

20W Constant Current CCT power supply



■ Approve

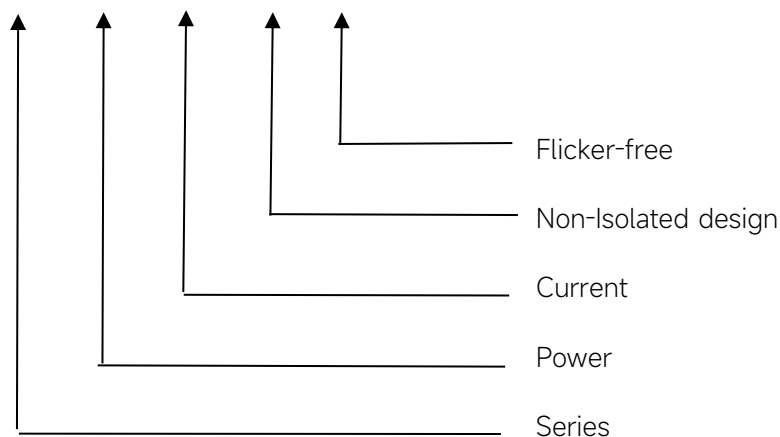


◆ Description

FMS-20-350 N-S CCT LD EXC is a 20W constant current LED driver that operates from 198-264Vac input with 200 to 350mA output current. The output current is adjustable by DIP Switch. With it's dimensions from 168 x 30 x 21mm. It is easy to integrate in linear light products. To ensure trouble-free operation, protection is provided against output short circuit, over voltage and over temperature.

◆ Model code

FMS-20-350 N-S CCT LD EXC



Features

- For luminaries of protection Class I/II , Non-isolated, Built-in
- Input Voltage 220-240VAC
- Protections: SCP/OLP/OVP/OTP
- Power Factor: ≥ 0.9 (Typ.)
- Efficiency: $\geq 86\%$ (Typ.)
- Adjustable Output Current with dip-switch
- 5 years warranty
- IP20

Applications

- Linear light

◆ Specification

Output	Constant Current	200mA	250mA	300mA	350mA
	Voltage Range	25-100VDC	25-80VDC	25-66.7VDC	25-57VDC
	Unload voltage Max.	250VDC			
	Current Accuracy	±5%			
	Output HF current ripple(≥1KHz)	±20%			
	Output LF current ripple(<120Hz)	±5%			
	SVM	≤0.4			
	Pst	≤1			
	Efficiency(Typ.)	≥86%@Full load ,220-240V			
	CCT funtion	YES/Three-step color temperature adjustment via tact switch			
Input	Rated input voltage	220-240V			
	Range of input voltage	198-264VAC			
	Maximum voltage	300VAC@1 h maximum,unit might not operate in this abnormal condition			
	Range of input DC voltage(VDC)	176-280VDC			
	Frequency(Hz)	0/50/60 Hz			
	Displacement factor	≥0.9			
	Power Factor	≥0.9@Full load ,220-240V			
	Input Current max	0.15A			
	Start-up time	< 0.5S			
	No Load Power	≤0.5W			
	THD (Typ.)	<15% @Full load ,220-240V			
Protection	Over Load Protection	>105%			
		YES/Auto Resume			
	Over Voltage Protection	>120V			
		YES/Auto Resume			
	Short circuit Protection	YES/Auto Resume			
capability	Surge capability (L-N)	2KV			
	Surge capability (L/N-Ground)	2KV			
Environment	Operating Temperature	-20°C~+50°C			
	Humidity	20%-90%RH			
	Tc	80°C			
	Storage Temperature	-25°C~+60°C			
	Life time	> 50000h@Tc=75°C,230VAC			
	Noise	≤25dB(A)@20cm			
Surface	Dimension	168 x 30 x 21(LXWXH)mm			
	material	metal case			
Standards	Safety	GB19510.1, GB19510.14; IEC61347-1, IEC61347-2-13; EN61347-1, EN61347-2-13, EN62384;AS/NAS 61347-1, AS/NAS 61347-2-13;AS/NZS 61347.1,AS 61347.2.13			

	EMC	GB/T17743, GB17625. 1; EN55015, EN61000-3-2, EN61000-3-3, EN61547; EN55015, EN61000-3-2, EN61000-3-3, EN61547; EN61000-4-5
	ErP	Erp2.0 EU 2019/2020
	RoHS	RoHS (2011/65/EU) (EU)2015/863
Note	1.All parameters NOT specially mentioned are measured at 230VAC input, full load and 25°C of ambient temperature. 2.Ripple & Noise are measured at 20MHz of bandwidth 3.Switch and dimmer are not recommended to connect between this product output and luminaries. 4.The DC input for this product is only used for emergency lighting and applies to functional and safety requirements, EMC is not considered.. 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. 6.The over-temperature protection of the product is provided by the IC. 7.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.	

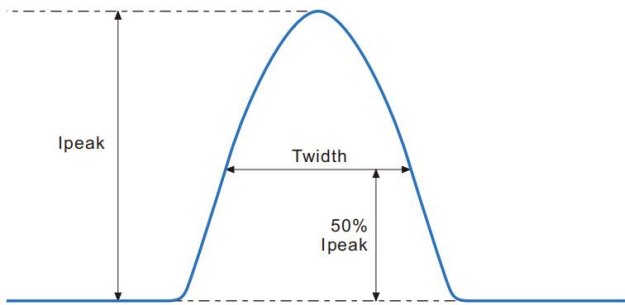
◆ Parameter

Number	Output				Switch position	
	Current (mA)	Voltage (VDC)	Voltage No load (VDC)	Power (W)	1	2
1	200mA	25-100	250	20W	--	--
2	250mA	25-80		20W	ON	--
3	300mA	25-66.7		20W	--	ON
*4	350mA	25-57		20W	ON	ON

* Factory default

◆ Inrush Current

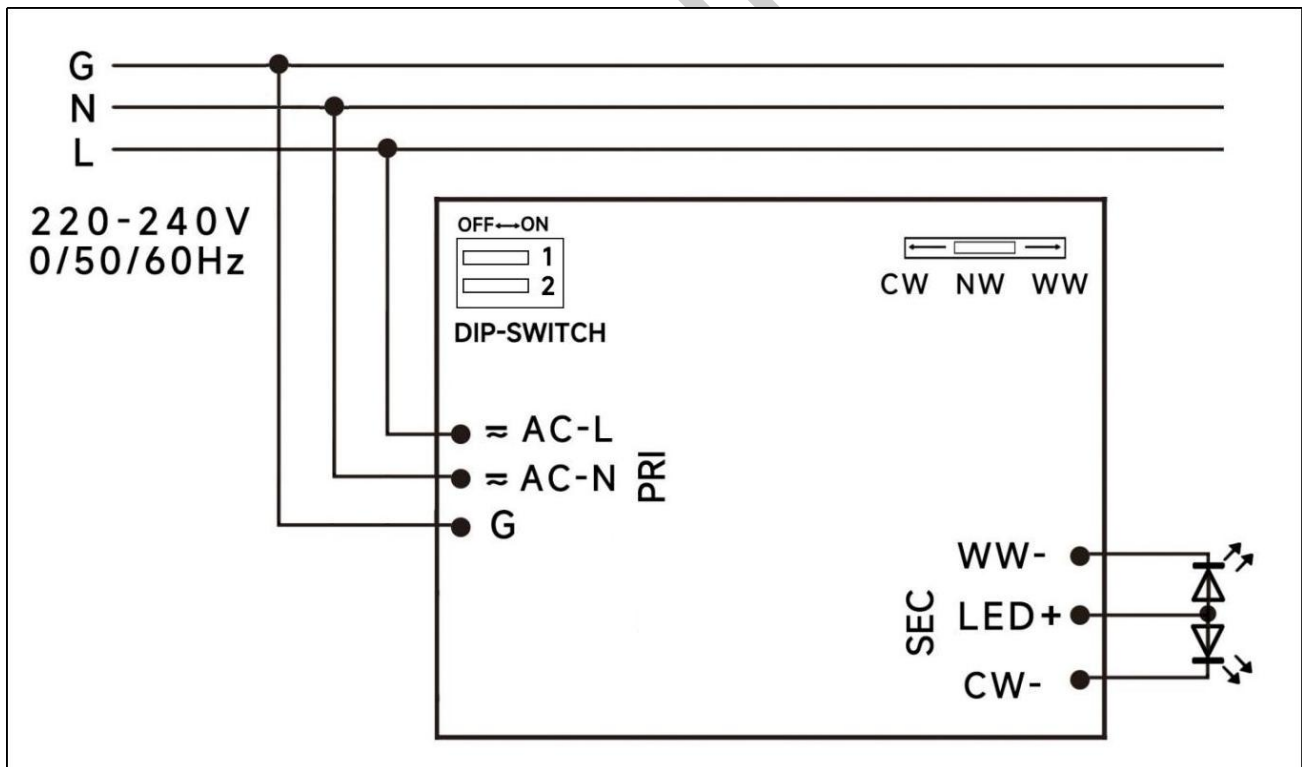
I_{peak}	Twidth	B10	B16	B20	C10	C16	C20
15.7A	106μs	51pcs	81pcs	102pcs	53pcs	85pcs	106pcs



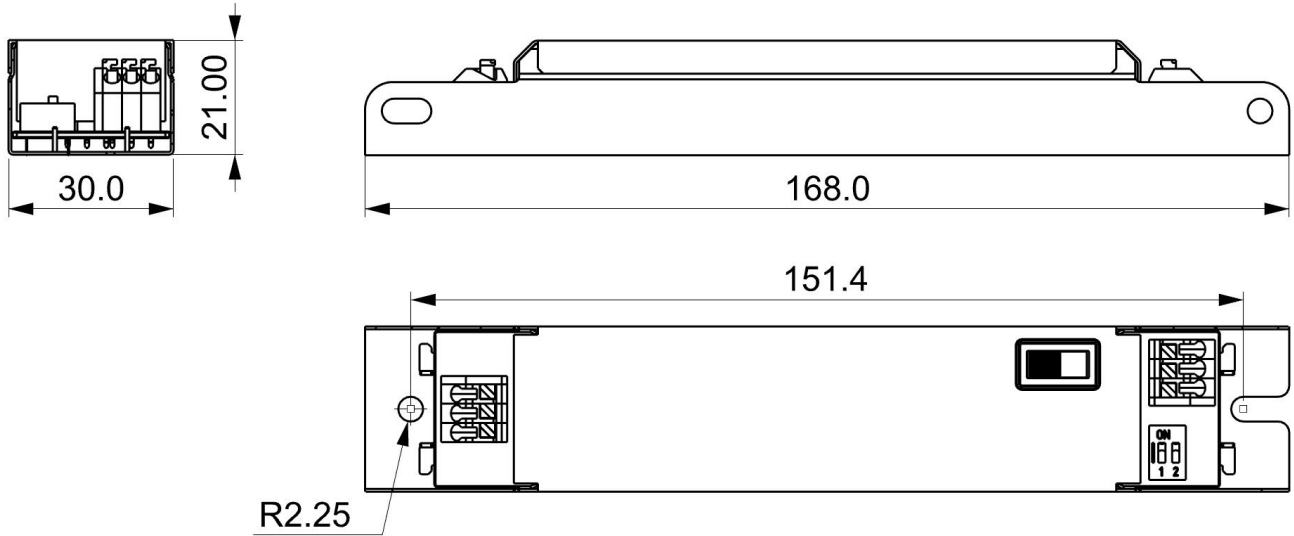
Remarks:

- 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.

◆ Wiring diagram



◆ 2D diagram



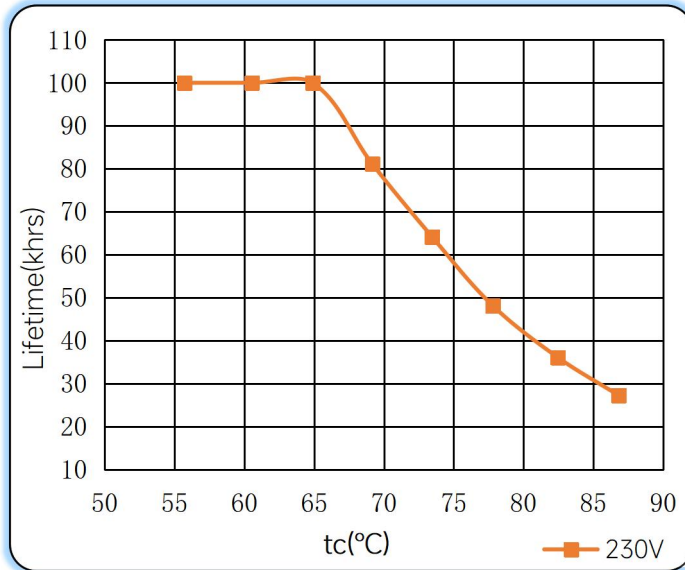
◆ Wiring & Connections

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	7...9mm
Output	Output wire cross-section	0.5...1.5 mm ²
	Output wire gauge.	16...20 AWG
	Output wire strip length	7...9mm

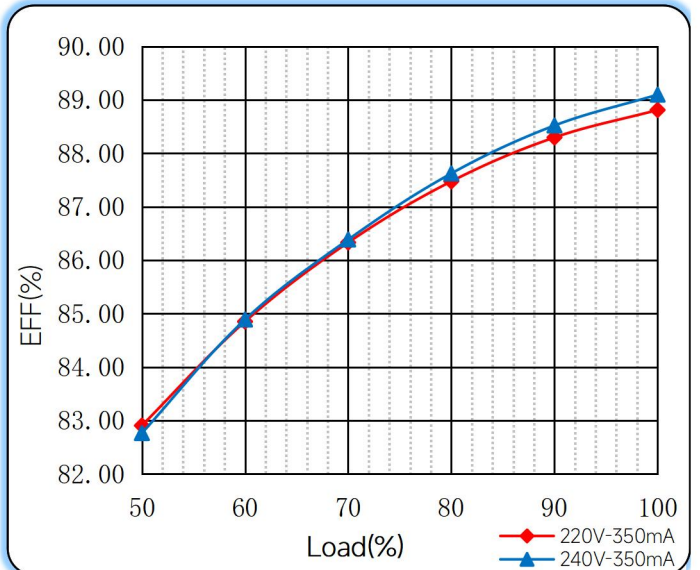
Note: Solid wire is risky to use on an angled terminal. Stranded wire is recommended for this kind of use.

◆ Curve for FMS-20-350 N-S CCT LD EXC, $I_o=350\text{mA}$

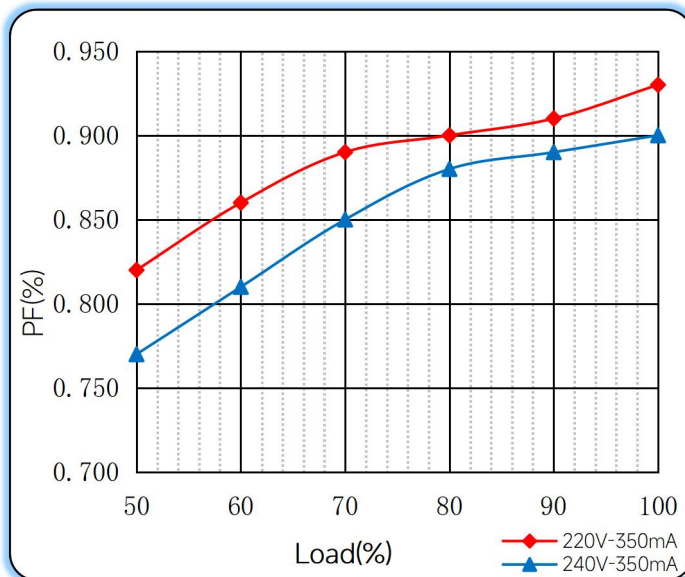
Lifetime vs. Temperature Curve



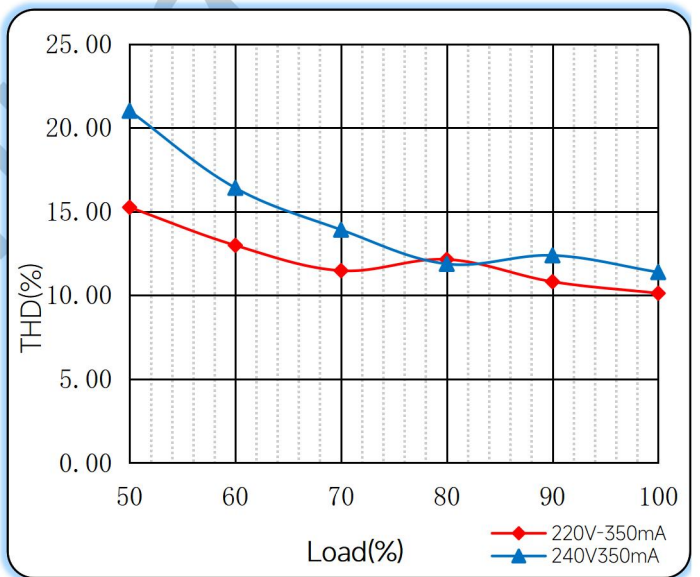
Efficiency vs. Load



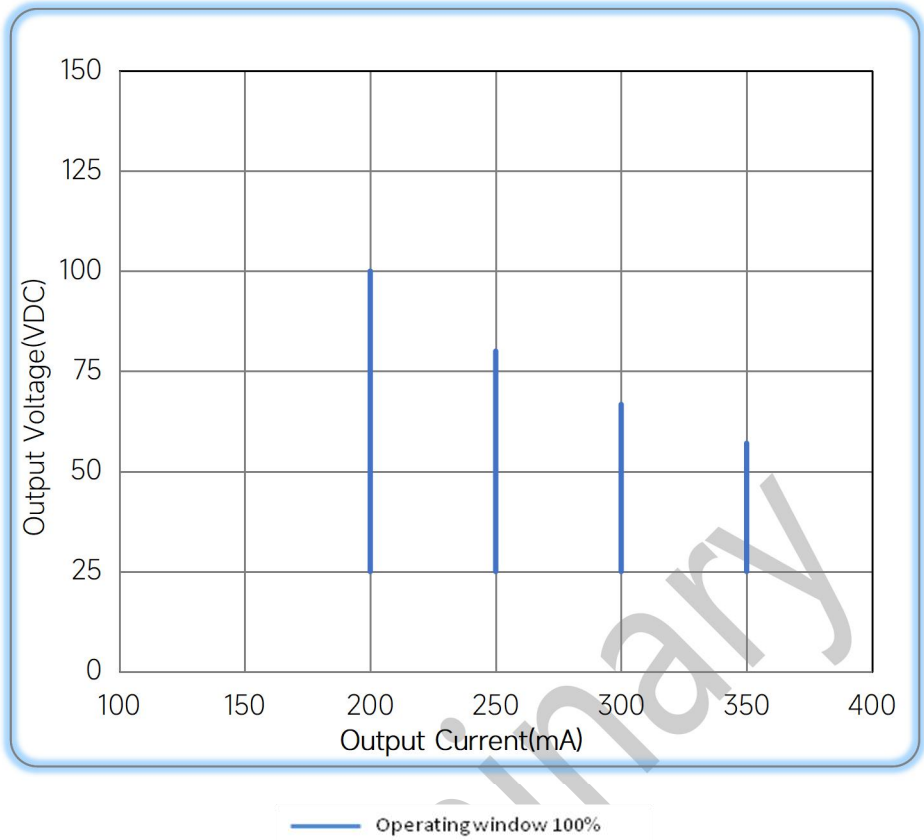
Power Factor Characteristics



THD vs. Load



◆ Operating window



◆ Revision Updates

ITEM	BEFORE	AFTER	VERSION	DATE
Initial			A	2024/04/27

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

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