

21W Constant Current -FDS power supply



■ Approve



Features

- Class II,SELV,built-in
- Input Voltage 220-240VAC
- Protections: SCP/OLP/OVP/OTP
- Power Factor :0.9
- Efficiency :88%
- Adjustable Output Current with dip-switch
- 5 years warranty

Applications

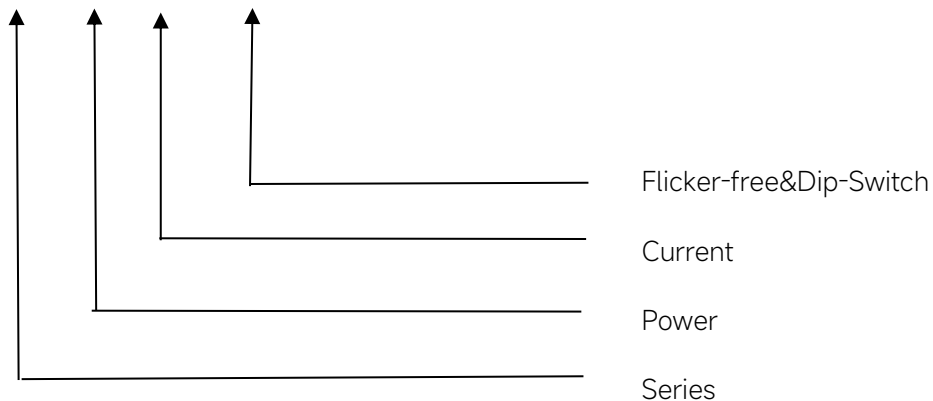
- Track Spot light

◆ Description

FDS-21-500 LD2-3 Wires is a 21W constant current LED driver that operates from 198-264Vac input with 350 to 500mA output current and a forward voltage range from 15 to 42 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-21-500 LD2-3 Wires



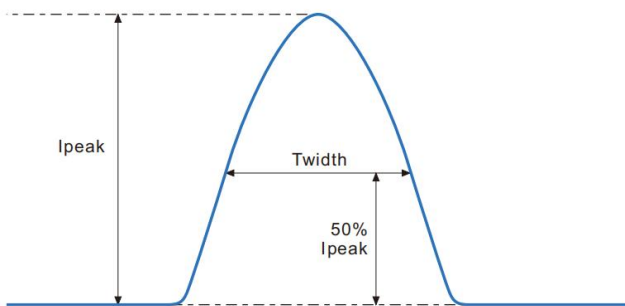
◆ Specification

	Constant Current	350mA	400mA	450mA	500mA
Output	Voltage Range	15-42VDC			
	Unload voltage Max.	59VDC			
	Current Accuracy	±7%		±5%	
	Output HF current ripple(≥1KHz)	±3%			
	Output LF current ripple(≤120Hz)	±3%			
	SVM	≤0.4			
	P _{st}	≤1			
	Efficiency(Typ.)	88%			
	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		>0.9			
Input Current max		0.15A 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	70°C			
	Storage Temperature	-20°C~+60°C			
	Life time	> 50000h@Tc=70°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 & 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.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>
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◆ Inrush Current

I ^{peak}	T _{width}	B10	B16	B20	C10	C16	C20
12.8A	113.6μs	53pcs	85pcs	106pcs	53pcs	85pcs	106pcs



Remarks:

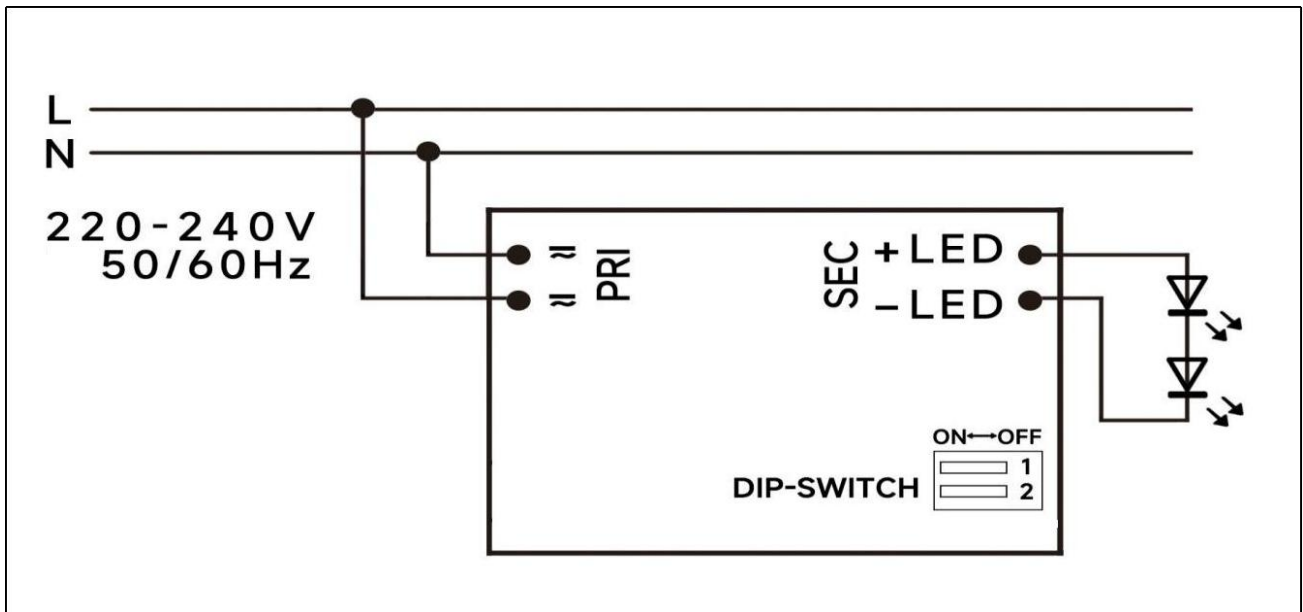
- 1.The number of drives mounted under different MCBs in the table is the maximum value. Please do not exceed this number during installation.
- 2.Different brands and models of miniature circuit breakers, the number of drives mounted will be slightly different.

◆ Parameter

Number	Output				Switch position	
	Current (mA)	Voltage (VDC)	Voltage No load (VDC)	Power (W)	1	2
1	350mA	15-42VDC	59	14.7	--	--
2	400mA			16.8	ON	--
3	450mA			18.9	--	ON
*4	500mA			21	ON	ON

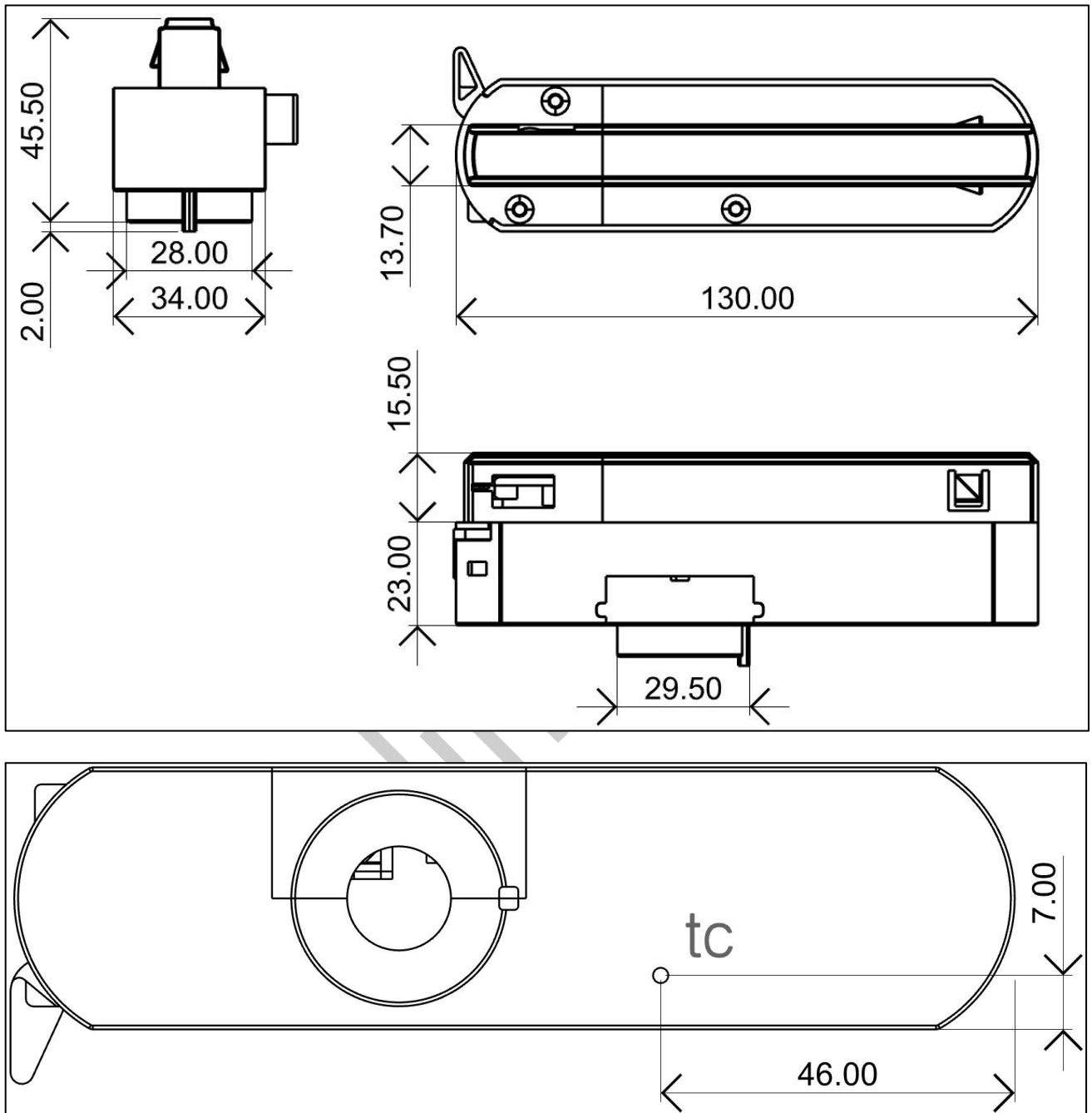
* Factory default

◆ **Wiring diagram**



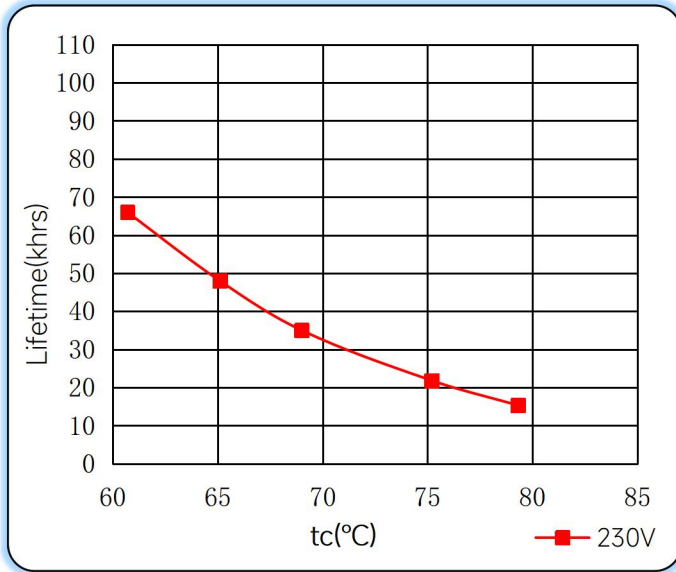
Preliminary

◆ 2D diagram

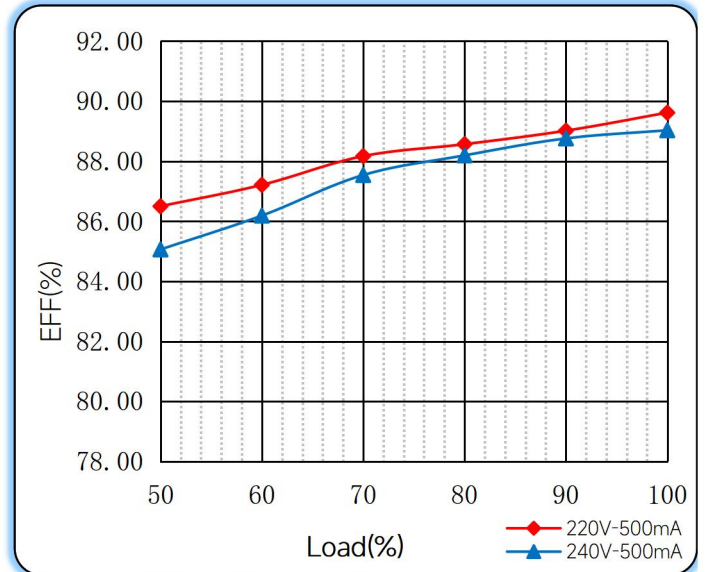


◆ Curve for FDS-21-500 LD2-3 Wires, $I_o=500\text{mA}$

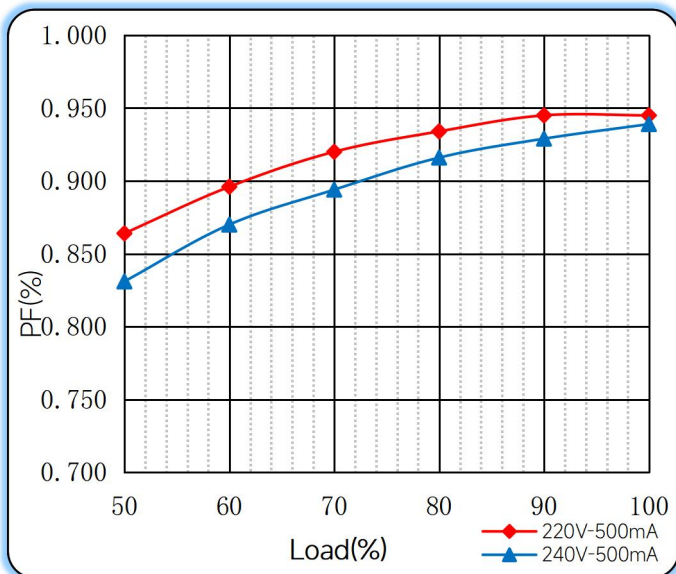
Lifetime vs. Temperature Curve



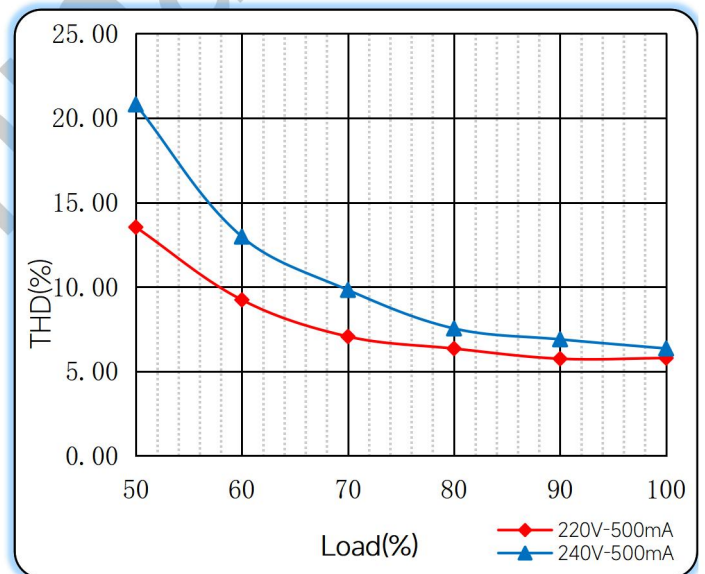
Efficiency vs. Load



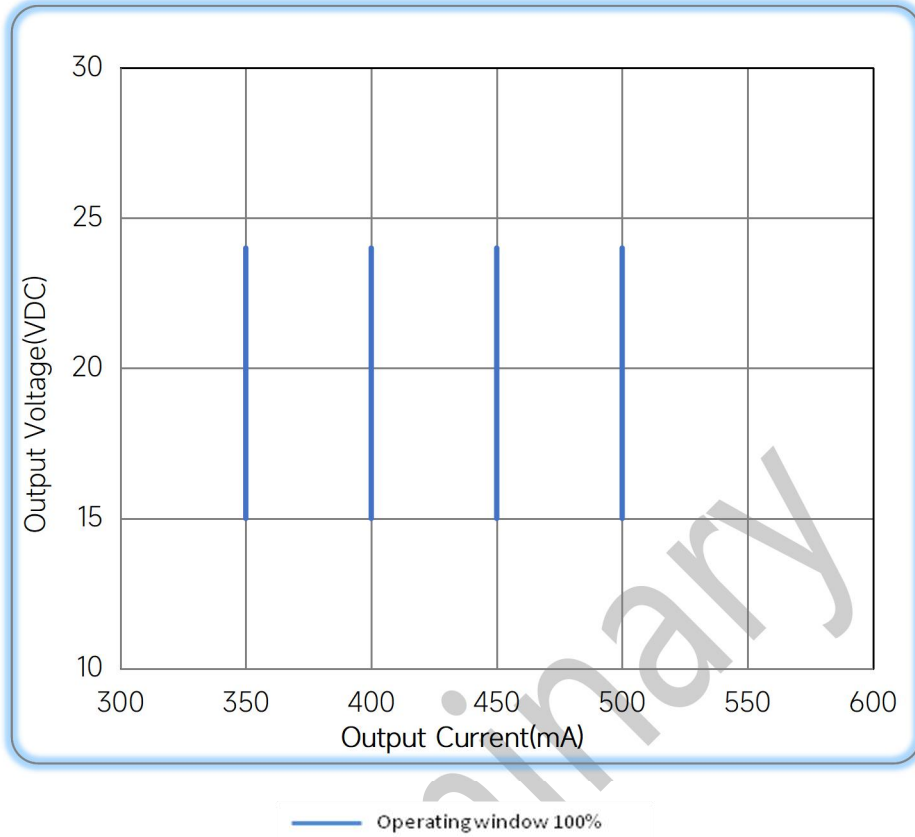
Power Factor Characteristics



THD vs. Load



◆ **Operating window**



◆ **Revision Updates**

ITEM	BEFORE	AFTER	VERSION	DATE
Initial			A	2023/08/17
Current Accuracy		Update	B	2024/03/21

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

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Manual