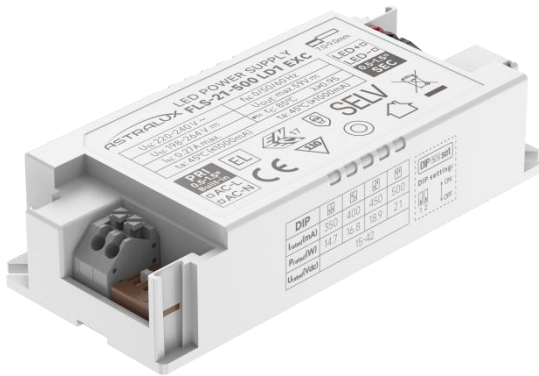


## 21W Constant Current Power Supply



■ Approve



SELV

### Features

- For luminaires of protection Class II, SELV, Built-in/Independent
- Input Voltage: 220-240VAC
- Protections: SCP/OLP/OVP/OTP
- Power Factor: 0.95(Typ.)
- Efficiency:  $\geq 85\%$ (Typ.)
- Adjustable Output Current with dip-switch
- 5 years warranty
- IP20

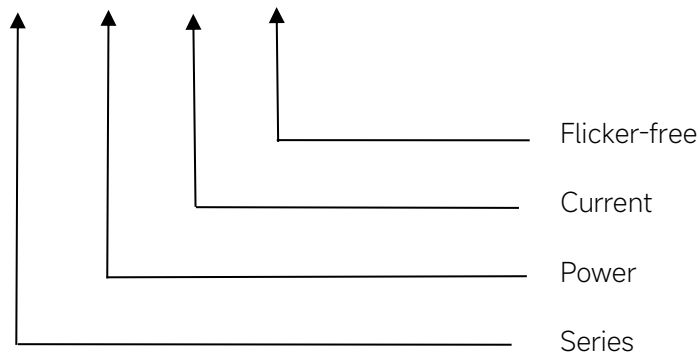
### Applications

### ◆ Description

FLS-21-500 LD1 EXC is a 21W constant current LED driver with 350 to 500mA output current and a forward voltage range from 27 to 42Vdc. The output current is adjustable by DIP Switch. With it's compact dimensions from 88 x 40 x 22 mm. It is easy to integrate in LED Panel and down light products. The side covers are available as accessories and allow to use the LED driver independent.

### ◆ Model code

#### FLS-21-500 LD1 EXC



## ◆ Specification

Output	Constant Current (mA)	350mA	400mA	450mA	500mA
	Voltage Range(VDC)	27-42V			
	Unload voltage Max.(VDC)	59V			
	Current Accuracy	±5%			
	Output HF current ripple(≥1KHz)	≤±5%			
	Output LF current ripple(≤120Hz)	≤±3%			
	SVM	≤0.4			
	Pst	≤1			
	Efficiency(Typ.)	≥85% @Full Load,230V			
	EOFI	100%			
Input	Rated input voltage(VAC)	220-240V			
	Range of input voltage(VAC)	198-264VAC			
	Maximum voltage	300VAC@1 h maximum,unit might not operate in this abnormal condition			
	Range of input voltage(VDC)	176-280VDC			
	Frequency(Hz)	0/50/60 Hz			
	Displacement factor	≥0.95 @Full Load,230V			
	Power Factor	0.95 @Full Load,230V			
	Input Current max	0.13A Max			
	Start-up time	< 0.5S			
	No Load Power	≤0.5W			
	THD (Typ.)	<10% @Full Load,230V			
Protection	Over Load Protection	103-120%			
		YES/Auto Resume			
	Over Voltage Protection	>59V			
		YES/Auto Resume			
	Short circuit Protection	YES/Auto Resume			
capability	Over Temperature Protection	YES/Auto Resume			
	Surge capability (L-N)	1KV			
	Surge capability (L/N-Ground)	NA			
Environment	Operating Temperature	-20°C~+45°C			
	Humidity	20%-90%RH			
	Tc	85°C			
	Storage Temperature	-25°C~+60°C			
	Life time	> 50000h@Tc=80°C			
	Noise	≤20dB(A)@10cm			
Surface	Dimension	88X40X22mm (With side caps):122X40X22mm			
	material	PC			
Standards	Safety	GB19510. 1, GB19510. 14;IEC61347- 1, IEC61347-2- 13;EN61347- 1, EN61347-2- 13; EN62384;			

	EMC	GB/T17743, GB17625. 1;EN55015, EN61000-3-2, EN61000-3-3, EN61547;EN61000-4-2,3,4,5,6,8,11, EN61547;EN61000-4-5
	Energy Efficiency	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.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>4.All Astralux 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>	

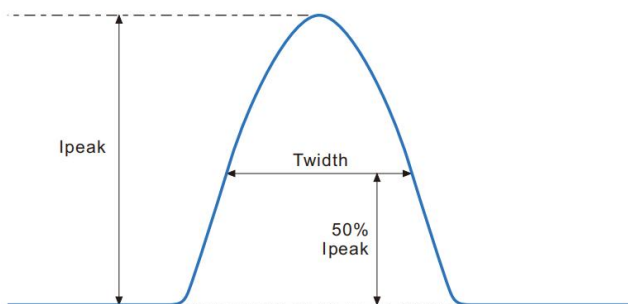
## ◆ Parameter

Number	Output				Switch position	
	Current (mA)	Voltage (VDC)	Voltage No load (VDC)	Power (W)	1	2
1	350mA	27-42VDC	59	14.7	--	--
2	400mA			16.8	ON	--
3	450mA			18.9	--	ON
*4	500mA			21	ON	ON

\* Factory default

## ◆ Inrush Current

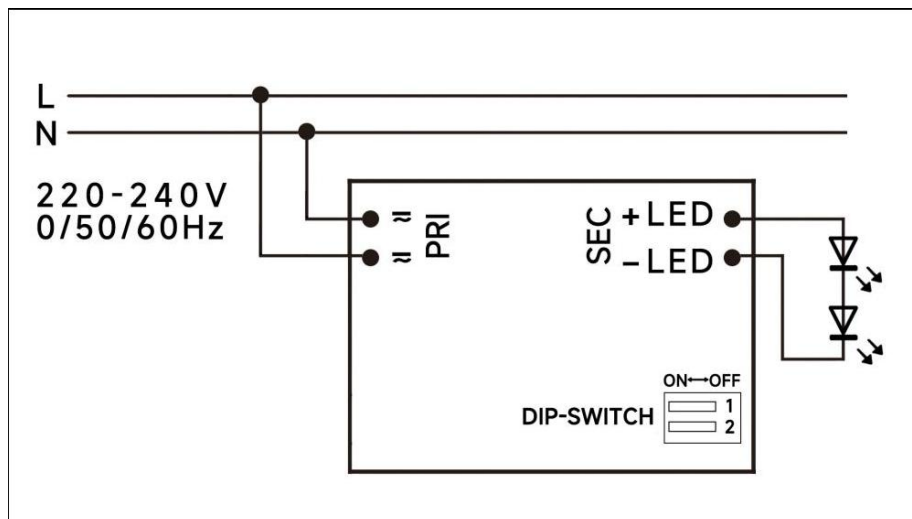
$I_{peak}$	$T_{width}$	B10	B16	B20	C10	C16	C20
A	$\mu s$	pcs	pcs	pcs	pcs	pcs	pcs



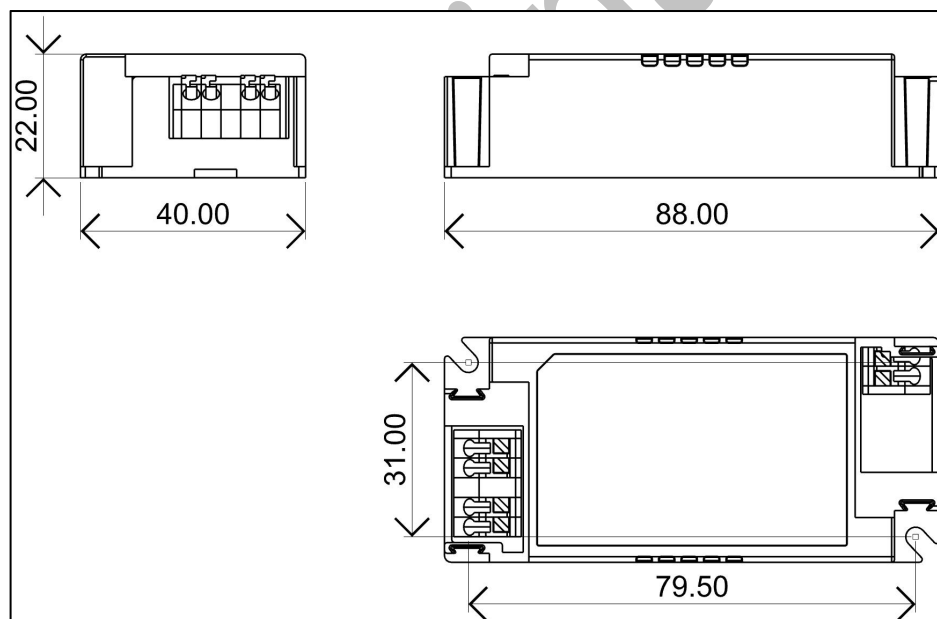
### Remarks:

- 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.

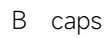
## ◆ Wiring diagram



## ◆ 2D diagram

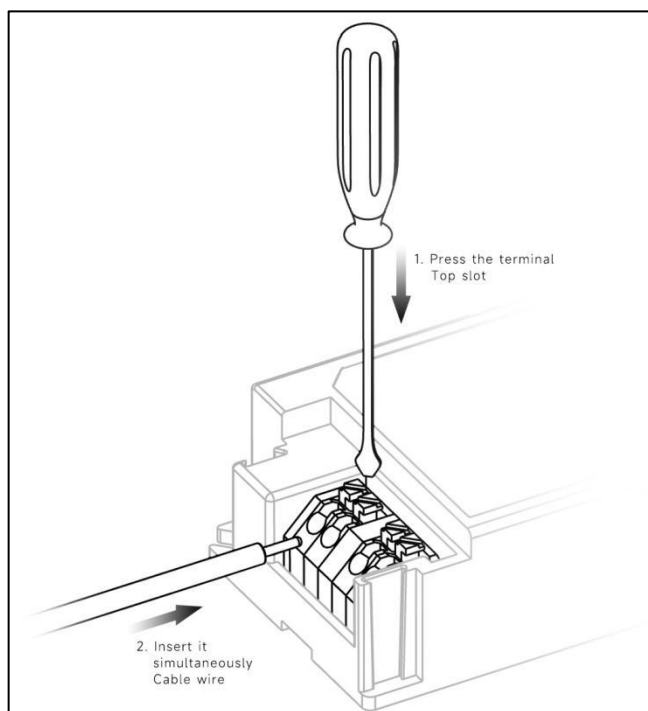


With side caps



132021T0256	Small, Grey ,with "Don't Cover" mark
1270100280	Screws

## Article information 2024/ 12/16



Preliminary

## ◆ Wiring & Connections

Specification item		Value (Unit )
Input	Input wire cross-section	0.5...1.5 mm <sup>2</sup> (With side caps: 0.75...1.5 mm <sup>2</sup> )
	Input wire gauge.	16...20 AWG (With side caps: 16...22 AWG )
	Input wire strip length	7...9mm
Output	Output wire cross-section	0.5...1.5 mm <sup>2</sup>
	Output wire gauge.	16...20 AWG
	Output wire strip length	7...9mm

## ◆ Recommended wire

Small side cap of small hole	Wire type
0.5mm <sup>2</sup>	H03VVH2-F 2 core&3 core H03VV-F 2 core&3 core
0.75mm <sup>2</sup>	H03VVH2-F 2 core&3 core H03VV-F 2 core&3 core H05VV-F 2 core
1.0mm <sup>2</sup>	H05VVH2-F 2 core
1.5mm <sup>2</sup>	CCC 08(RV-90)

Small side cap of big hole	Wire type
0.75mm <sup>2</sup>	H05VV-F 2 core&3 core&4 core
1.0mm <sup>2</sup>	H05VV-F 2 core&3core
1.5mm <sup>2</sup>	H05VV-F 2 core&3core

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

# ◆ Curve for FLS-21-500 LD1 EXC, $I_o=700\text{mA}$

Lifetime vs. Temperature Curve

Efficiency vs. Load

Power Factor Characteristics

THD vs. Load

Preliminary

## ◆ Operating window

Operating window 100%

## ◆ Revision Updates

ITEM	BEFORE	AFTER	VERSION	DATE
Initial			A	2024/02/23
Tc	85°C	90°C	B	2024/12/16

Remark: The final interpretation of the contents of the specification belongs to Astralux.

Preliminary

E-mail: [sales@astralux-driver.com](mailto:sales@astralux-driver.com)

Website : [www.astralux-driver.com](http://www.astralux-driver.com)