

## 42W Constant Current -FDS power supply



■ Approve



### Features

- Class II,SELV,built-in
- Input Voltage 220-240VAC
- Protections: SCP/OLP/OVP/OTP
- Power Factor :0.95
- Efficiency: 89.5%
- Adjustable Output Current with dip-switch
- 5 years warranty

### Applications

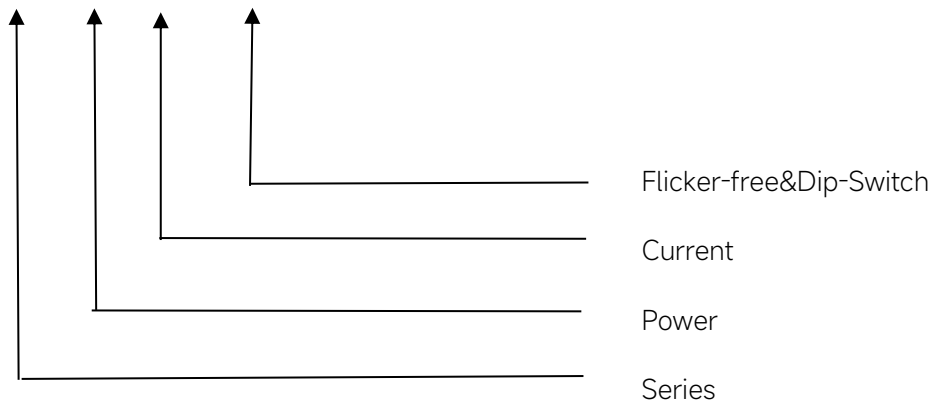
- Track Spot light

### ◆ Description

FDS-42-1050 LD2-3 Wires is a 42W constant current LED driver that operates from 198-264Vac input with 700 to 1050mA output current and a forward voltage range from 15 to 40 Vdc. The output current is adjustable by DIP Switch. With it's compact dimensions from 130 X 34 X 45.5mm it is easy to integrate in track spot light products. To ensure trouble-free operation, protection is provided against output short circuit and over Load.

### ◆ Model code

#### FDS-42-1050 LD2-3 Wires



## ◆ Specification

	Constant Current	700mA	800mA	900mA	1050mA
Output	Voltage Range	15-40VDC			
	Unload voltage Max.	59VDC			
	Current Accuracy	±5%			±7%
	Output HF current ripple(≥1KHz)	±3%			
	Output LF current ripple(≤120Hz)	±3%			
	SVM	≤0.4			
	P <sub>st</sub>	≤1			
	Efficiency(Typ.)	89.5%			
	Input	Rated input voltage	220-240VAC		
Range of input voltage		198-264VAC			
Maximum voltage		300VAC@1 h maximum,unit might not operate in this abnormal condition			
Frequency(Hz)		50/60 Hz			
Displacement factor		≥0.9			
Power Factor		>0.95			
Input Current max		0.28A MAX.			
Start-up time		< 0.5S			
No Load Power		≤0.5W			
THD (Typ.)		<10%			
Protection		Over Load Protection	103-130% YES/Auto Resume		
	Over Voltage Protection	> 59VDC YES/Auto Resume			
	Short circuit Protection	YES/Auto Resume			
capability	Surge capability (L-N)	2KV			
	Surge capability (L/N-Ground)	4KV			
Environment	Operating Temperature	-20°C~+35°C			
	Humidity	20%-90%RH			
	Tc	75°C			
	Storage Temperature	-20°C~+60°C			
	Life time	> 50000h@Tc=75°C			
	Noise	≤25dB(A)@20cm			
Surface	Dimension	130 X 34 X 45.5(LXWXH)mm			
	material	PC			
Standards	Safety	GB19510. 1, GB19510. 14; IEC61347- 1, IEC61347-2- 13; 61347.2.13			
	EMC	GB/T17743, GB17625. 1; EN55015, EN61000-3-2, EN61000-3-3, 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 &amp; Noise are measured at 20MHz of bandwidth by using a 300mm twisted pair-wire terminated with a 0.1uF &amp; 47 uF parallel capacitor.</p> <p>3.Data are typical values obtained from test samples</p> <p>4.The over-temperature protection of the product is provided by the IC.</p> <p>5.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>	

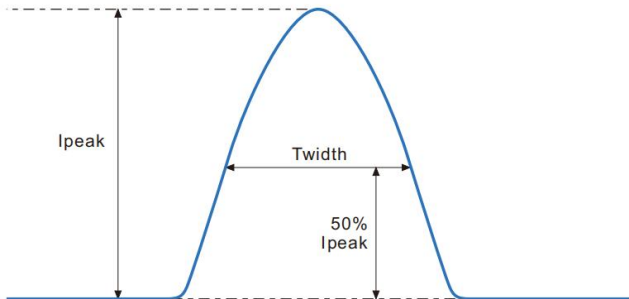
## ◆ Parameter

Number	Output				Switch position	
	Current (mA)	Voltage (VDC)	Voltage No load (VDC)	Power (W)	1	2
1	700mA	15-40VDC	59	28	--	--
2	800mA			32	ON	--
3	900mA			36	--	ON
*4	1050mA			42	ON	ON

\* Factory default

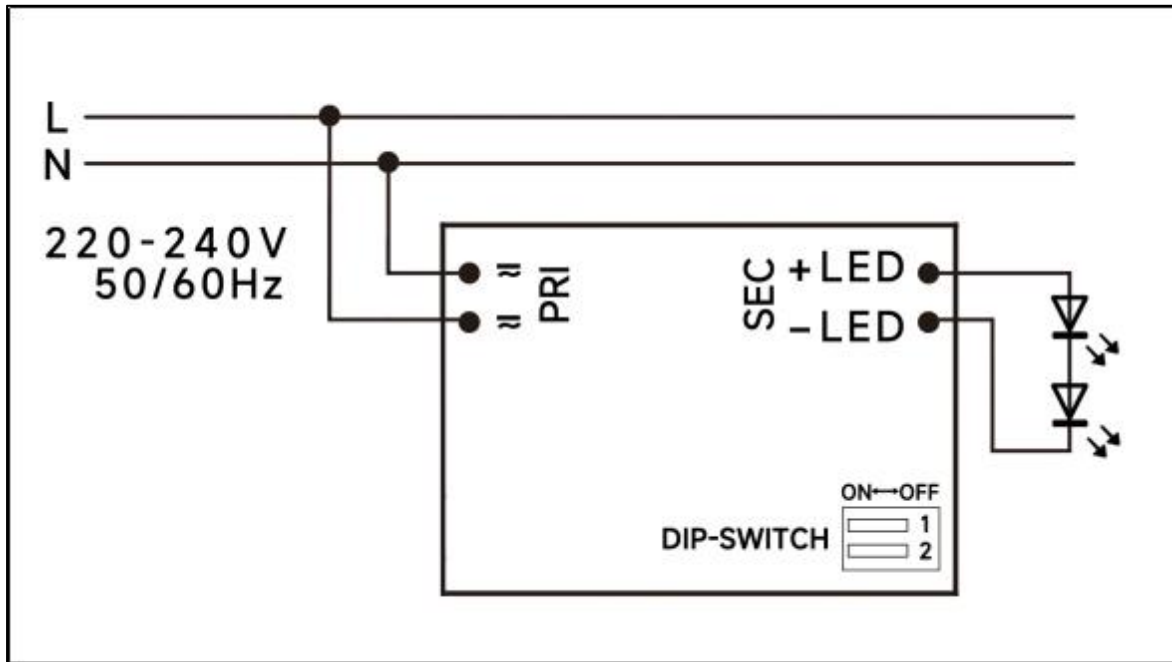
## ◆ Inrush Current

I <sub>peak</sub>	T <sub>width</sub>	B10	B16	B20	C10	C16	C20
20.4A	138μs	28pcs	45pcs	57pcs	28pcs	45pcs	57pcs

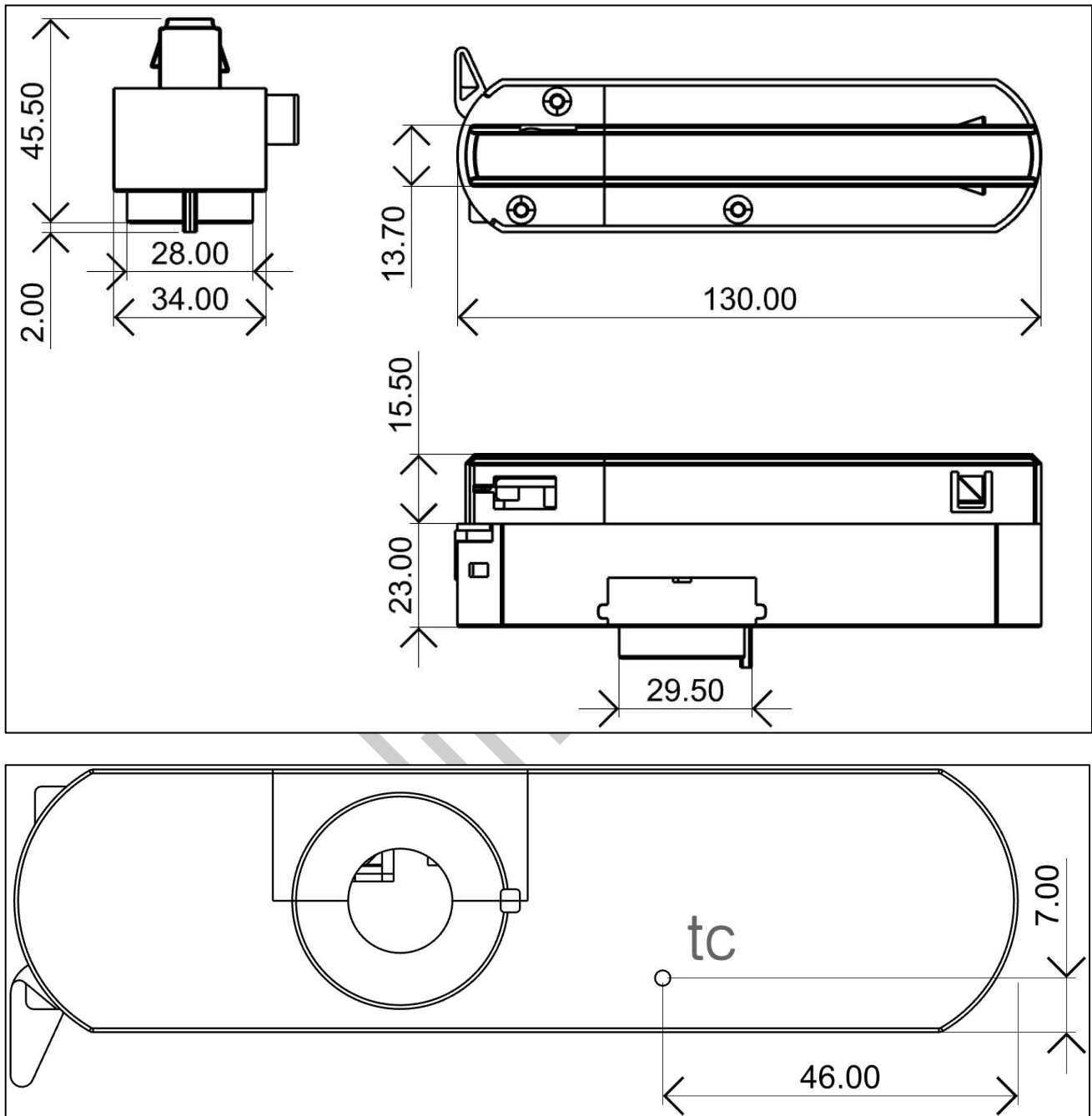


### Remarks:

- 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**

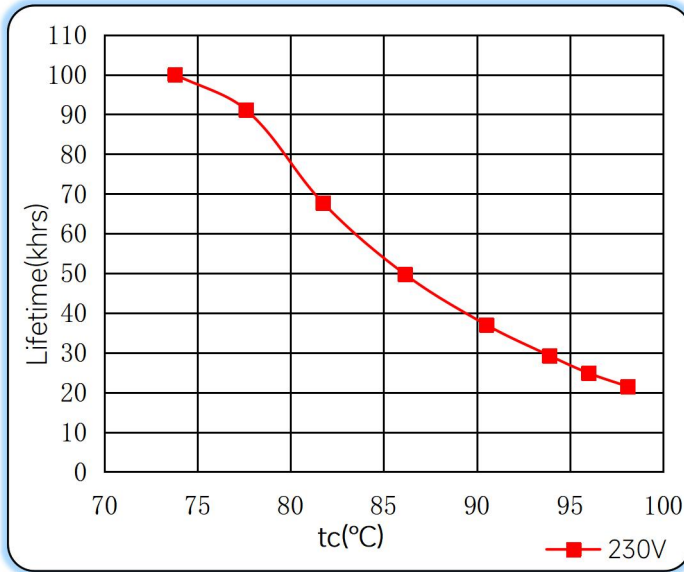
Preliminary

**◆ 2D diagram**

**◆ Wiring & Connections**

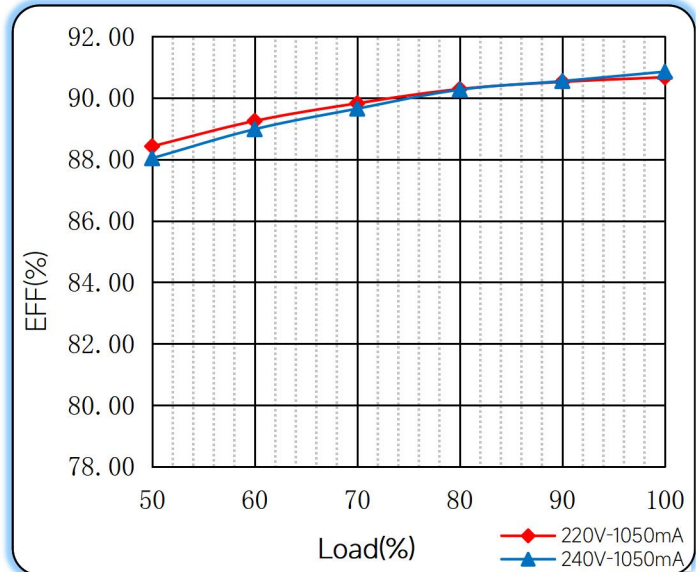
	Specification item	Value (Unit )
Output	Output wire cross-section	0.5...1.5 mm <sup>2</sup>
	Output wire gauge.	16...20 AWG
	Output wire strip length	8...9mm

## ◆ Curve for FDS-42-1050 LD2-3 Wires, $I_o=1050mA$

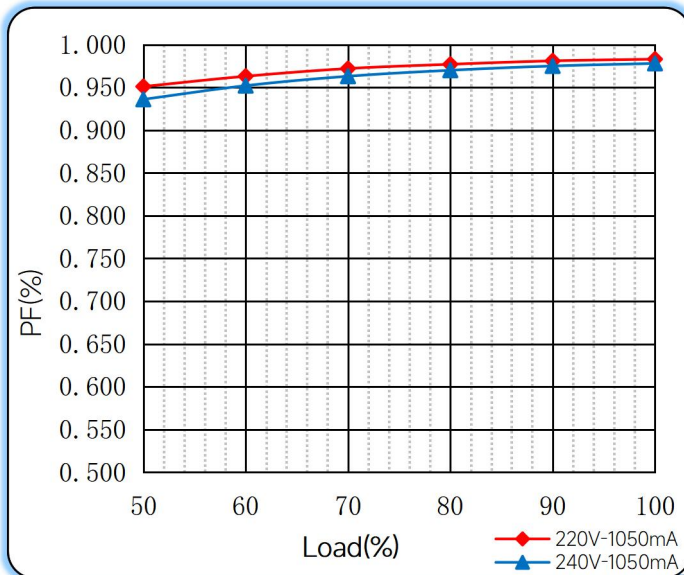
### Lifetime vs. Temperature Curve



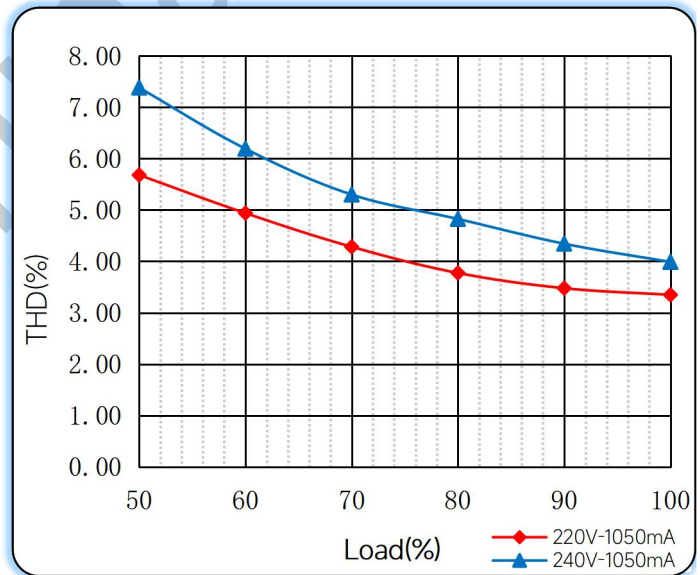
### Efficiency vs. Load



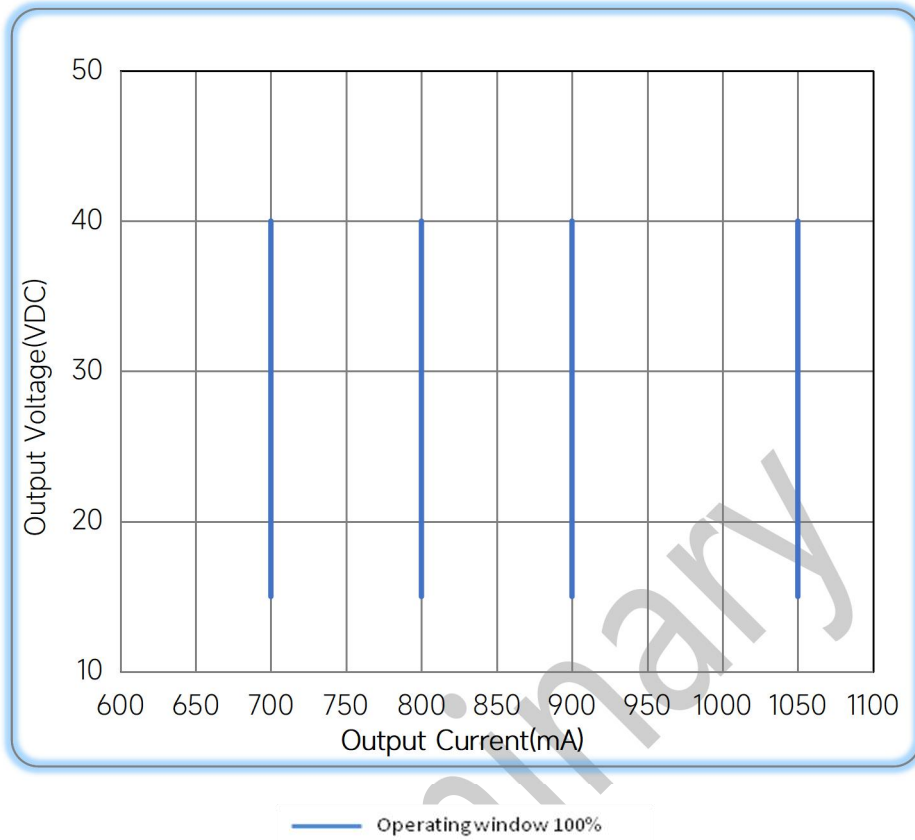
### Power Factor Characteristics



### THD vs. Load



◆ **Operating window**



◆ **Revision Updates**

ITEM	BEFORE	AFTER	VERSION	DATE
Initial			A	2023/10/20
Current Accuracy		update	B	2024/03/12

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

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Manual