

40W FDS-DALI-2 Dimming power supply



■ Approve

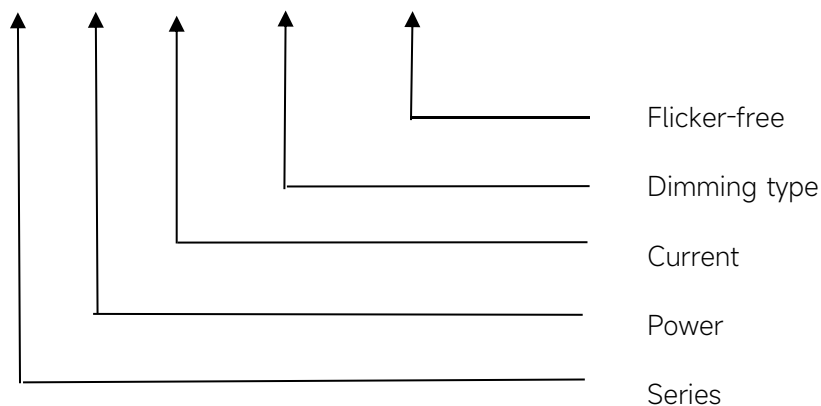


◆ Description

FDS-40-1050 DALI-2 LD is a 40W constant current LED driver that operates from 198-264Vac input with 700mA to 1050mA output current and a forward voltage range from 9 to 42Vdc. The output current is adjustable by DIP Switch. With it's compact dimensions from 248 x 31 x 45 mm. It is easy to integrate in track light products. To ensure trouble-free operation, protection is provided against output short circuit and over Load.

◆ Model code

FDS-40-1050 DALI-2 LD



Features

- Class II,SELV,Built-in
- Input Voltage 220-240VAC
- Protections: SCP/OLP/OVP/OTP
- Power Factor 0.75C-0.98
- Efficiency $\geq 86\%$
- Adjustable Output Current with dip-switch
- Support DALI-2
- 5 years warranty

Applications

- Track light

◆ Specification

Output	Constant Current (mA)	700	750	800	850	900	950	1000	1050
	Voltage Range (VDC)	9-42						9-40	9-38.5
	Unload voltage Max.	56VDC							
	Current Accuracy	±5%							
	Output HF current ripple(≥1KHz)	±10%							
	Output LF current ripple(≤120Hz)	±3%							
	SVM	≤0.4							
	P _{st}	≤1							
	Efficiency(Typ.)	≥86%@Full load,230V							
Input	Rated input voltage	220-240VAC							
	Range of input voltage	198-264VAC							
	Range input voltage(DC)	198-280VDC							
	Frequency(Hz)	0/50/60 Hz							
	Displacement factor	≥0.9							
	Power Factor	0.75C-0.98							
	Input Current	0.26A							
	Start-up time	< 0.5S							
	No Load Power	≤0.5W							
	Standby Power	≤0.5W							
	Network standby power	≤0.5W							
	THD (Typ.)	<10%							
Dimming	Dimming	YES							
	Dimming mode	DALI-2 (IEC 62386-101,102,207)							
	Dimming depth	1%							
	Dimming current range	1 ~100%							
Protection	Over Load Protection	103-120%							
		YES/Latch off							
	Over Voltage Protection	> 56VDC							
		YES/Latch off							
Environment	Short circuit Protection	YES/Latch off							
	Over Temperature Protection	YES/Auto Resume							
	Operating Temperature	-20°C~-+35°C							
	Humidity	20%-90%RH							
	Tc	85°C							
Surface	Storage Temperature	-20°C~-+60°C							
	Lifetime	>50000h,@Tc=85°C							
Surface	Dimension	248X31X45(LXWXH)mm							

Standards	EEN 61347-1,EN 61347-2-13(CE-LVD,ENEC) IEC 61347-1,IEC 61347-2-13(CB) EN 62384(ENEC) EN IEC 55015,EN IEC 61000-3-2,EN 61000-3-3(CE-EMC) EN 61547(CE-EMC)	
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.Switch and dimmer are not recommended to connect between this product output and luminaries.</p> <p>4.The DC input for this product is only used for emergency lighting and applies to functional and safety requirements, EMC is not considered.</p>	

◆ Parameter

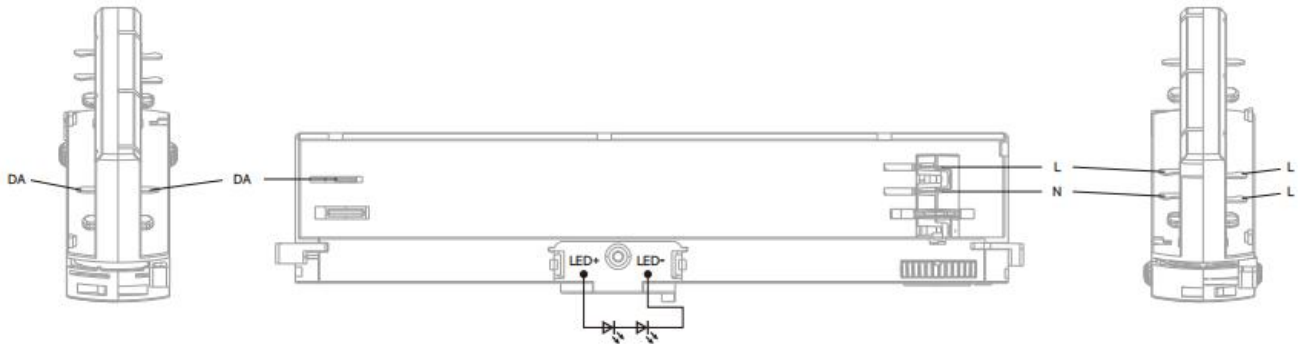
Number	Output	Switch position		
	Current(mA)	1	2	3
1	700	--	--	--
2	750	ON	--	--
3	800	--	ON	--
4	850	ON	ON	--
5	900	--	--	ON
6	950	ON	--	ON
7	1000	--	ON	ON
*8	1050	ON	ON	ON

* Factory default

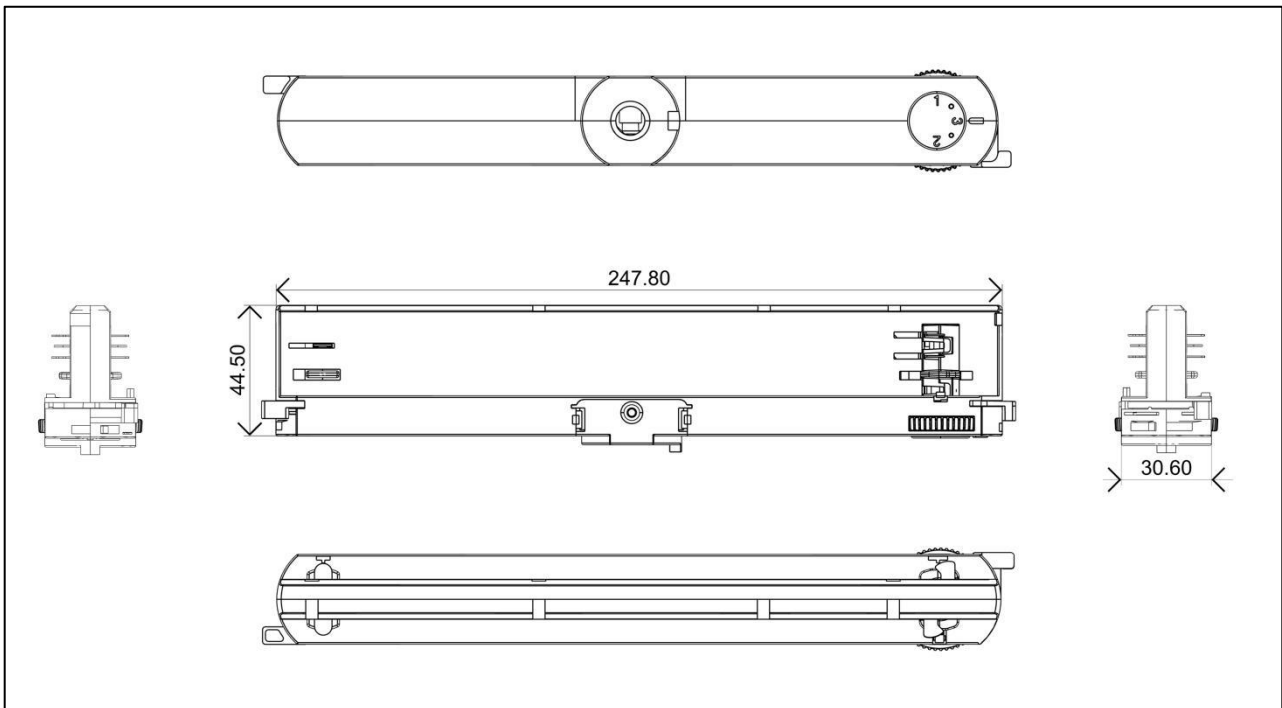
◆ Circuit Breaker

I _{peak}	T _{width}	B10	B16	B20	C10	C16	C20
14.7A	101.6μs	30pcs	49pcs	61pcs	30pcs	49pcs	61pcs

◆ Wiring diagram



◆ 2D diagram

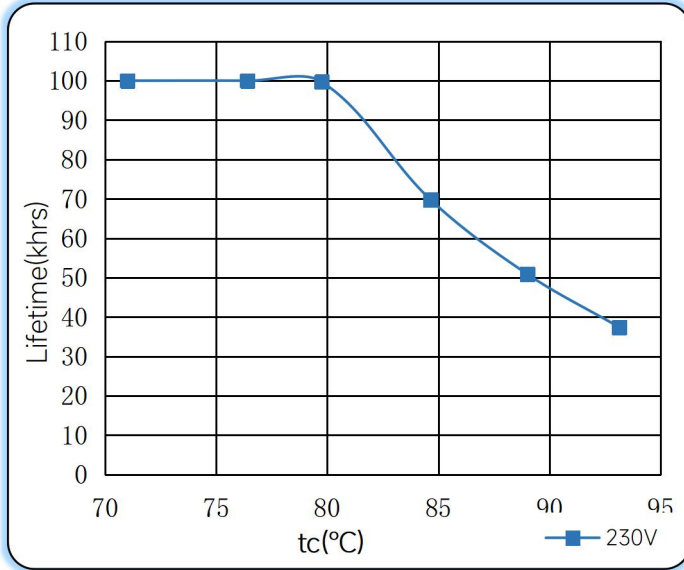


◆ Wiring & Connections

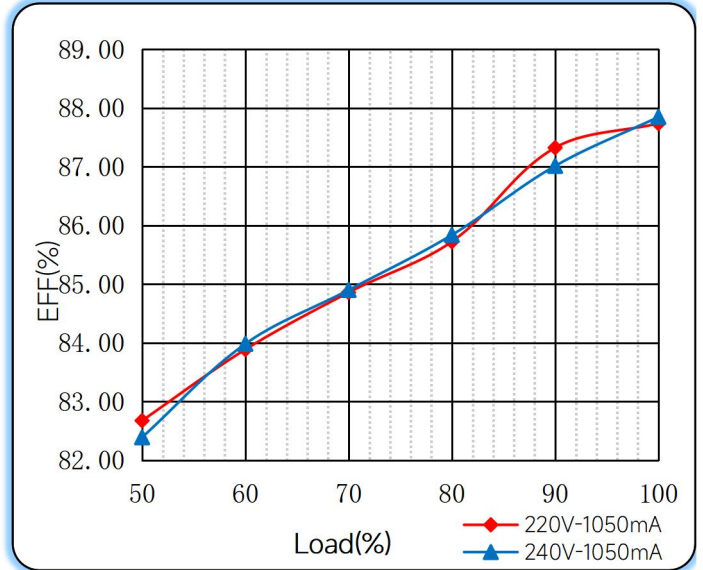
Specification item		Value (Unit)
Output	Output wire cross-section	0.5...1.5 mm ²
	Output wire gauge.	16...20 AWG
	Output wire strip length	8...9mm

◆ Curve for FDS-40-1050 DALI-2 LD, $I_o=1050\text{mA}$

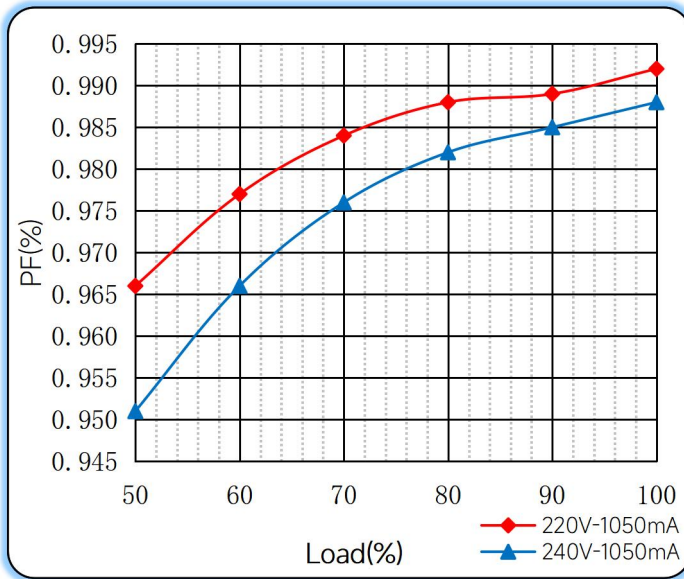
Lifetime vs. Temperature Curve



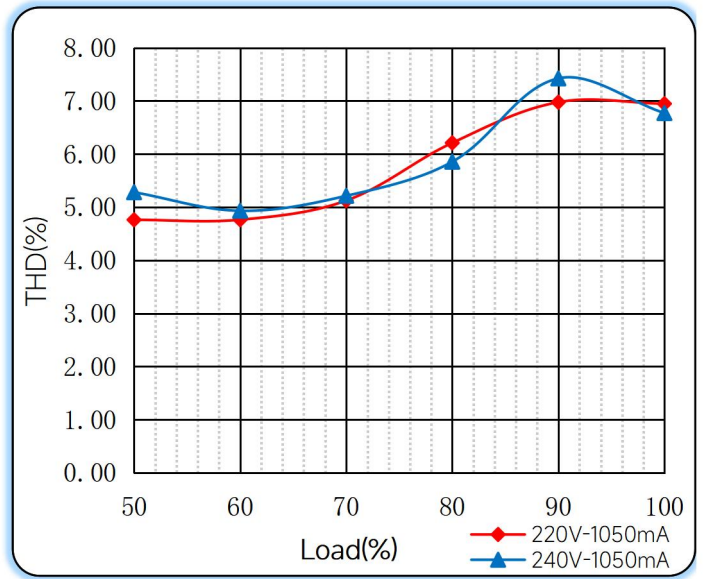
Efficiency vs. Load



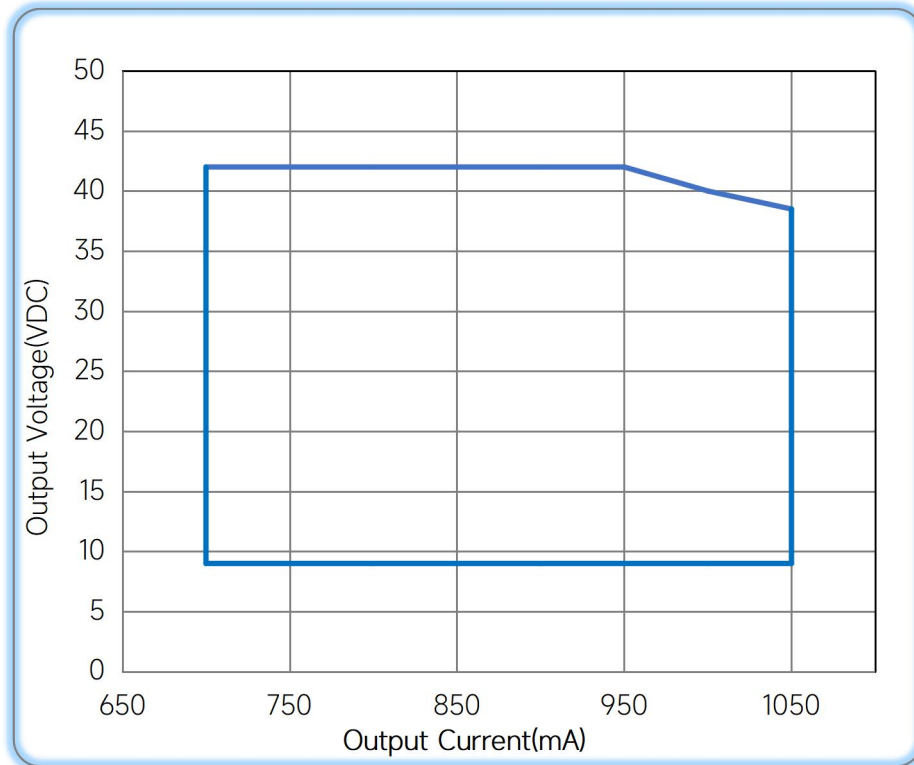
Power Factor Characteristics



THD vs. Load



◆ **Operating window**



◆ **Revision Updates**

ITEM	BEFORE	AFTER	VERSION	DATE
Initial			A	2022/10/24
Updated			B	2023/03/09

Tel: +86-0757-86256822, +86-0757-86256831

E-mail: sales@eaglerise.com

Website : <https://lighting.eaglerise.com>



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Manual