

16W DALI + PUSH Dimming power supply



■ Approve



Features

- For luminaries of protection Class II, SELV, Independent
- Input Voltage : 220-240V
- Protections: SCP/OLP/OVP/OTP
- Power Factor : 0.95
- Efficiency : 85%
- Support DALI-2,Push Dimming
- 5 years warranty

Applications

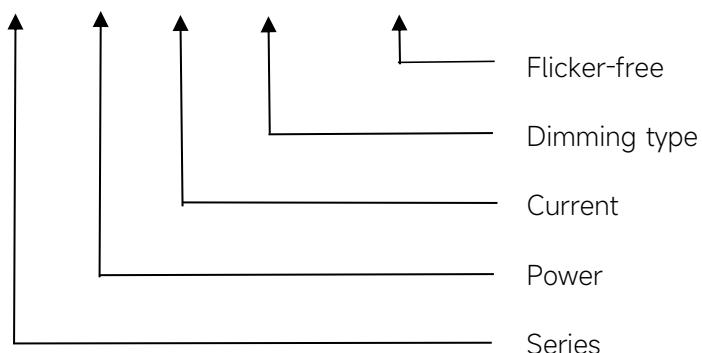
- LED panel, Spot light, Down light

◆ Description

FLS-16-450 DALI-2 LA ADV is a 16W constant current LED driver with 100 to 450mA output current and a forward voltage range from 2.5 to 42Vdc. The output current is adjustable by DIP Switch. With it's dimensions from 115 x 30 x 20.5 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,over load,over voltage and over temperature.

◆ Model code

FLS-16-450 DALI-2 LA ADV



◆ Specification

	Constant Current (mA)	100	150	200	250	300	350	400	450										
	Voltage Range (VDC)	2.5-42			2.5-40			2.5-36											
Output	Unload voltage Max.	59VDC																	
	Current Accuracy	±7%	±5%																
	Output LF current	±5%																	
	SVM	≤0.4@Full Load,230VAC																	
	P _{st}	≤1@Full Load,230VAC																	
	Efficiency(Typ.)	85%@Full Load,230VAC																	
	EOFI	15%																	
	Rated input voltage	220-240V																	
	Range of input voltage	198-264VAC																	
Input	Maximum voltage	300VAC@1 h maximum,unit might not operate in this abnormal condition																	
	Rated input voltage(DC)	176-280VDC																	
	Frequency(Hz)	0/50/60 Hz																	
	Displacement factor	≥0.7@Full Load,230VAC																	
	Power Factor	0.95@Full Load,230VAC																	
	Input Current	0.11A MAX.																	
	Start-up time	< 0.8S																	
	Switch over time(AC/DC mode)	< 0.5S																	
	No Load Power	≤0.5W																	
	Standby Power	≤0.5W																	
	THD (Typ.)	<10%@Full Load,230VAC																	
Dimming	Dimming	YES																	
	Dimming mode	DALI-2 (IEC 62386-101,102,207,251,252,253) & Push Dimming (Corridor Function)																	
	Dimming depth	4mA@≤400mA; 1%@450mA																	
	Dimming current range	1~100%																	
Protection	Over Load Protection	103-120%																	
		YES/Auto Resume																	
	Over Voltage Protection	> 59VDC																	
		YES/Auto Resume																	
Capability	Short Circuit Protection	YES/Auto Resume																	
	Over Temperature	YES/Auto Resume																	
Withstand voltage	Surge capability (L-N)	1KV																	
	Surge capability	NA																	
Environment	Input-Output	3750V/ 5mA/ 60S																	
Environment	Operating Temperature	-20°C~+45°C																	

	Humidity	20%-90%RH
	Tc	85°C
	Storage Temperature	-25°C~+85°C
	Lifetime	>50000h, @Tc=80°C
	Noise	≤25dB(A)@20cm
Surface	Dimension	115X30X20.5mm
	material	PC
Standards	Safety	GB19510.1, GB19510.14; IEC61347-1, IEC61347-2-13; AS/NZS 61347-1, AS/NZS 61347-2-13; AS 61347.2.13; EN62384;
	EMC	GB/T17743, GB17625.1; EN55015, EN61000-3-2, EN61000-3-3, EN61547; EN55015, EN61000-3-2, EN61000-3-3, EN61547, EN62493; EN61000-4-5; EN61000-4-2,3,4,5,6,8,11, EN61547
	ErP	ErP2.0 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. Data are typical values obtained from test samples.</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. EL compatible with IEC 61347-2-13 Annex J, compatible with EN 60598-2-22 emergency lighting fixtures, compatible with EN 50172 central battery system applications.</p> <p>6. 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>7. All Eaglerise power supply are complied with EMI regulations. Since they are belong to component and will be installed inside system enclosure. When they are integrated into a system, the EMI characteristics of the system must be re-verified again.</p>	

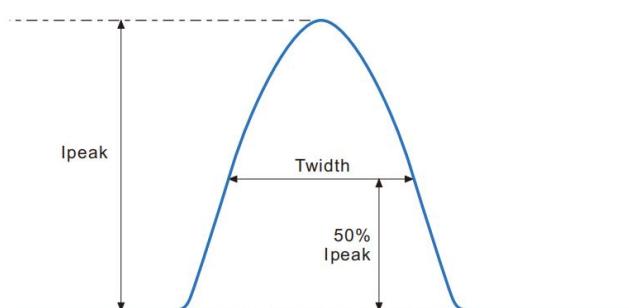
◆ Parameter

Number	Output				Switch position		
	Current (mA)	Voltage (VDC)	Voltage No load (VDC)	Power (W)	1	2	3
1	100mA	2.5-42VDC	59VDC	4.2	--	--	--
2	150mA	2.5-42VDC		6.3	ON	--	--
3	200mA	2.5-42VDC		8.4	--	ON	--
4	250mA	2.5-42VDC		10.5	ON	ON	--
5	300mA	2.5-42VDC		12.6	--	--	ON
6	350mA	2.5-42VDC		14.7	ON	--	ON
7	400mA	2.5-40VDC		16	--	ON	ON
*8	450mA	2.5-36VDC		16.2	ON	ON	ON

* Factory default

◆ Inrush Current

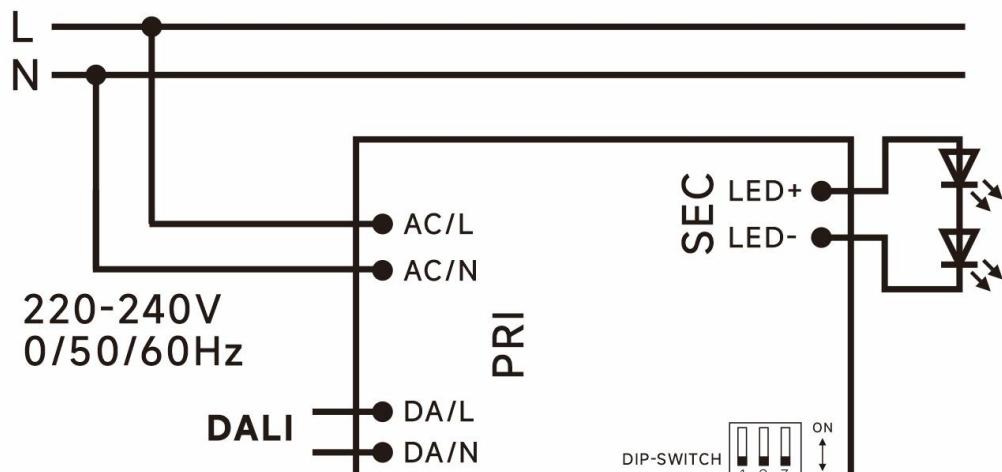
I _{peak}	T _{width}	B10	B16	B20	C10	C16	C20
2.38A	36μs	72pcs	116pcs	145pcs	72pcs	116pcs	145pcs



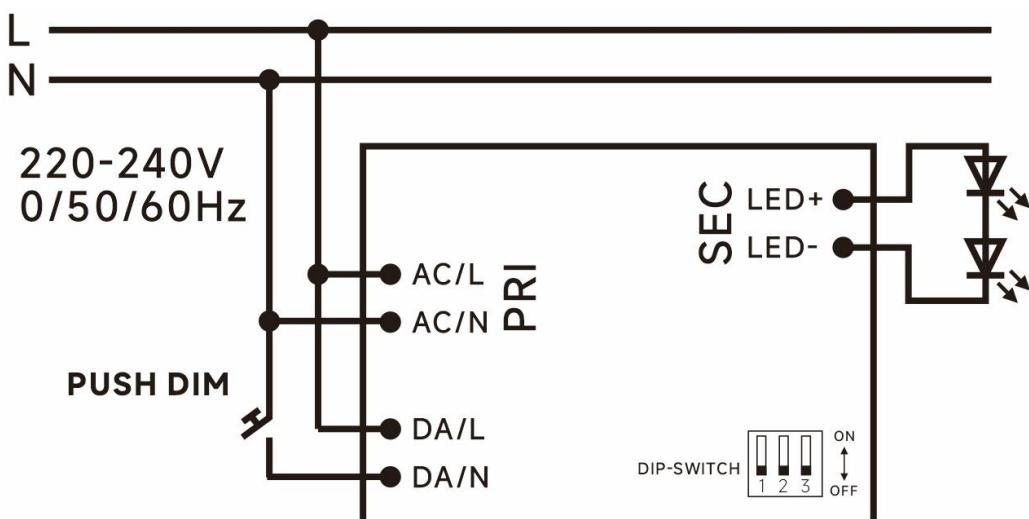
Remarks:

- 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.

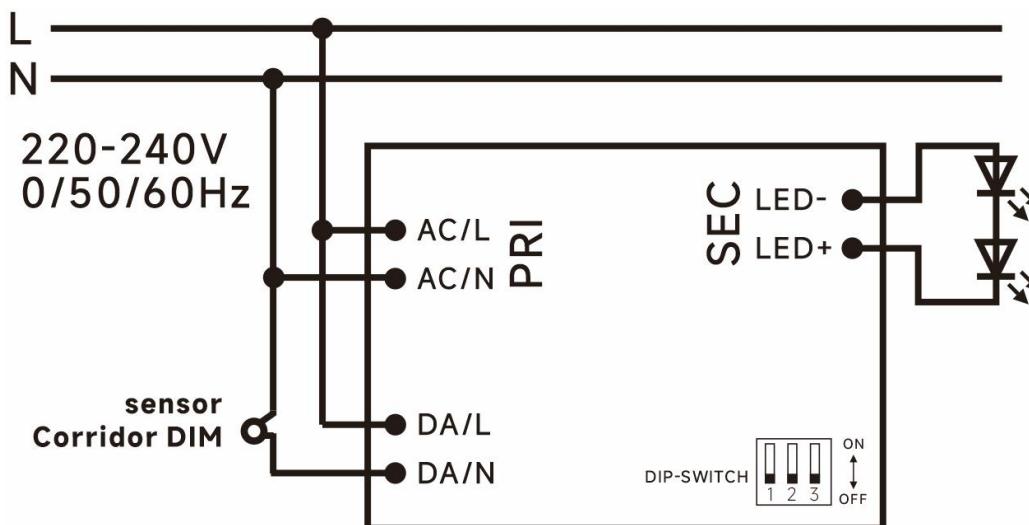
◆ Wiring diagram



DALI dimming application

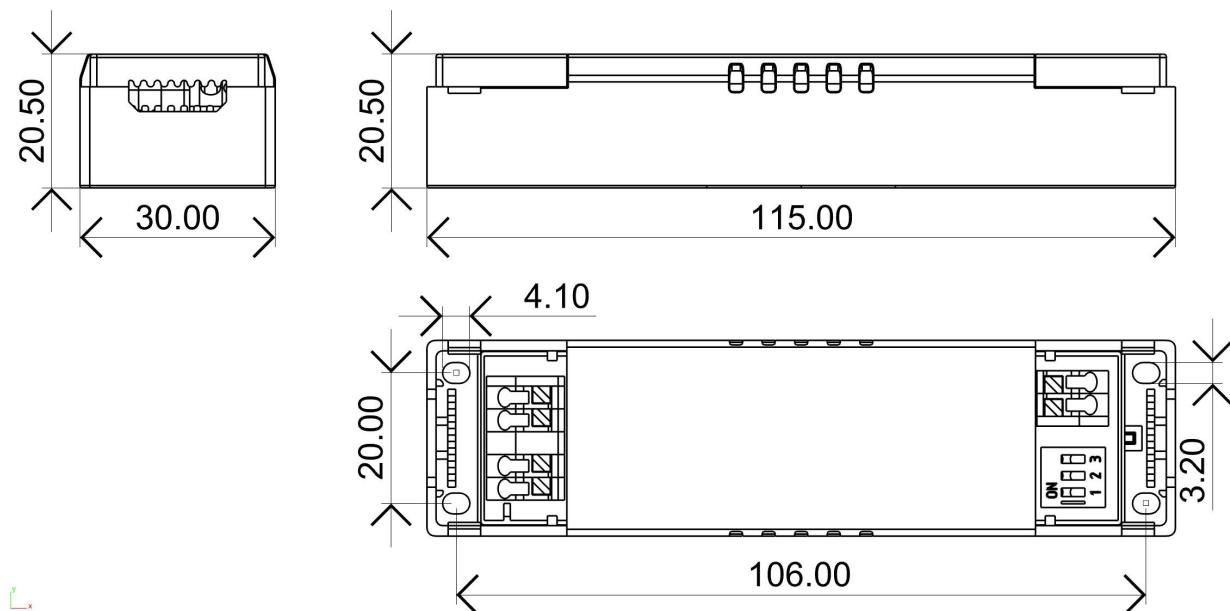


Push DIM dimming application



Corridor DIM dimming application

◆ 2D diagram



◆ Wiring & Connections

Specification item		Value (Unit)
Input	Input wire cross-section	0.5...1.5 mm ²
	Input wire gauge.	16...20 AWG
	Input wire strip length	8...9mm
Output	Output wire cross-section	0.5...1.5 mm ²
	Output wire gauge.	16...20 AWG
	Output wire strip length	8...9mm

◆ Recommended wire

Wire cross-section	Wire type
2*0.5mm ²	H03VWH2-F 2core
2*0.75mm ²	H03VWH2-F 2core
1.5mm ²	CCC 08(RV-90)
16AWG(1.25mm ²)	UL1015

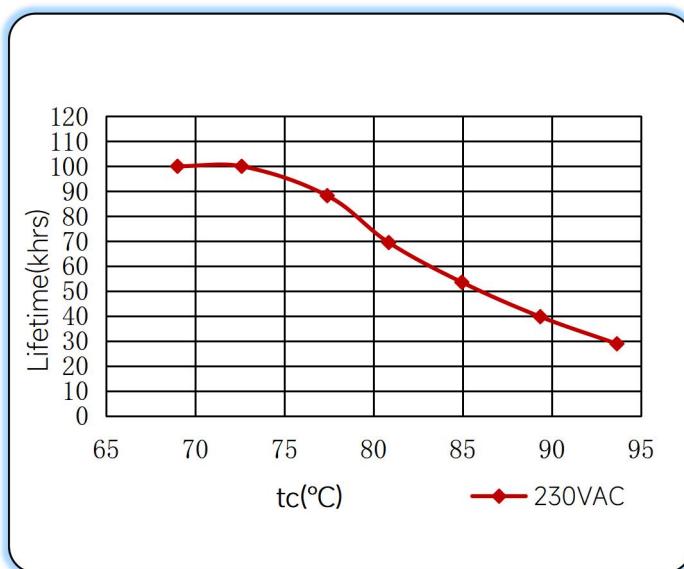
Note: Solid wire is risky to use on an angled terminal. Stranded wire is recommended for this kind of use.

◆ Packaging

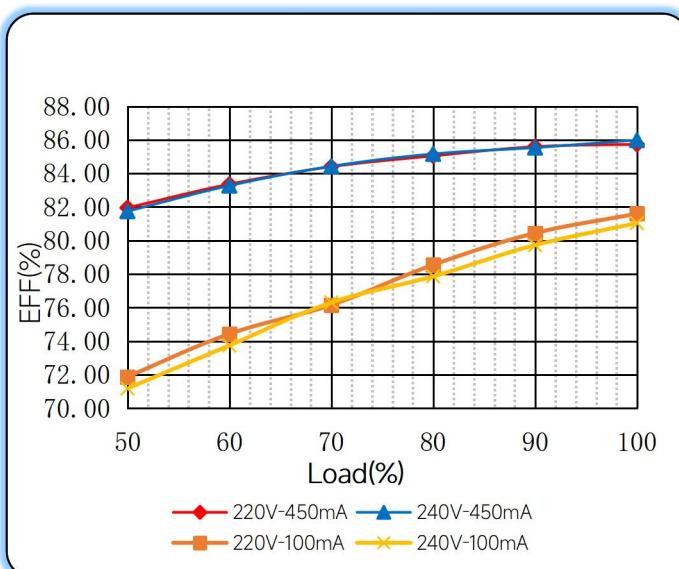
Model	Product Dimensions(mm)	weight/piece	Outer carton dimension(mm)	Quantity/carton	Net weight/carton(Kg)	Gross weight/carton(Kg)
FLS-16-450 DALI-2 LA ADV	115X30X20.5	0.061	380X285X225	203	12.383	14.81

◆ Curve for FLS-16-450 DALI-2 LA ADV, Io=100/450mA

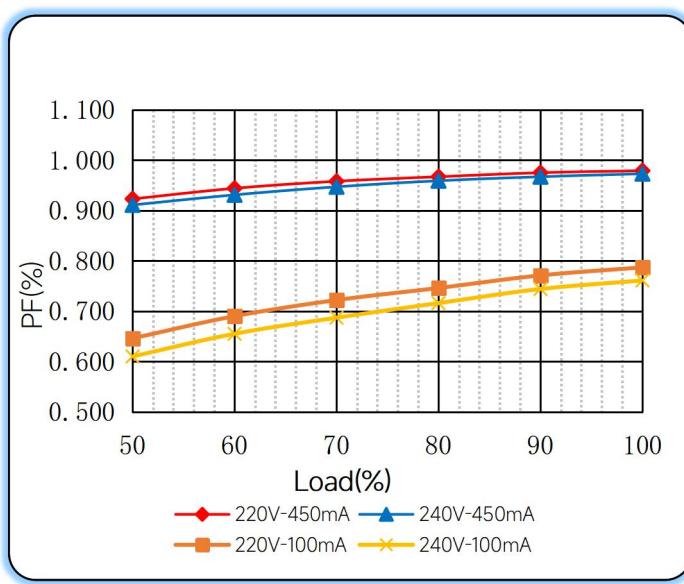
Lifetime vs. Temperature Curve



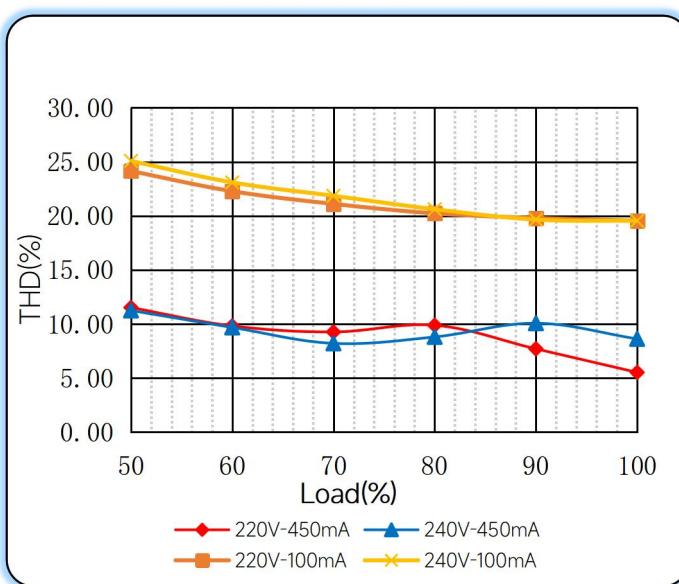
Efficiency vs. Load



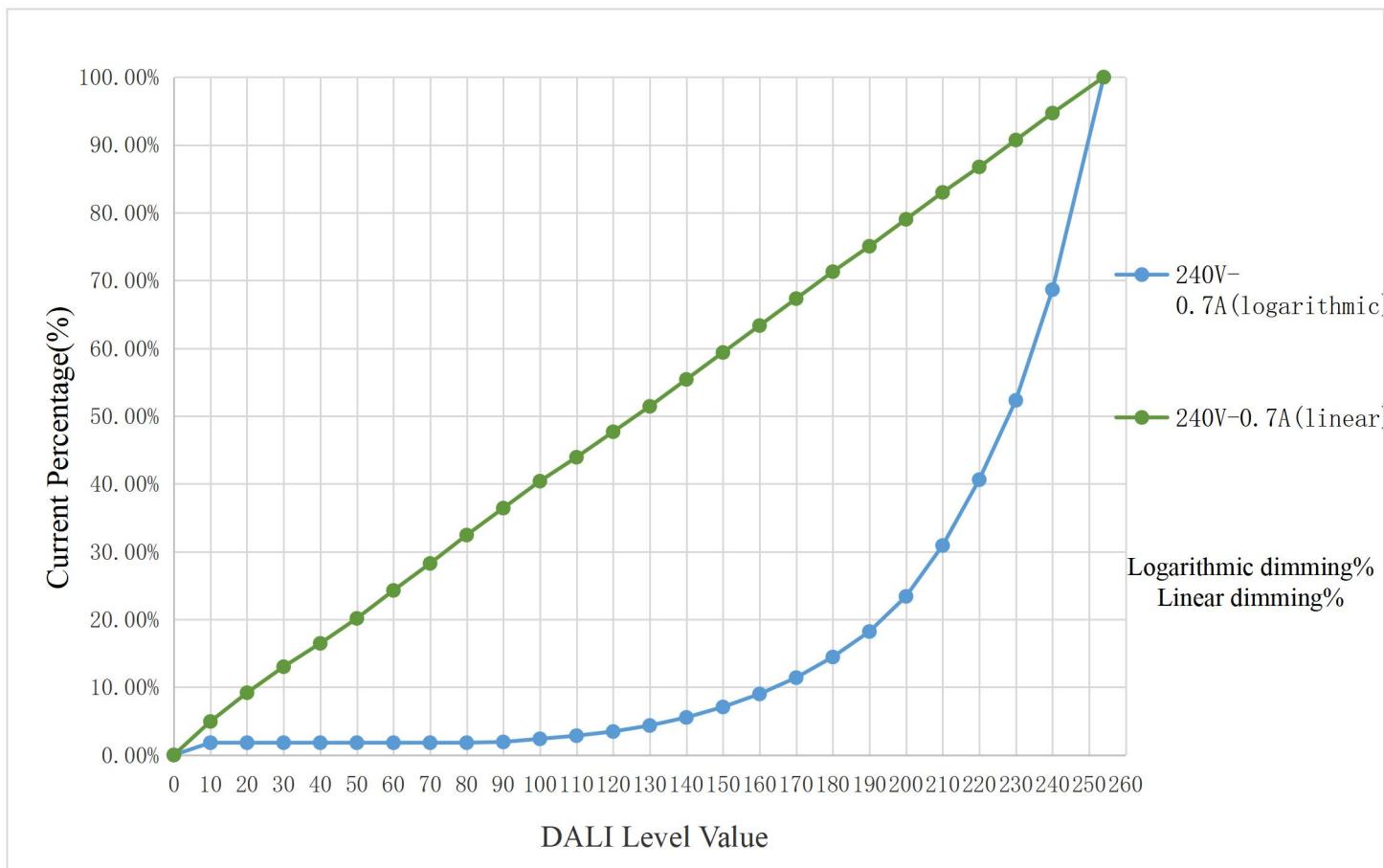
Power Factor Characteristics



THD vs. Load



◆ Dimming Curve



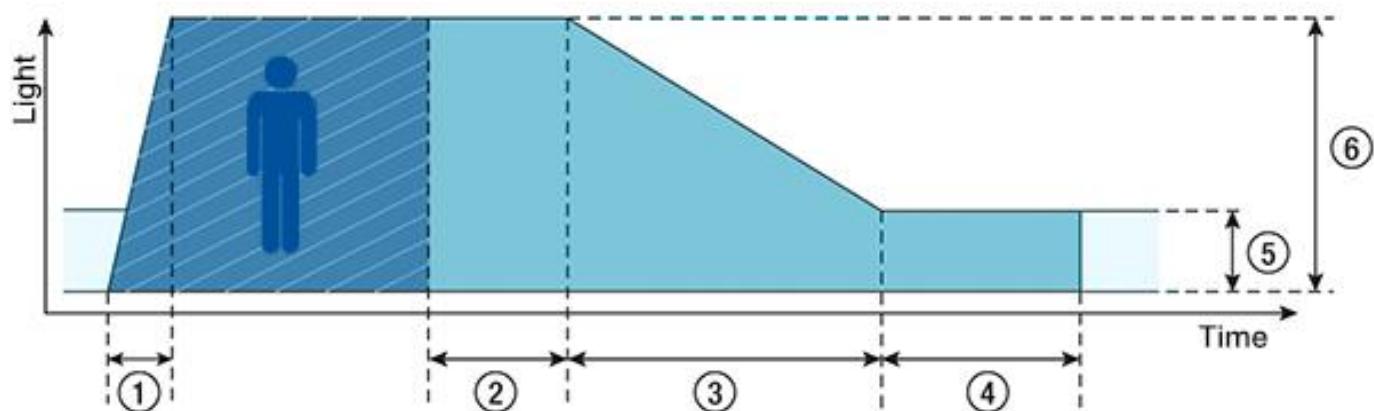
◆ Push dimming operation

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:

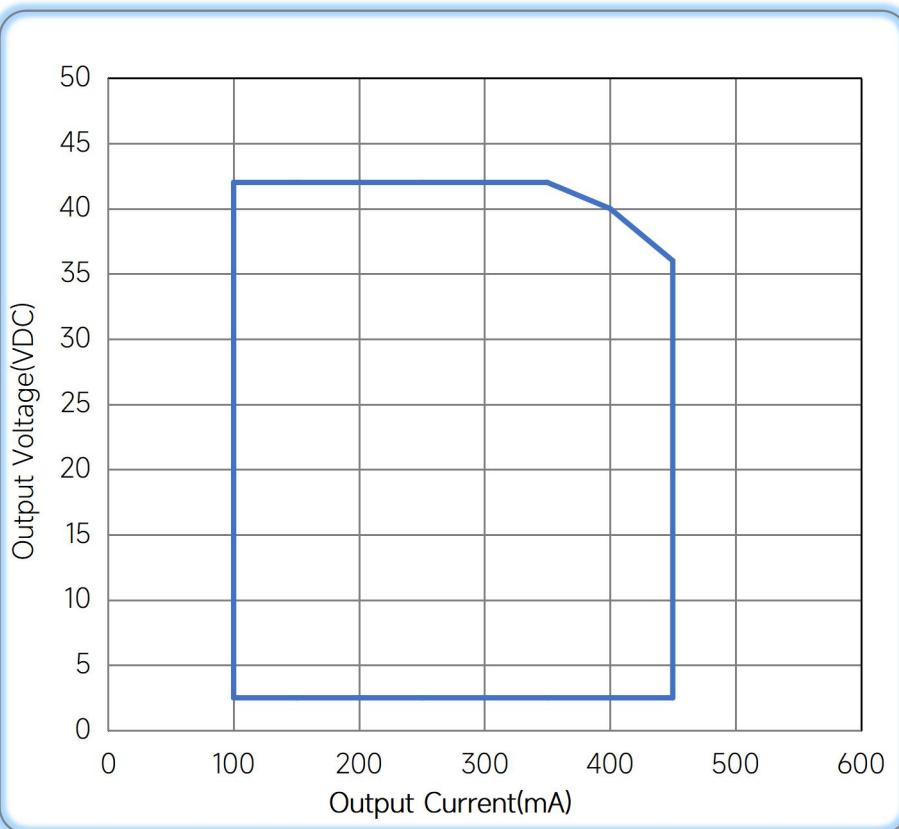
- 1.The factory default brightness is at 100%.
- 2.Up to 30 drivers can perform the PUSH dimming at the same time when utilizing one common push button
- 3.The maximum length of the cable from the push button to the last driver is 200 meters.

◆ 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 (level=10%.Non-configurable): 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	2025/10/20
Model Name	FLS-15-450 DALI-2 LA ADV	FLS-16-450 DALI-2 LA ADV	B	2025/12/05
Current Accuracy	±5%	±7%@100mA;±5%@150 ~ 450mA	C	2026/01/13

Remark: The final interpretation of the contents of the specification belongs to Eaglerise Electric & Electronic (China) Co., Ltd.

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