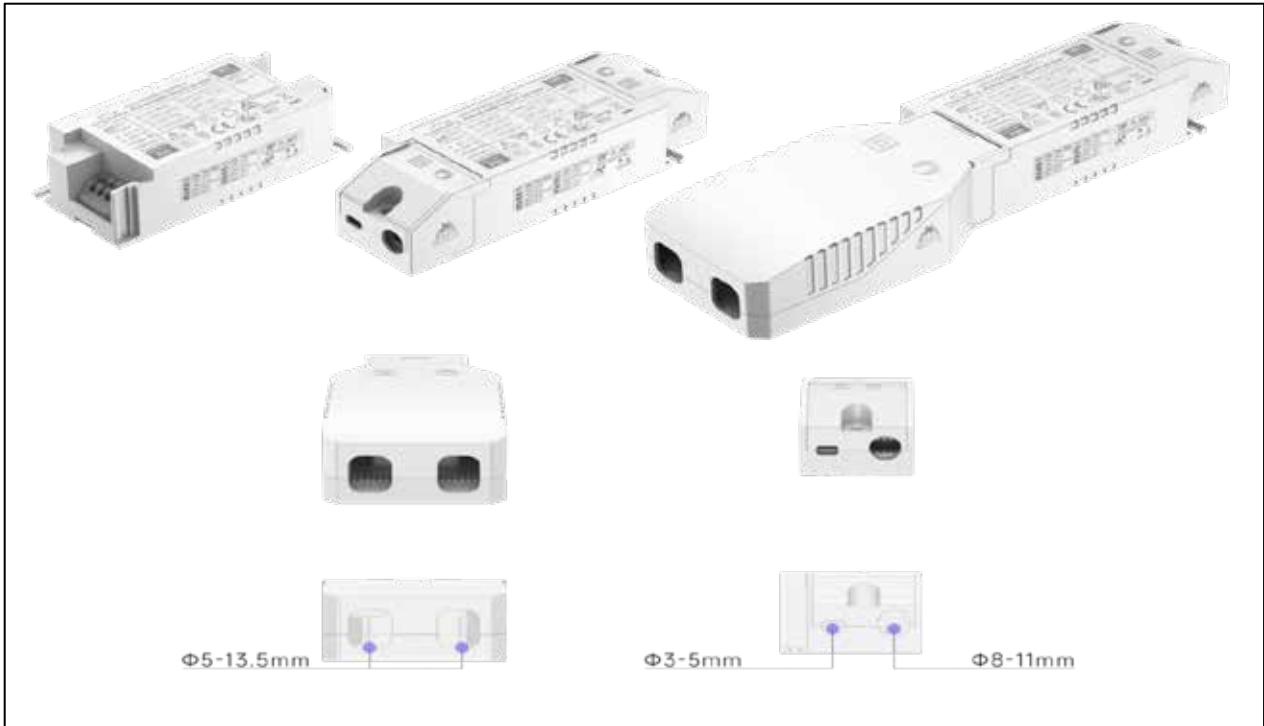
◆ **Wiring diagram**



◆ **2D diagram**



With side caps



A caps

B caps



Top end caps coding: 132021T0079-1
 Bottom end caps coding: 132021T0033
 Strain relief coding: 132038T0046
 Terminal coding: 126016T0009



Top end caps coding:132021T0080-1
 Bottom end caps coding: 132021T0035

◆ Wiring & Connections

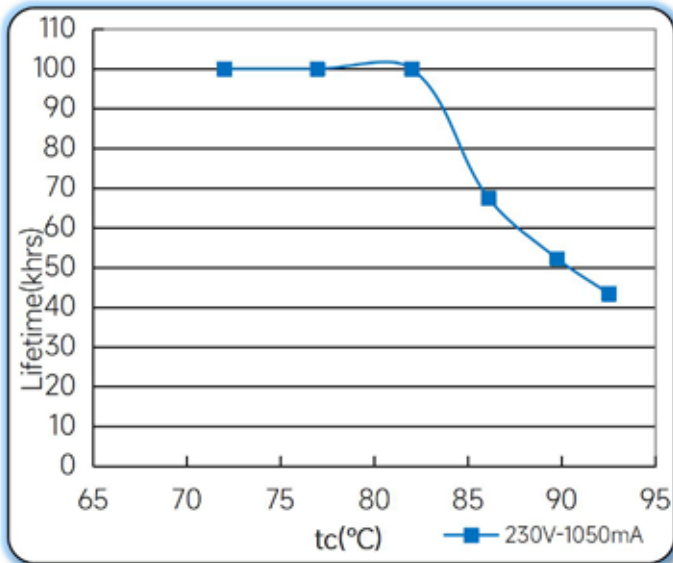
Specification item		Value (Unit)
Input	Input wire cross-section	0.5...1.5 mm ² (With A side caps: 0.75...2.5 mm ²)
	Input wire gauge.	16...20 AWG (With A side caps: 14...20 AWG)
	Input wire strip length	7...9mm
Output	Output wire cross-section	0.5...1.5 mm ²
	Output wire gauge.	16...20 AWG
	Output wire strip length	7...9mm

Common ways of wire clamping:

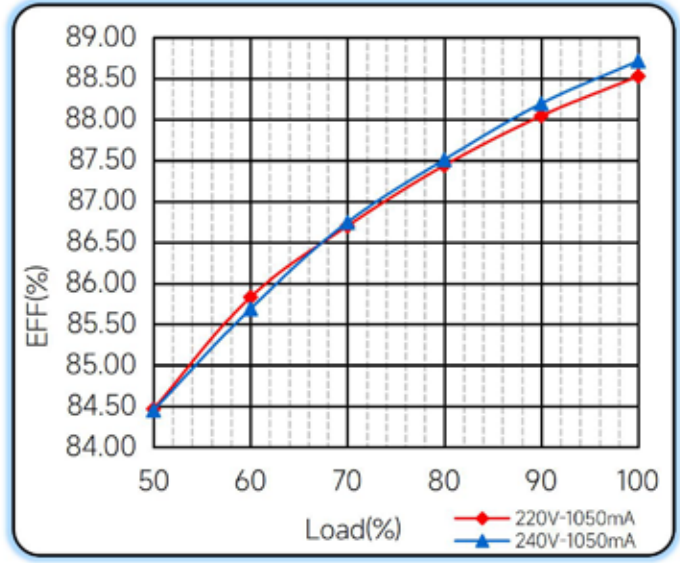
1. Tighten the screws to secure the side cover or clips, to clamp the cables
2. Through the main shell and side cover side teeth to clamp the cables

◆ Curve for FLS-44-1050 DALI-2 LD ECO, $I_o=1050\text{mA}$

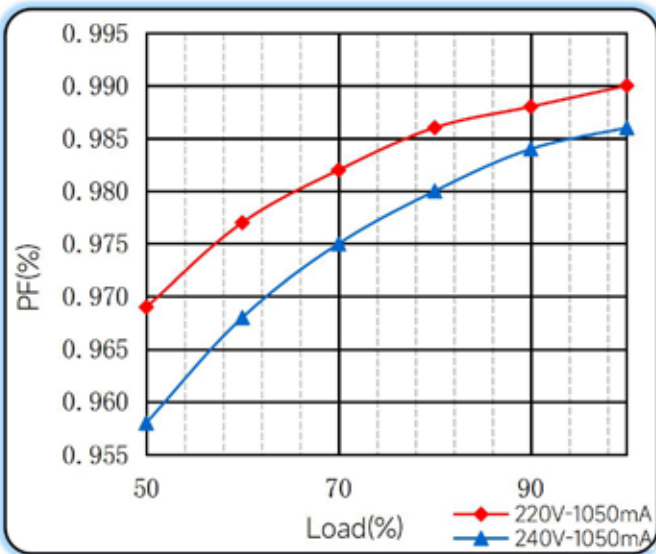
Lifetime vs. Temperature Curve



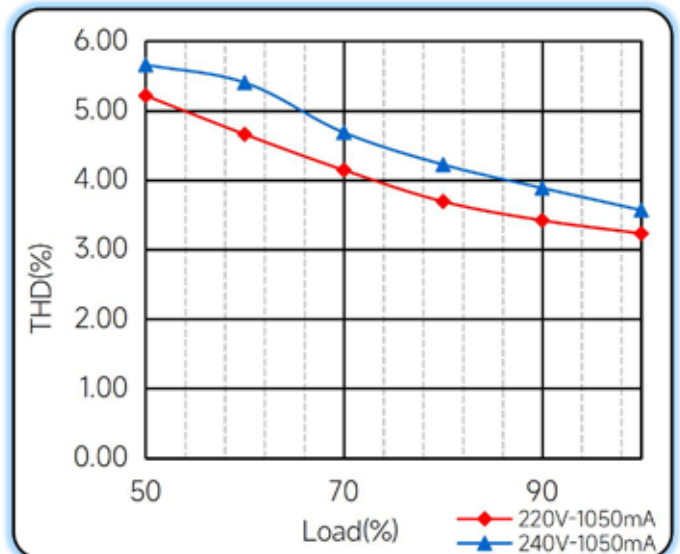
Efficiency vs. Load



Power Factor Characteristics



THD vs. Load



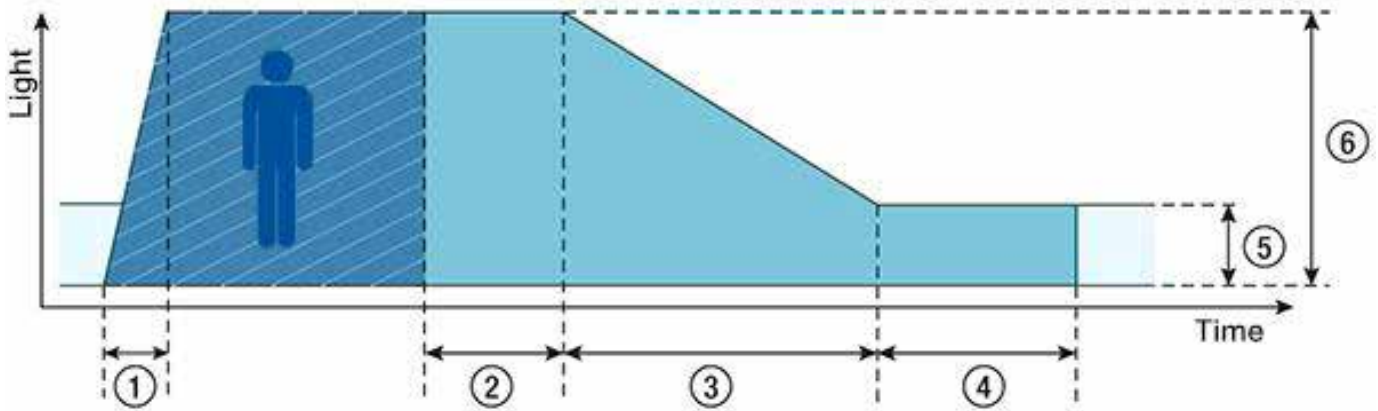
◆ Push dimming operation

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:

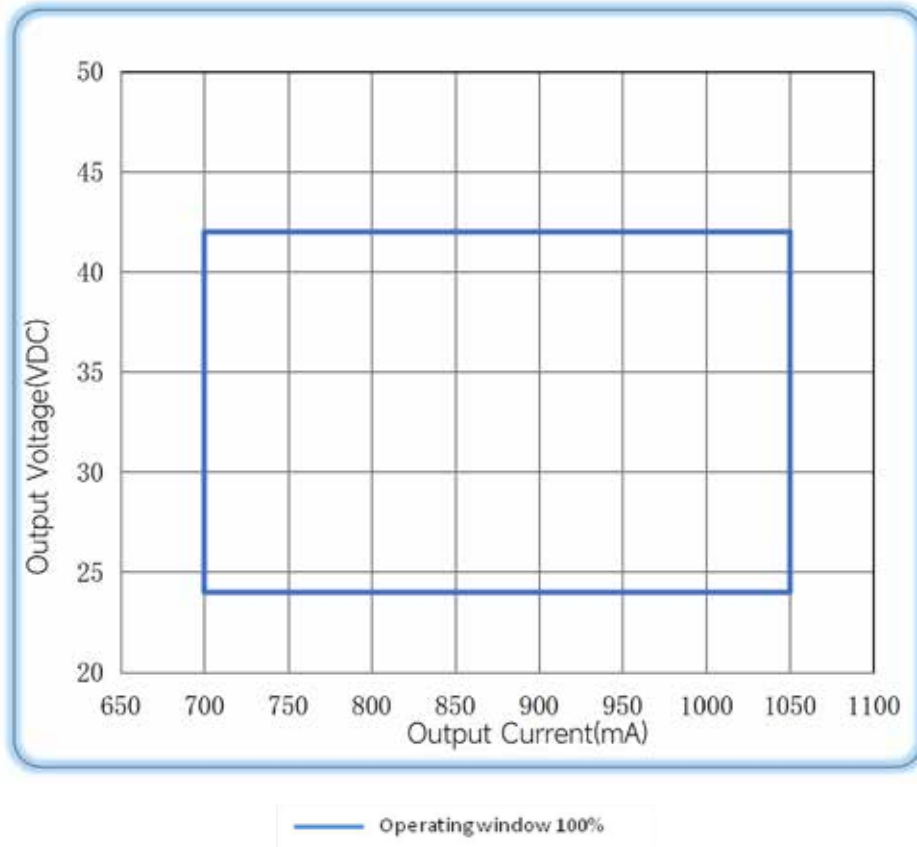
- 1.The factory default brightness is at 100%.
- 2.Up to 30 drivers can perform the PUSH dimming at the same time when utilizing one common push button
- 3.The maximum length of the cable from the push button to the last driver is 200 meters.

◆ Corridor mode



- ◆ ① **Fade-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.
- ◆ ② **Run-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.
- ◆ ③ **Fade time(32s)**: the time during which the luminous intensity is faded from the presence value to the absence value.
- ◆ ④ **Switch-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.
- ◆ ⑤ **Absence value(default: 10 %)**: the luminous intensity when there is no person present.
- ◆ ⑥ **Presence value (default: 100 %)**: the luminous intensity when persons are present.

◆ **Operating window**



◆ **Revision Updates**

ITEM	BEFORE	AFTER	VERSION	DATE
Initial			A	2022/02/15