

42W DALI + PUSH Dimming power supply



■ Approve

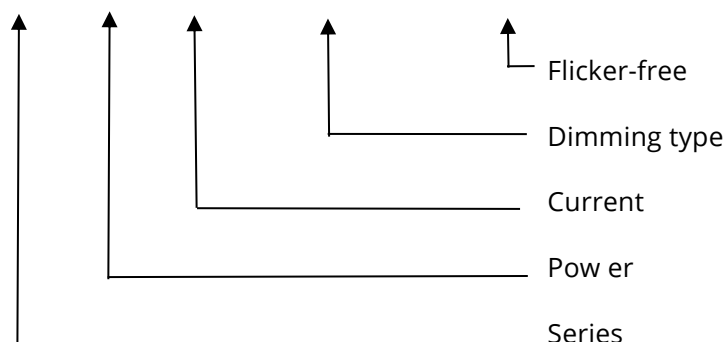


Description

FLS-42-1050 DALI-2 LD ADV is a 42W constant current LED driver with 150 to 1050mA output current and a forward voltage range from 2.5 to 52Vdc. The output current is adjustable by DIP Switch. With its dimensions from 97 x 43 x 30 mm. It is easy to integrate in LED Panel and down light products. To ensure trouble-free operation, protection is provided against output short circuit and over Load.

Model code

FLS-42-1050 DALI-2 LD ADV



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: 0.95

Efficiency: 87%

Support DALI-2, Push Dimming

5 years warranty

Applications
LED panel, LED down light

Specification

Output	Constant Current (mA)	150mA	200mA	1000mA	1050mA
	Voltage Range(VDC)	2.5-52VDC	2.5-52VDC	2.5-42VDC	2.5-40VDC
	Unload voltage Max.(VDC)	59VDC				
	Current Accuracy	±6%@150-300mA;±5%@350-1050mA				
	Output HF current ripple(≥1KHz)	±5%				
	Output LF current ripple(≤120Hz)	±3%				
	SVM	≤0.01@Full Load				
	Pst	≤0.05@Full Load				
	Efficiency(Typ.)	87%@full load				
Input	Rated input voltage(VAC)	220-240VAC				
	Range of input voltage(VAC)	198-264VAC				
	Range of input voltage(VDC)	198-280VDC				
	Frequency(Hz)	0/50/60 Hz				
	Displacement factor	≥0.9@full load				
	Power Factor(Typ.)	0.95@full load				
	Input Current max	0.26A max				
	Start-up time	<0.7S				
	No Load Power	≤0.5W				
	Standby Power	≤0.5W				
	THD (Typ.)	<10%@full load				
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~+45°C				
	Humidity	20%-90%RH				
	Tc	85°C				
	Storage Temperature	-40°C~+80°C				
	Life time	>50000h,@TC=85°C				
Surface	Dimension	97x43x30mm (With side caps) : 131X43X30mm				

standards	EN 61347- EN61347-2-13; EN62384; EN55015; EN61000-3-2 ; EN61000-3-3; EN 61547		
Others	1; 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.DALI protocol comprises 16 groups and 64 addresses.Up to 32 drivers can perform the PUSH dimming at the same time when utilizing one push button.</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)	Voltage (VDC)	Voltage No load (VDC)	Power (W)	1	2	3	4	
1	150mA	2.5-52VDC	59VDC	7.8W	--	--	--	--	
2	200mA			10.4W	ON	--	--	--	
3	250mA			13W	--	--	--	--	
4	300mA			15.6W	ON	ON	--	--	
5	350mA			18.2W	--	--	ON	--	
6	400mA			20.8W	ON	--	ON	--	
7	500mA			26W	--	ON	ON	--	
8	600mA			31.2W	ON	ON	ON	--	
9	700mA			36.4W	--	--	--	ON	
10	750mA			39W	ON	--	--	ON	
11	800mA			41.6W	--	ON	--	ON	
12	850mA			2.5-49VDC	41.65W	ON	ON	--	ON
13	900mA			2.5-46VDC	41.4W	--	--	ON	ON
14	950mA			2.5-44VDC	41.8W	ON	--	ON	ON
15	1000mA			2.5-42VDC	42W	--	ON	ON	ON
*16	1050mA	2.5-40VDC	42W	ON	ON	ON	ON		

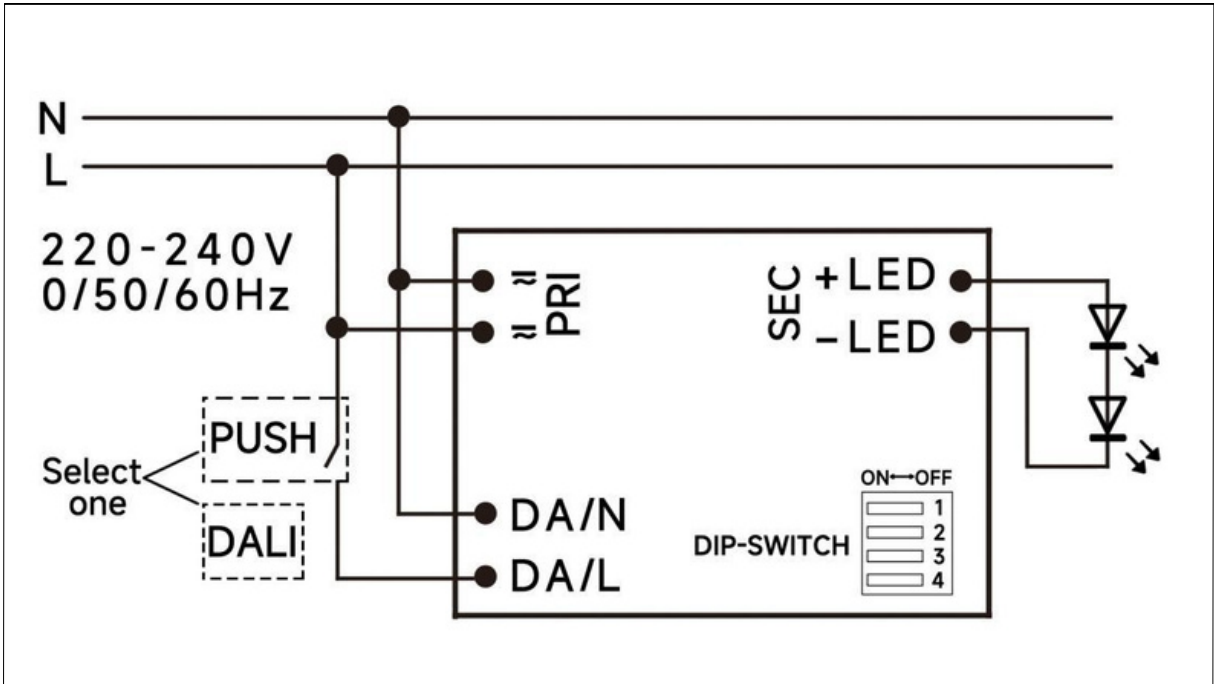
* Factory default

Circuit Breaker

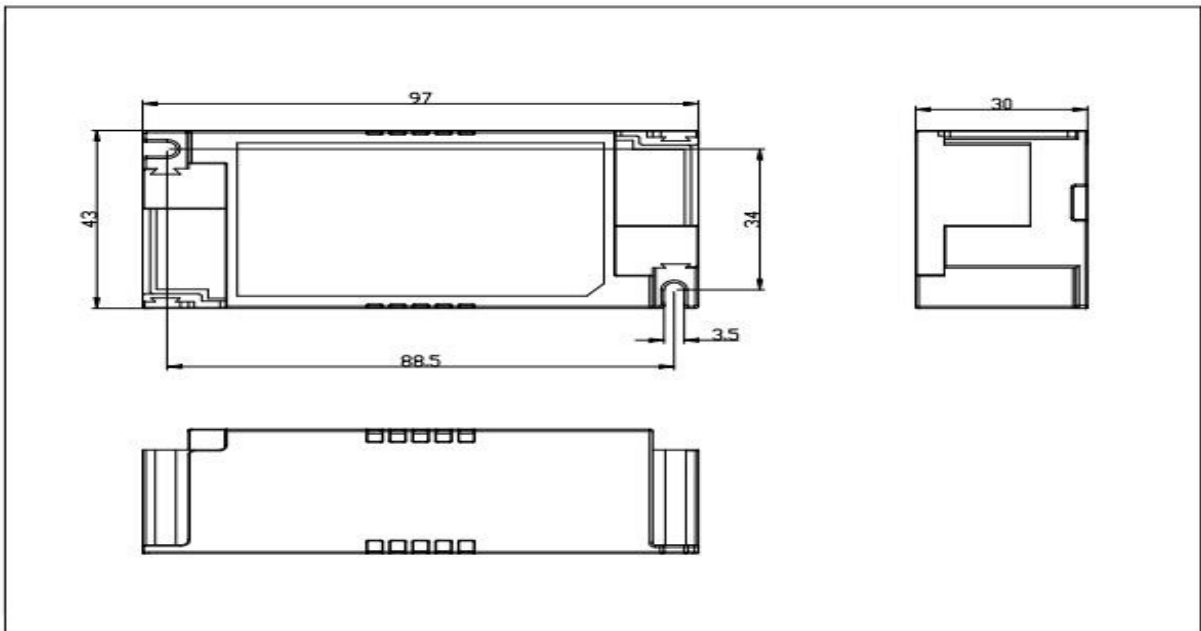
Ipeak	Tw idth	B10	B16	B20	C10	C16	C20
5.36A	48µs	30pcs	49pcs	61pcs	30pcs	49pcs	61pc

S

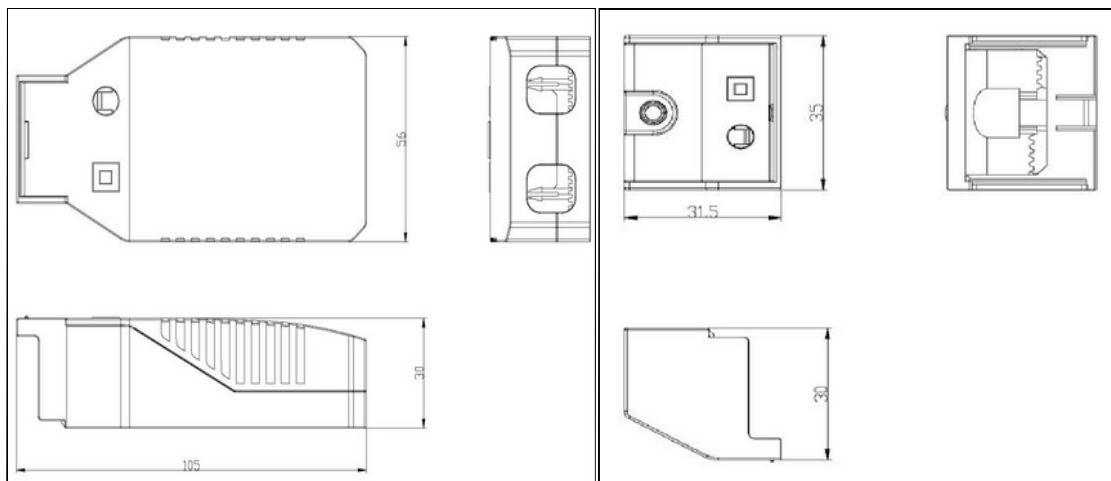
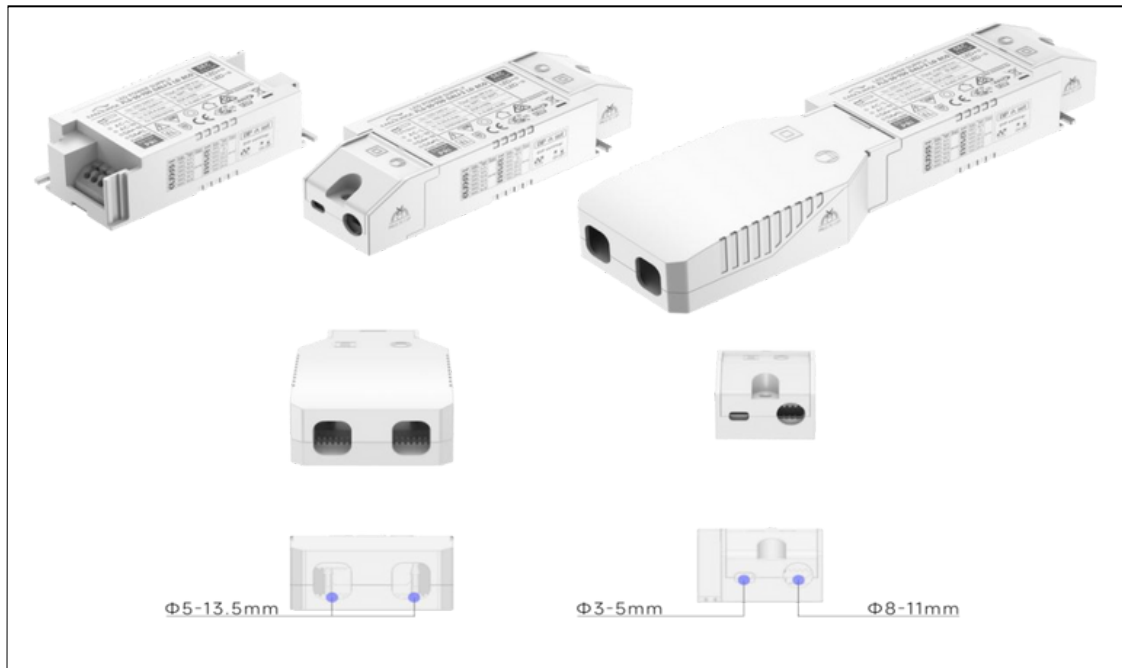
Wiring diagram



2D diagram



With side caps



A caps

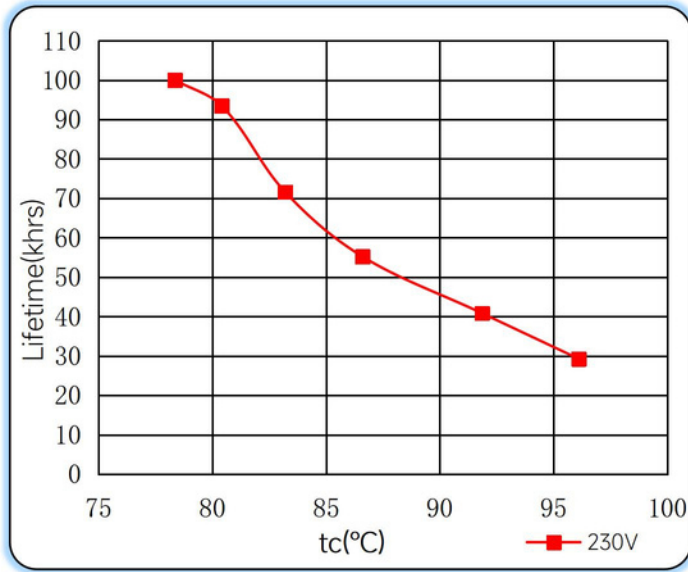
B caps

Wiring & Connections

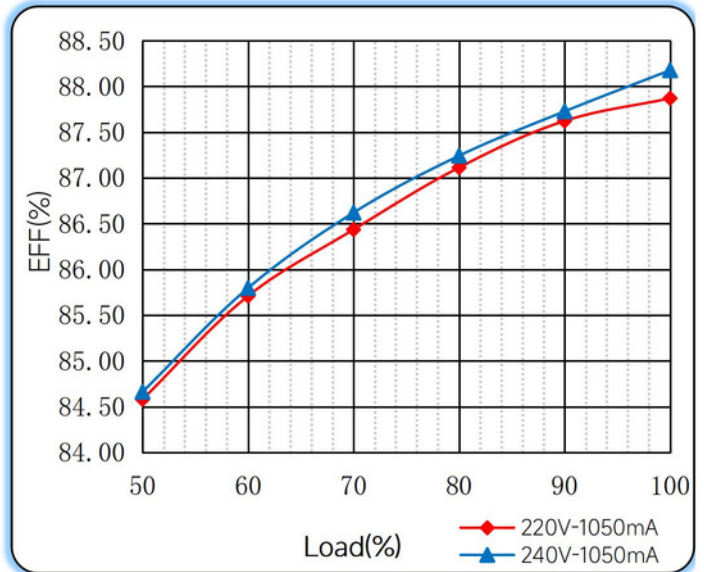
	Specification item	Value (Unit)
Input	Input wire cross-section	0.5...1.5 mm ² (With A side caps : 0.75...2.5
	Input wire gauge.	mm ²) 16...20 AWG (With A side caps: 14...20
	Input wire strip length	AWG) 7...9mm
Output	Output wire cross-section	0.5...1.5 mm ²
	Output wire gauge.	16...20 AWG
	Output wire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

Curve for FLS-42-1050 DALI-2 LD ADV, $I_o=1050\text{mA}$

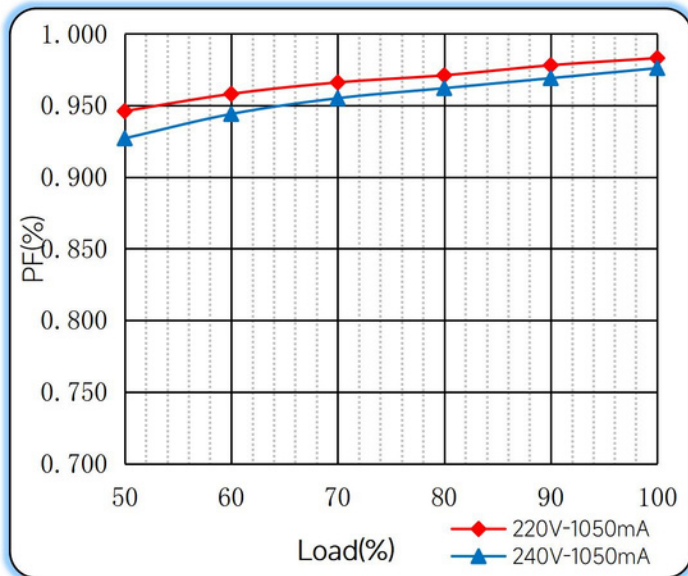
Lifetime vs. Temperature Curve



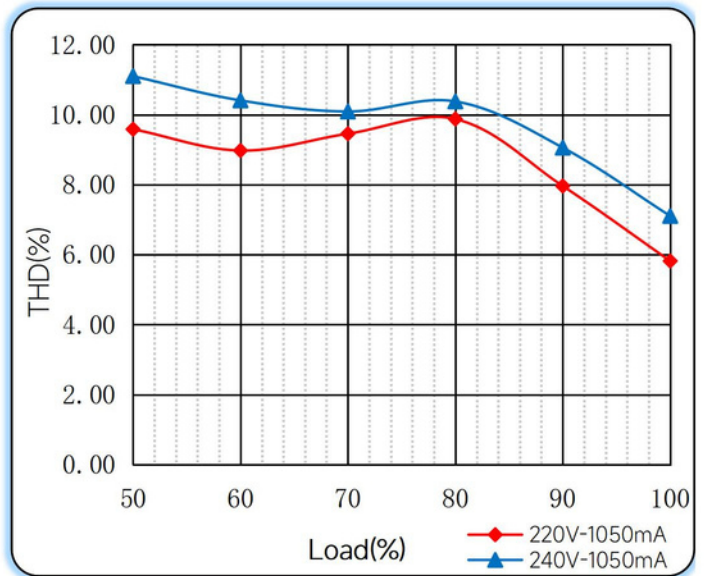
Efficiency vs. Load



Power Factor Characteristics



THD vs. Load



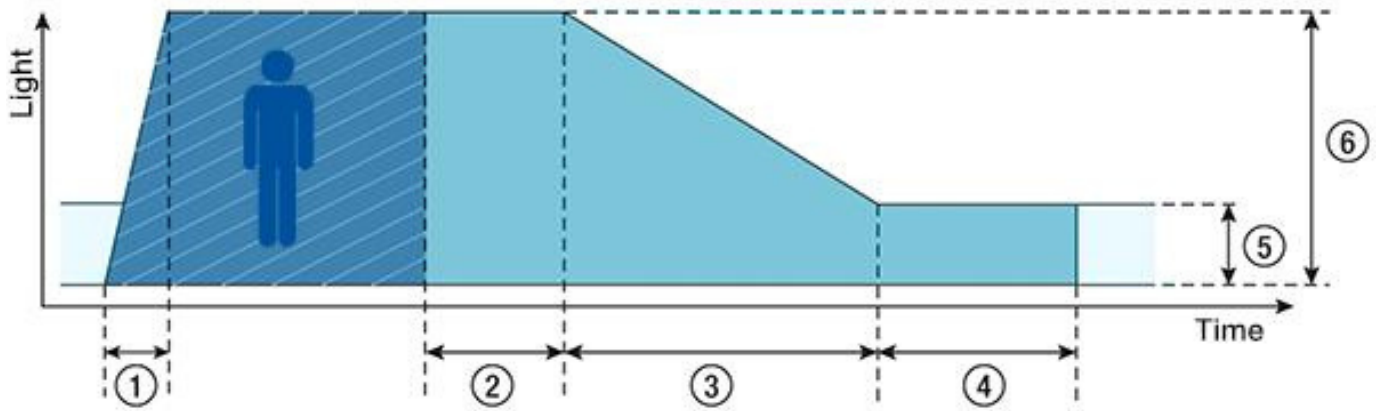
Push dimming operation

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	<0.5s	Quit Corridor mode
Long push	0.5-14s	Dimming up or down
Long push	15s-2mins	Syncall LED stobe 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.

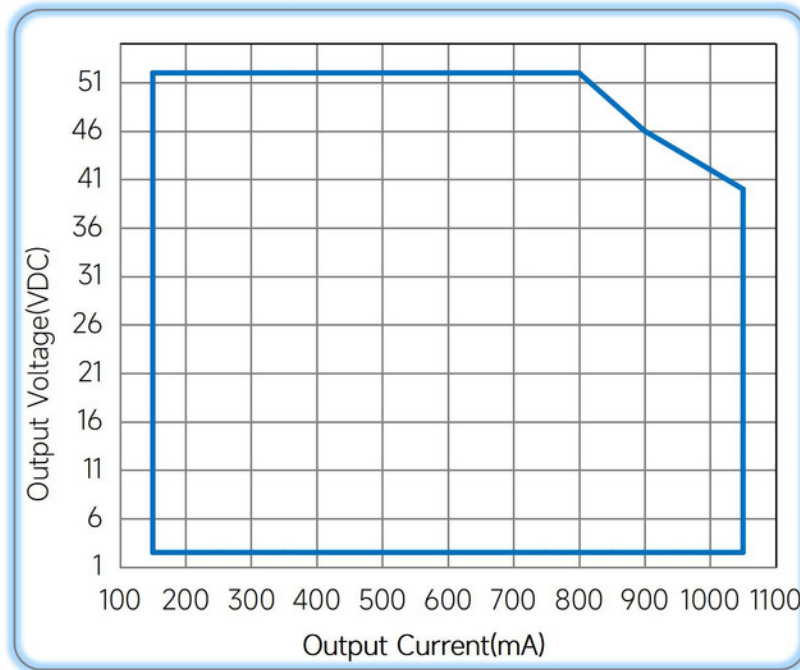
Note:

- 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



Operating window



— Operating window 100%

Revision Updates

ITEM	BEFORE	AFTER	VERSION	DATE
Initial			A	2022/09/09
Protection		Updated	B	2023/02/06