

100W NFC Dimming power supply



■ Approve



Features

- Class I, Non-Isolated design, built-in
- Input Voltage 220-240VAC
- Protections: SCP/OLP/OVP/OTP
- Power Factor : 0.95
- Efficiency : 93%
- Adjustable Output Current with NFC
- 5 years warranty

Applications

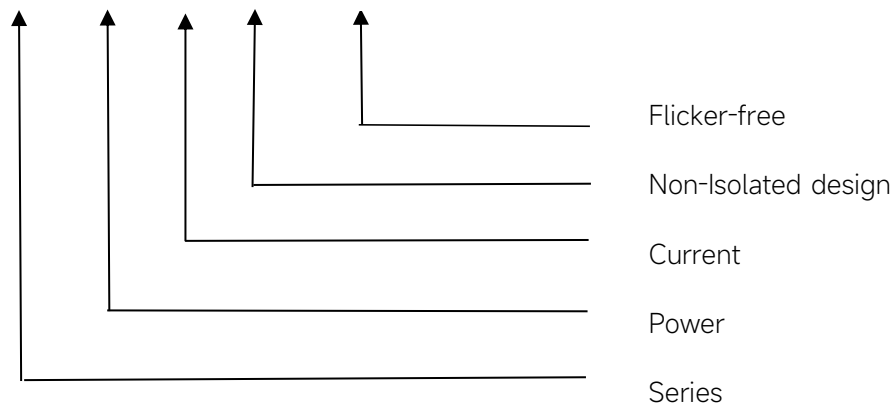
- Linear light

◆ Description

FMS-100-700 N-S LN is a 100W constant current LED driver that operates from 198-264Vac input with 200 to 700mA output current and a forward voltage range from 50 to 220Vdc. The output current is adjustable by NFC. With it's compact dimensions from 360x30x16mm it is easy to integrate in linear light products. To ensure trouble-free operation, protection is provided against output short circuit and over Load.

◆ Model code

FMS-100-700 N-S LN



◆ Specification

Output	Constant Current (mA)	200-700mA
	Voltage Range(VDC)	50-220VDC
	Unload voltage Max.(VDC)	< 350V RMS
	Current Accuracy	±5%
	Output HF current ripple(≥1KHz)	±15%
	Output LF current ripple(≤120Hz)	±2%
	SVM	≤0.4@Full Load
	P _{st}	≤1@Full Load
	Efficiency(Typ.)	93%
Input	Rated input voltage(VAC)	220-240 VAC
	Range of input voltage(VAC)	198-264 VAC
	Range of input voltage(VDC)	198-280 VDC
	Frequency(Hz)	0/50/60 Hz
	Displacement factor (Typ.)	≥0.95
	Power Factor (Typ.)	>0.95
	Input Current max	0.65A.Max
	Start-up time	0.5s
	No Load Power	< 0.5W
	Standby Power	< 0.5W
	THD (Typ.)	< 10%
Protection	Over Load Protection	103-120%
		YES/Auto Resume
	Over Voltage Protection	350VDC
		YES/Auto Resume
	Short circuit Protection	YES/Auto Resume
Environment	Over Temperature Protection	YES/Auto Resume
	Operating Temperature	-25°C~+60°C
	Humidity	20%-90%RH
	Tc	80°C
	Storage Temperature	-25°C~+60°C
Surface	Life time	>50000h,@Tc=80°C
	Dimension	360x30x16(LXWXH)mm
Standards	EN 61347-1; EN61347-2-13; EN62384; EN55015; EN61000-3-2 ; EN61000-3-3; EN 61547;	
Others	ErP	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 by using a 300mm twisted pair-wire terminated with a 0.1uF & 47 uF parallel capacitor.
- 3.The DC input for this product is only used for emergency lighting and applies to functional and safety requirements, EMC is not considered.

◆ Parameter

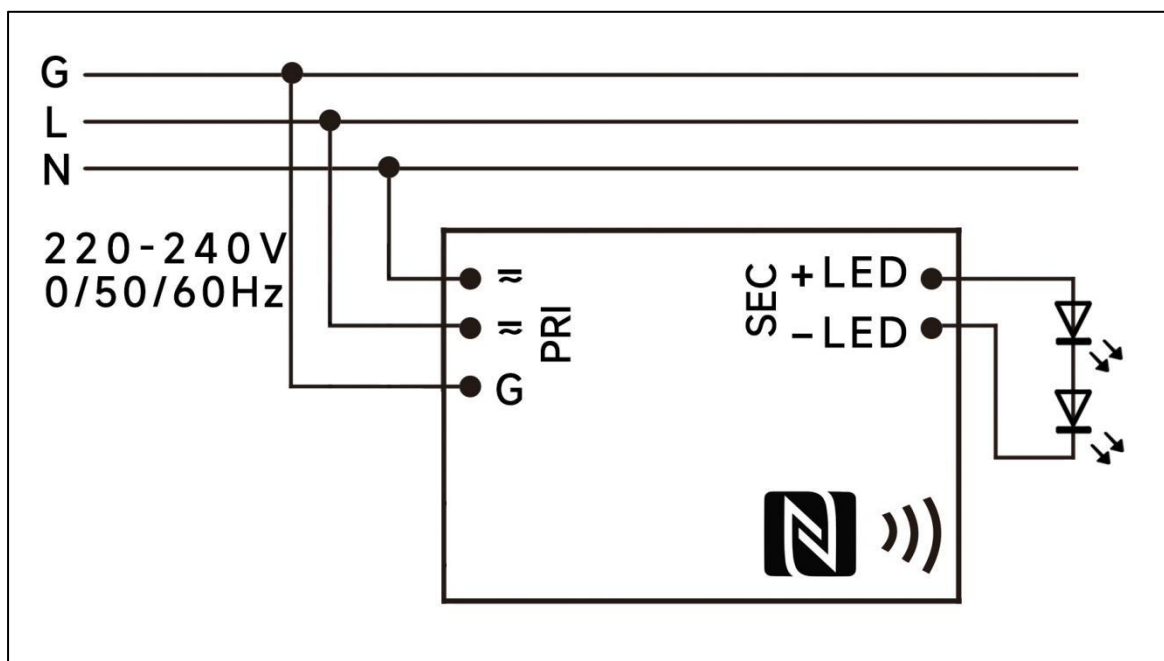
Number	Output			
	Current (mA)	Voltage (VDC)	Voltage No load (VDC)	Power (W)
*1	200mA	50-220VDC	350	44
2	...	...	...	...
3	454mA	50-220VDC	350	99.8
4	...	...	...	...
5	700mA	50-142.9VDC	350	100

* Factory default

◆ Circuit Breaker

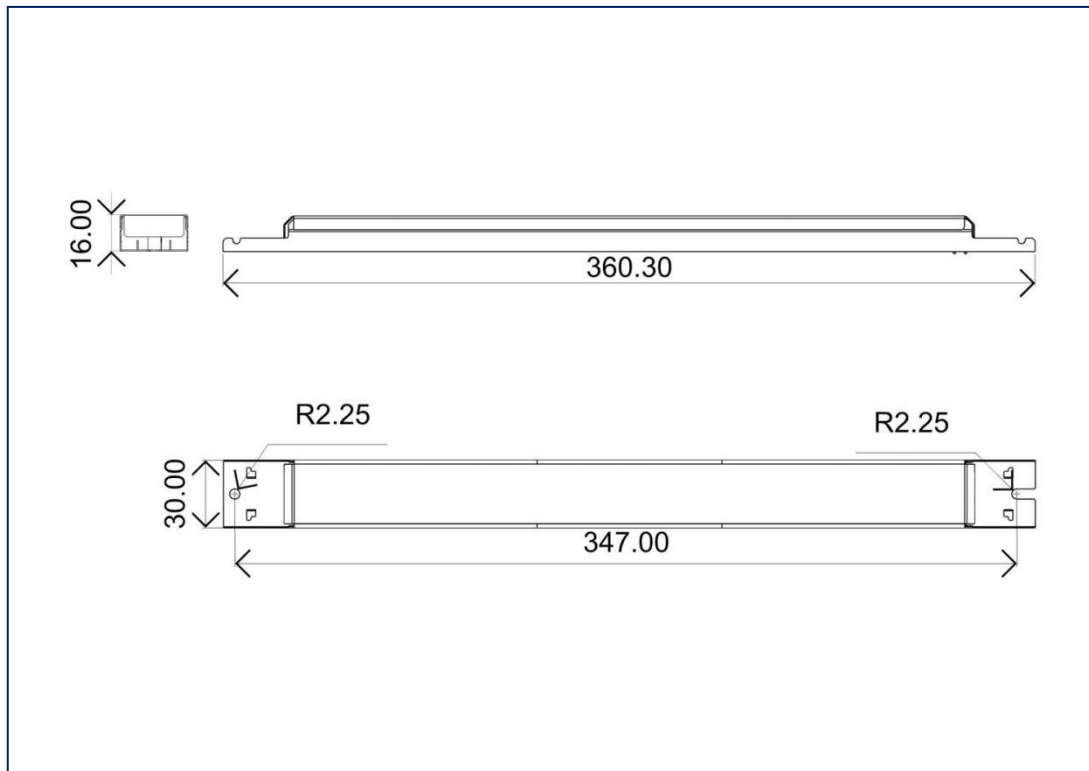
I _{peak}	T _{width}	B10	B16	B20	C10	C16	C20
34.8A	134μs	12pcs	19pcs	24pcs	12pcs	19pcs	24pcs

◆ Wiring diagram



Preliminary

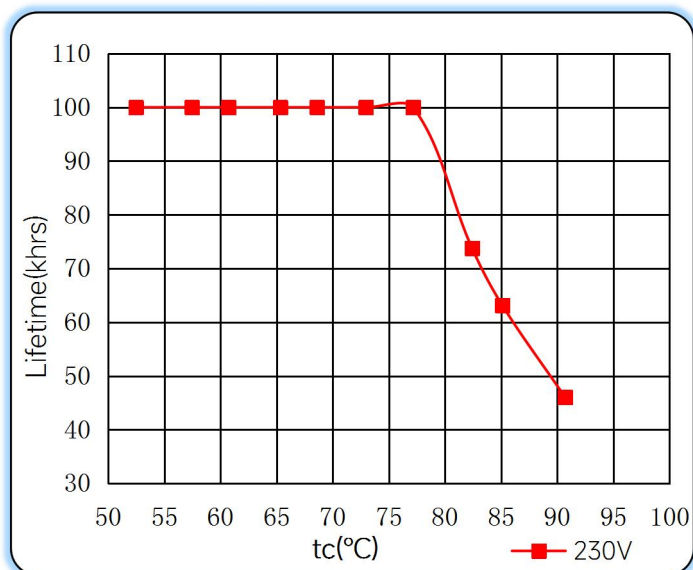
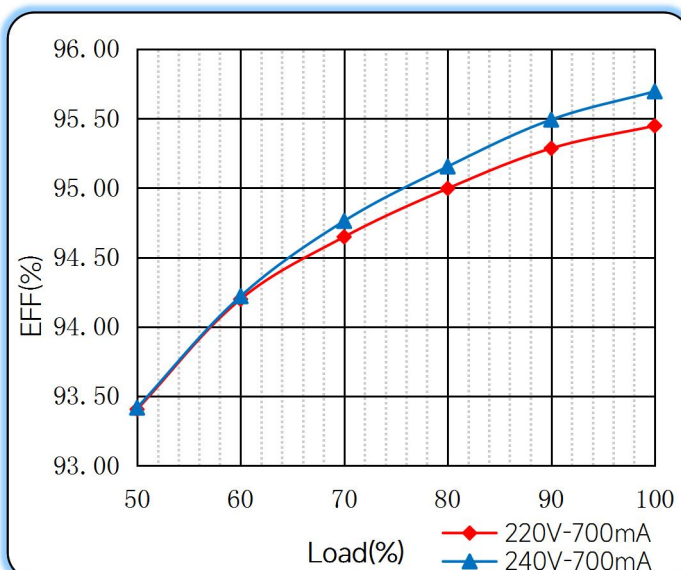
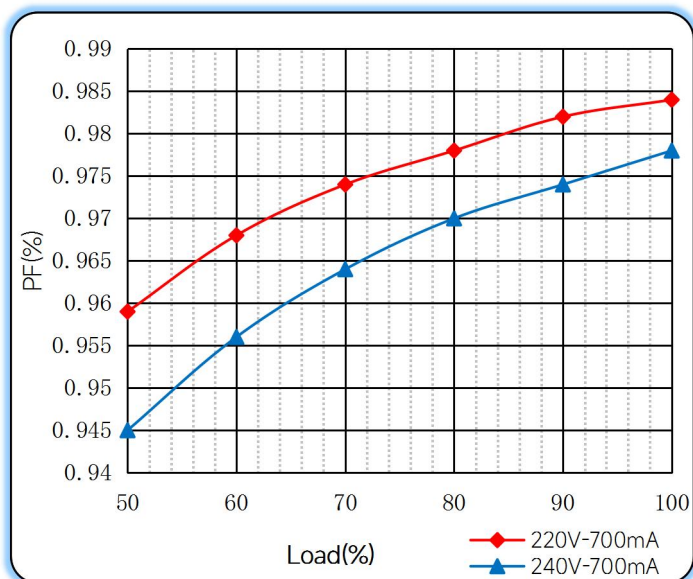
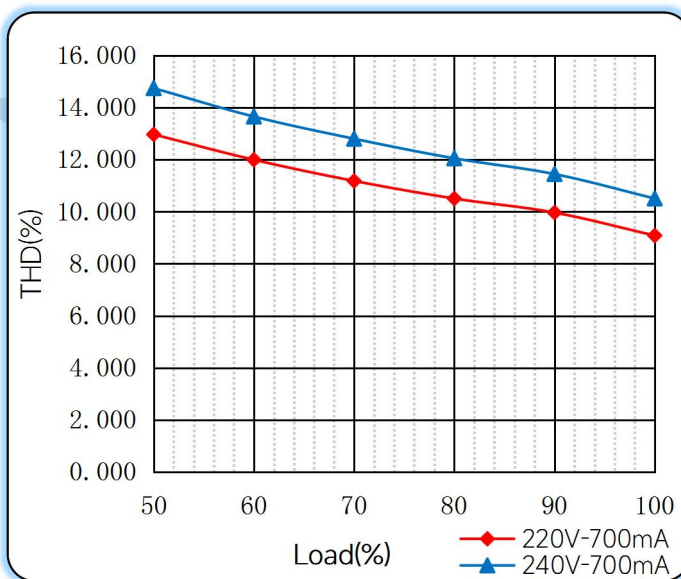
◆ 2D diagram



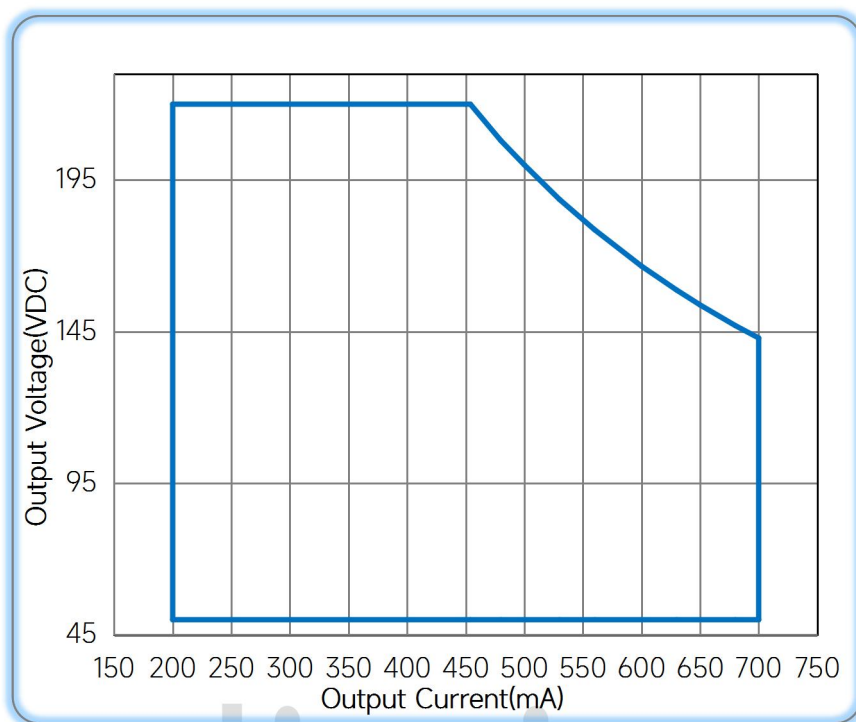
◆ Wiring & Connections

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

◆ Curve for FMS-100-700 N-S LN, $I_o=700\text{mA}$

Lifetime vs. Temperature Curve

Efficiency vs. Load

Power Factor Characteristics

THD vs. Load


◆ Operating window



— Operating window 100%

◆ Revision Updates

ITEM	BEFORE	AFTER	VERSION	DATE
Initial			A	2022/09/30
Circuit Breaker		Added	B	2022/11/15
Curve		Added	B	2022/11/15
Tc	85°C	80°C	C	2022/11/18
Displacement factor	≥0.9	≥0.95		
Over Load Protection	Non-auto Resume	YES/Auto Resume		
Life time	>50000h,@Tc=85°C	>50000h,@Tc=80°C		

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Manual