44W DALI+PUSH Dimming power supply

■Approve

CE EK 05 SELV

DALI 2 EL CCC CB
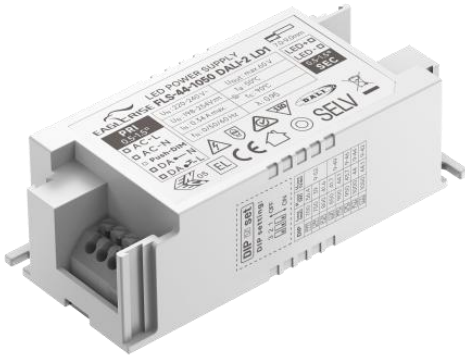
◆ Features

- Class II，SELV，Built-in/Independent
- Input Voltage 220-240VAC
- Protections: SCP/OLP/OVP/OTP
- Power Factor：＞0.95@Full load,230V
- Efficiency：87%@Full load,230V
- Support DALI-2, Push Dimming
- 5 years warranty

Applications

LED panel,down light,spot light

◆ Description

FLS-44-1050 DALI-2 LD1 is a 44W constant current LED driver with 700 to 1050mA output current and a forward voltage range from 9 to 52Vdc. The output current is adjustable by DIP Switch. With it's dimensions from 97 x 43 x 30mm. 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

FLS-44-1050 DALI-2 LD1

- Flicker-free
- Dimming type
- Current
- Power
- Series
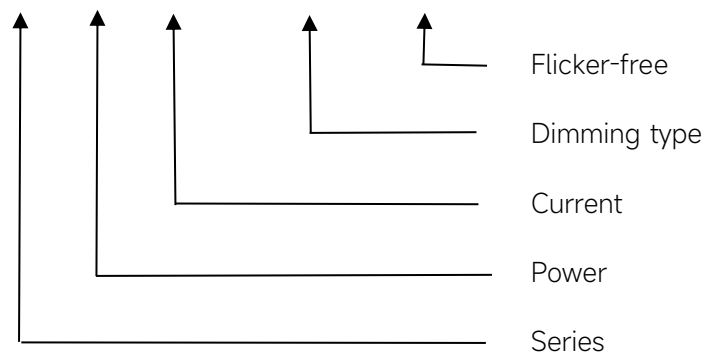
◆ Specification

	Constant Current （mA)	700	750	800	850	900	950	1000	1050
Output	Voltage Range（VDC)	9-52				9-49		9-46	9-44	9-42
	Unload voltage Max.	60VDC								
	Current Accuracy	±5%								
	Output HF current ripple(≥1KHz)	±10%								
	Output LF current ripple(≤120Hz)	±3%								
	SVM	≤0.4								
	P_{st}	≤1								
	Efficiency(Typ.)	87%@Full load,230V								
Input	Rated input voltage	220-240VAC								
	Range of input voltage	198-264VAC								
	Range of input voltage(DC)	198-280VDC								
	Frequency(Hz)	0/50/60 Hz								
	Displacement factor	≥0.9								
	Power Factor	>0.95@Full load,230V								
	Input Current	0.34A								
	Start-up time	＜0.7S								
	No Load Power	≤0.5W								
	Standby Power	≤0.5W								
	THD (Typ.)	<10%								
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	＞60VDC								
		YES/Latch off								
	Short circuit Protection	YES/Latch off								
	Over Temperature Protection	YES/Auto Resume								
Environment	Operating Temperature	-20℃~+50℃								
	Humidity	20%-90%RH								
	Tc	75℃								
	Storage Temperature	-25℃~+60℃								
	Lifetime	>50000h,@Tc=75℃								
Surface	Dimension	97X43X30mm（With side caps :131X43X30mm)								

Standards	IEC61347- 1, IEC61347-2- 13;EN61347- 1, EN61347-2- 13;EN61347- 1, EN61347-2- 13, EN62384;GB/T17743;EN61547 GB 19510.1,GB 19510.14;GB/T 17743,GB 17625.1;EN IEC 55015,EN IEC 61000-3-2,EN 61000-3-3

Others	ErP	EU 2019/2020
	RoHS	RoHS (2011/65/EU) (EU)2015/863

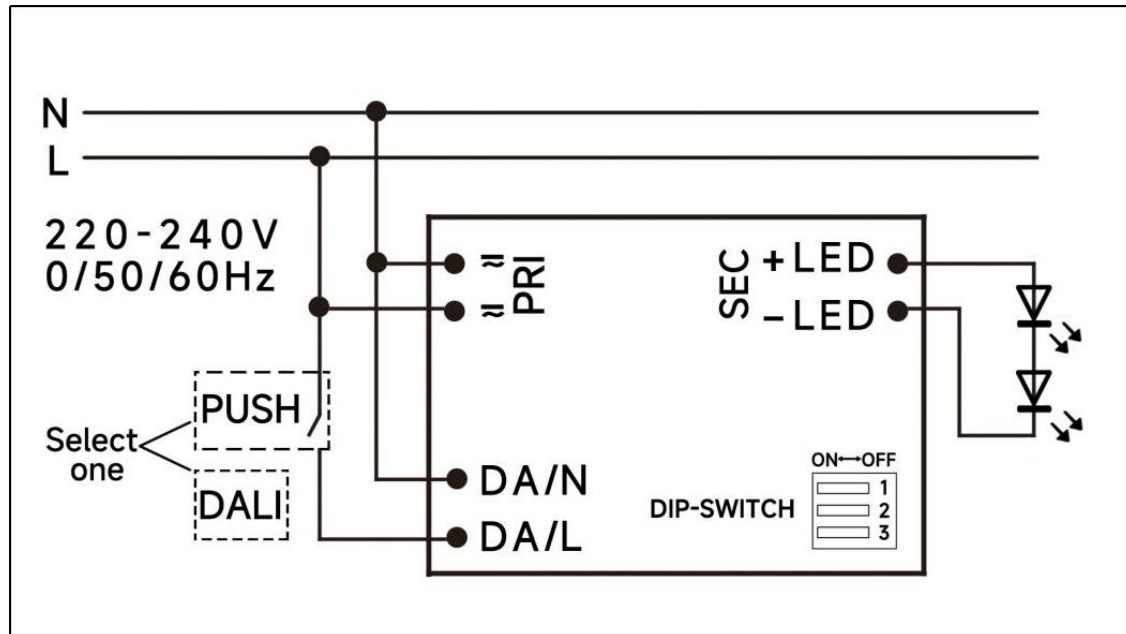| Note	1.All parameters not specially mentioned are measured at 230VAC input , full load and 25℃ of ambient temperature.
	2.Ripple & Noise are measured at 20MHz of bandwidth by using a 300mm twisted pair-wire terminated with a 0.1uF & 47 uF parallel capacitor.

◆ Parameter

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

* Factory default

◆ Circuit Breaker

I^{peak}	T_{width}	B10	B16	B20	C10	C16	C20
6.8A	**47.8μ**s	23pcs	37pcs	47pcs	23pcs	37pcs	47pcs

◆ Wiring diagram

N

L

220-240V
0/50/60Hz

PRI ≈

SEC +LED
−LED

Select one
PUSH
DALI

DA/N
DA/L

ON←→OFF
DIP-SWITCH
1
2
3

◆ 2D diagram

97

43

34

88.5

3.5

30

With side caps

Φ5-13.5mm   Φ3-5mm   Φ8-11mm

A caps
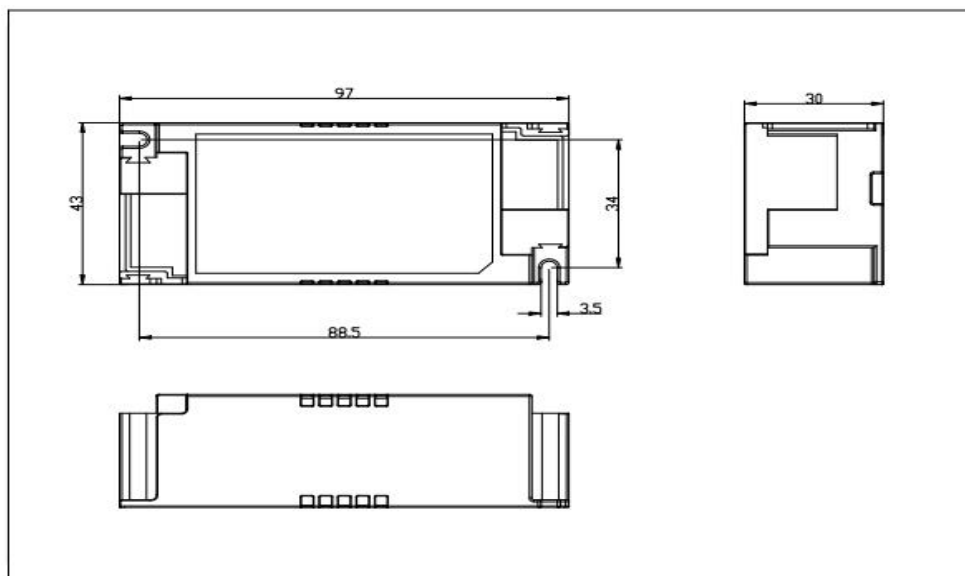
B caps
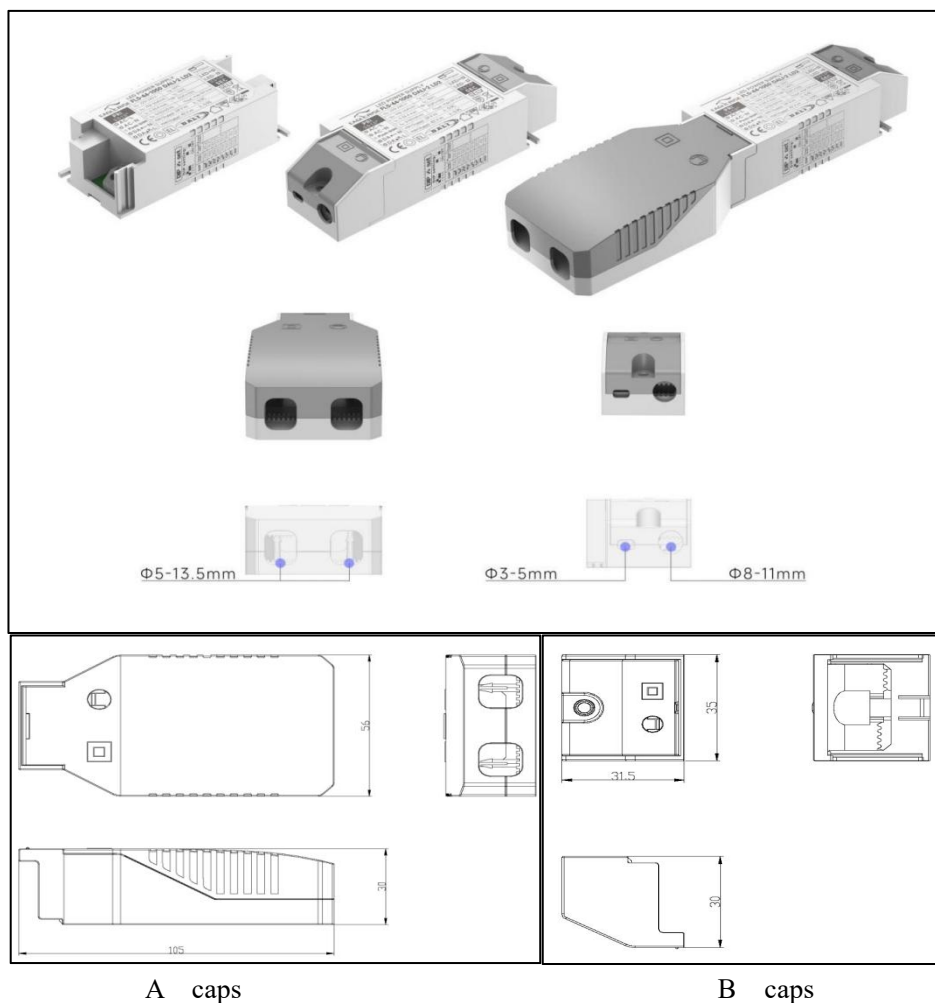
◆ Wiring & Connections

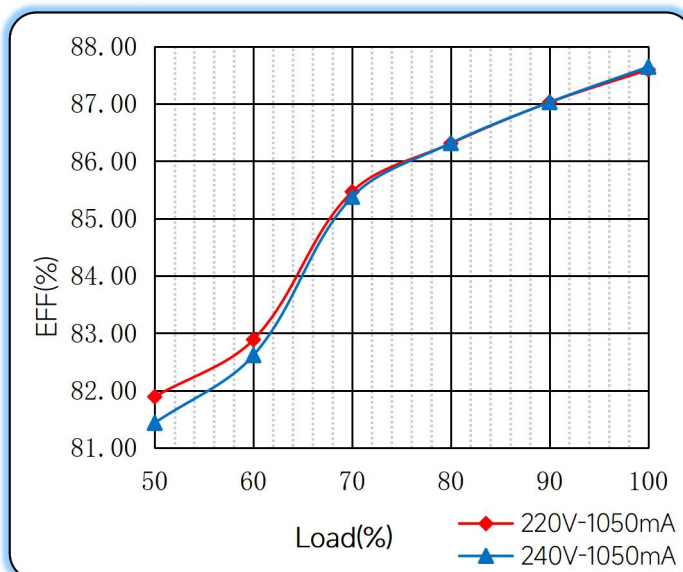|	Specification item	Value （Unit ）
Input	Input wire cross-section	0.5…1.5 mm^2 （With A side caps：0.75…2.5 mm^2）
	Input wire gauge	16…20 AWG （With A side caps：14…20 AWG ）
	Input wire strip length	7…9mm
Output	Output wire cross-section	0.5…1.5 mm^2
	Output wire gauge	16…20 AWG
	Output wire strip length	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
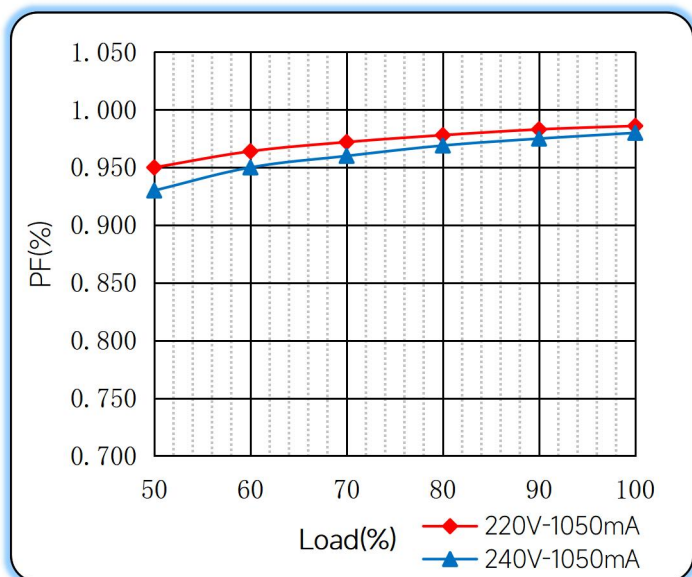
◆ Curve for FLS-44-1050 DALI-2 LD1， Io=1050mA
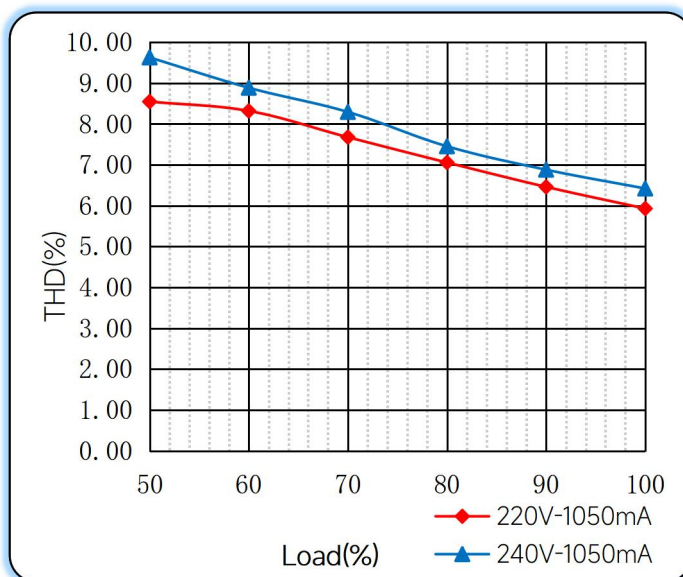
Lifetime vs. Temperature Curve
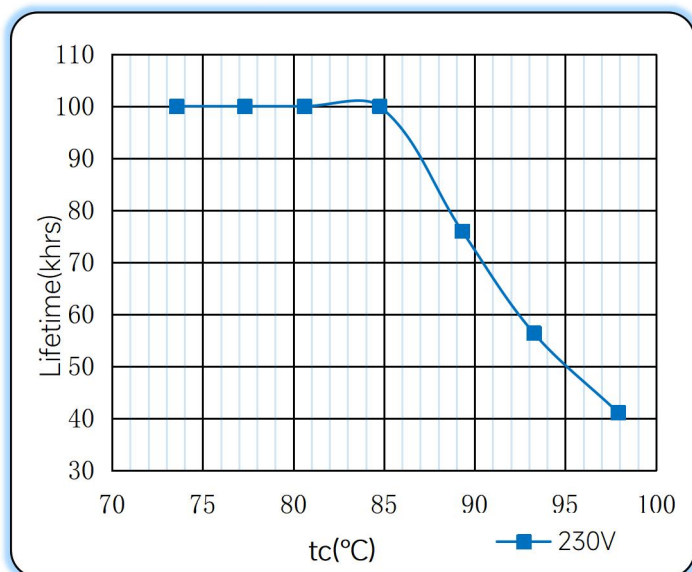
Efficiency vs. Load


Power Factor Characteristics

THD vs. Load

Stock code : 002922

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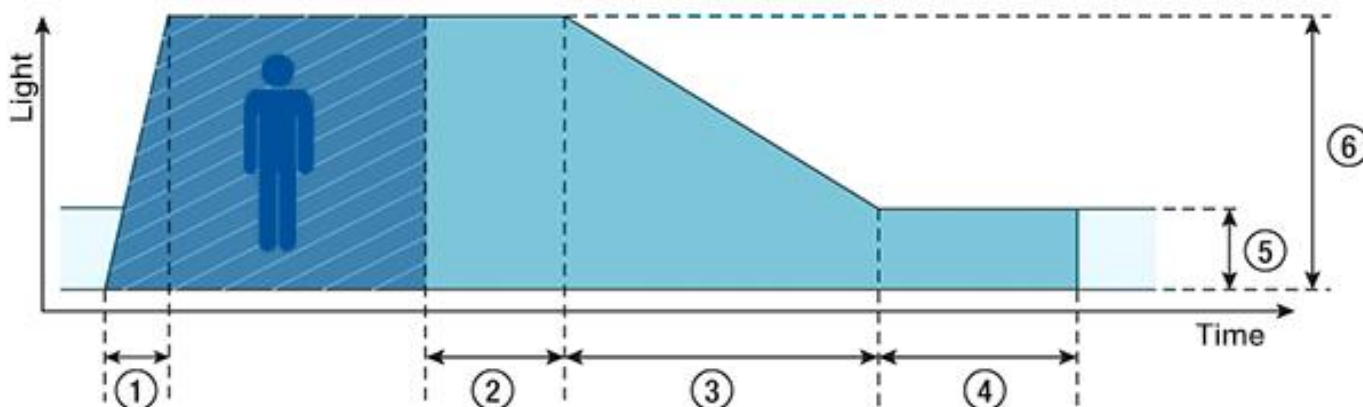
- ◆ **①Fade-in time(0.5s):** the time that starts as soon as the presence of a person is detected. During the fade-in time the luminous intensity is faded up to the presence value.

- ◆ **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%
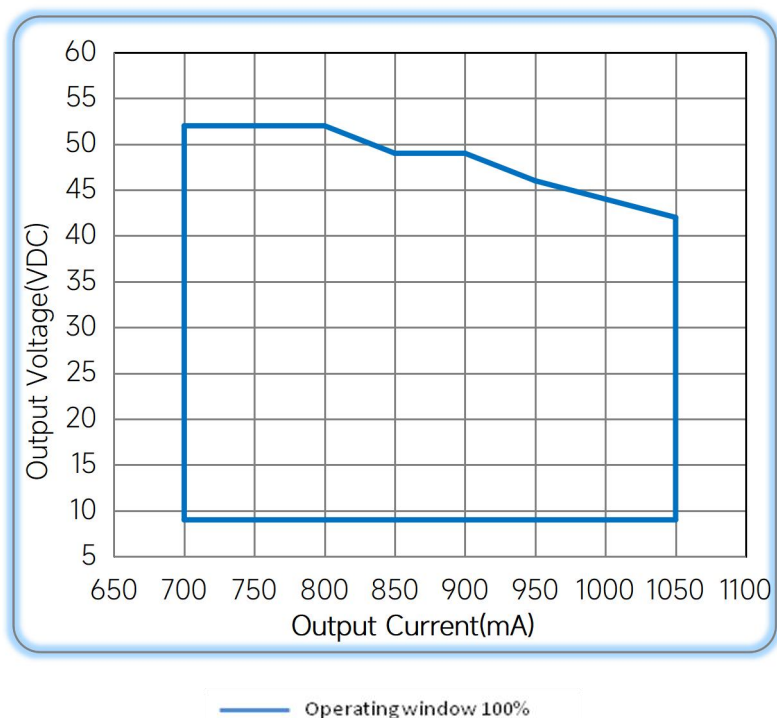
◆ Revision Updates

ITEM	BEFORE	AFTER	VERSION	DATE
Initial			A	2022-09-15

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Manual