

20W Constant Current power supply



■ Approve

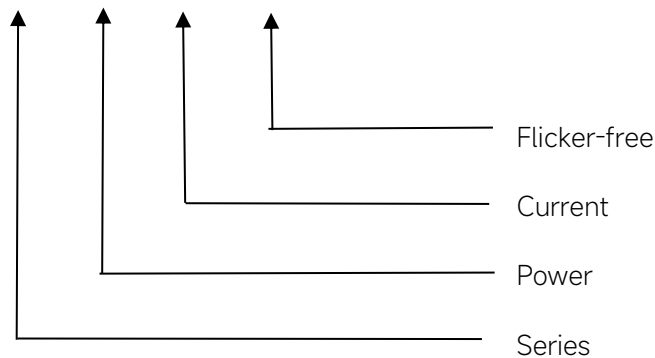


◆ Description

MS-20-XXX LI is a 20W constant current LED driver with 400 to 550mA output current. With it's compact dimensions from 190 x 30 x 25mm. It is easy to integrate in LED Panel, and down lights product. To ensure trouble-free operation, protection is provided against output short circuit and over Load.

◆ Model code

MS-20-XXX LI



Features

- Class I, SELV, Built-in
- Input Voltage: 220-240VAC
- Protections: SCP/OLP/OVP/OTP
- Power Factor: 0.95@Full load
- Efficiency: 85%@Full load
- 5 years warranty
- IP20

Applications

- LED panel, LED down light

◆ Specification

Output	Constant Current (mA)	400mA	...	550mA
	Voltage Range(VDC)	24-42VDC		24-40VDC
	Unload voltage Max.(VDC)	55VDC		
	Current Accuracy	±5%		
	Output HF current ripple(≥1KHz)	±5%		
	Output LF current ripple(≤120Hz)	±5%		
	SVM	< 0.4		
	Pst	< 1		
	Efficiency(Typ.)	85%@Full load,230V		
Input	Rated input voltage(VAC)	220~240VAC		
	Range of input voltage(VAC)	198~264VAC		
	Range of input voltage(VDC)	198~280VDC		
	Frequency(Hz)	0/50/60Hz		
	Displacement factor	> 0.9		
	Power Factor	0.95@Full load,230V		
	Input Current max	0.124A@400-500mA;0.13A@550mA		
	Start-up time	< 0.5S		
	No Load Power	<0.5W		
	THD (Typ.)	<20%@Full load,230V		
Protection	Over Load Protection	103-120%		
		YES/Auto Resume		
	Over Voltage Protection	55VDC		
		YES/Auto Resume		
	Short circuit Protection	YES/Auto Resume		
Over Temperature Protection	YES/Auto Resume			
Environment	Operating Temperature	-25°C~60°C		
	Humidity	10%~90%		
	Tc	75°C		
	Storage Temperature	-25°C~80°C		
	Life time	> 50000h@Tc=75°C		
Surface	Dimension	190 x 30 x 25mm		
Standards	EN 61347-1,EN 61347-2-13; IEC 61347-1,IEC 61347-2-13; EN 62384; EN IEC 55015,EN IEC 61000-3-2,EN 61000-3-3			
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.Switch and dimmer are not recommended to connect between this product output and luminaries.			

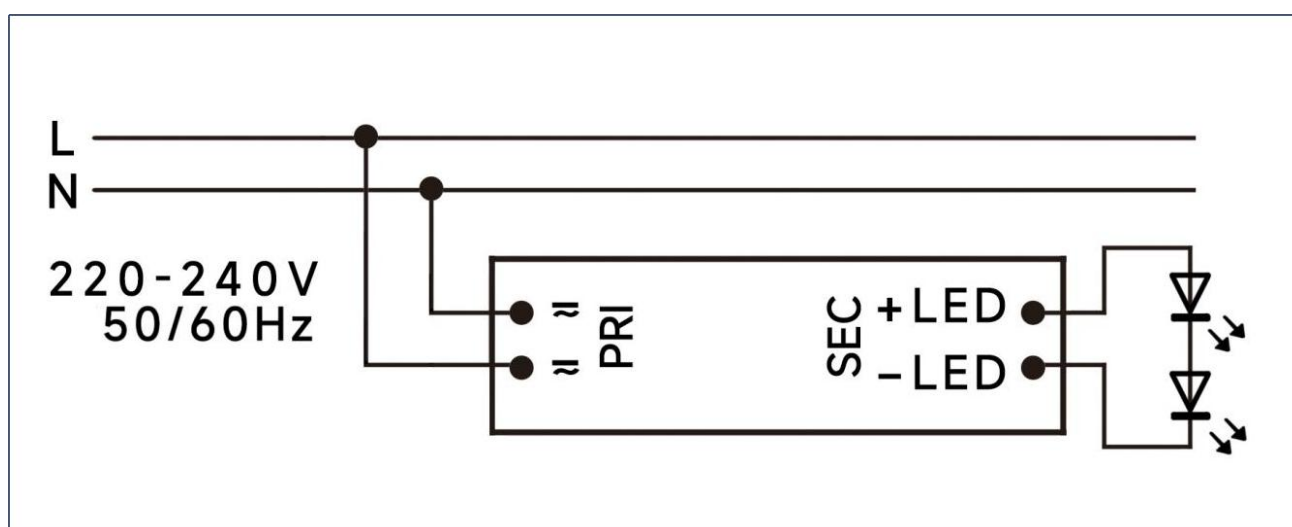
◆ Model list

Number	Model number	Output			
		Current (mA)	Voltage (VDC)	Voltage No load (VDC)	Power (W)
1	*MS-20-400 LI	400	24-42	55	16.8
2	MS-20-420 LI	420			17.64
3	*MS-20-450 LI	450			18.9
4	*MS-20-500 LI	500			21
5	*MS-20-550 LI	550	24-40		22

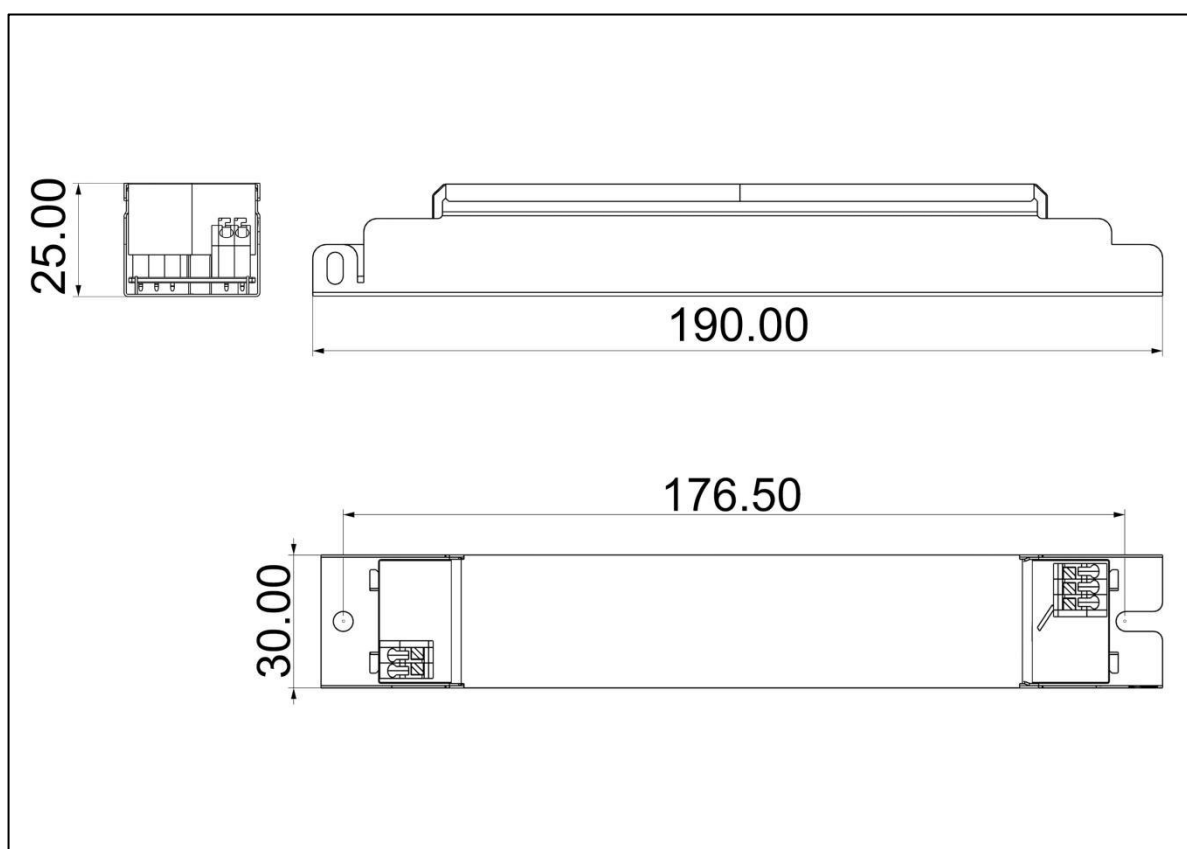
◆ Circuit Breaker

I _{peak}	T _{width}	B10	B16	B20	C10	C16	C20
12.9A	148μs	43pcs	69pcs	87pcs	64pcs	103pcs	129pcs

◆ Wiring diagram



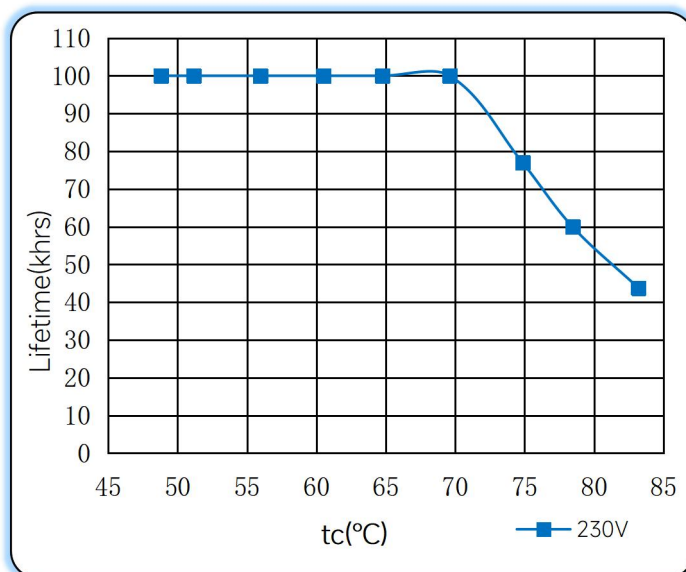
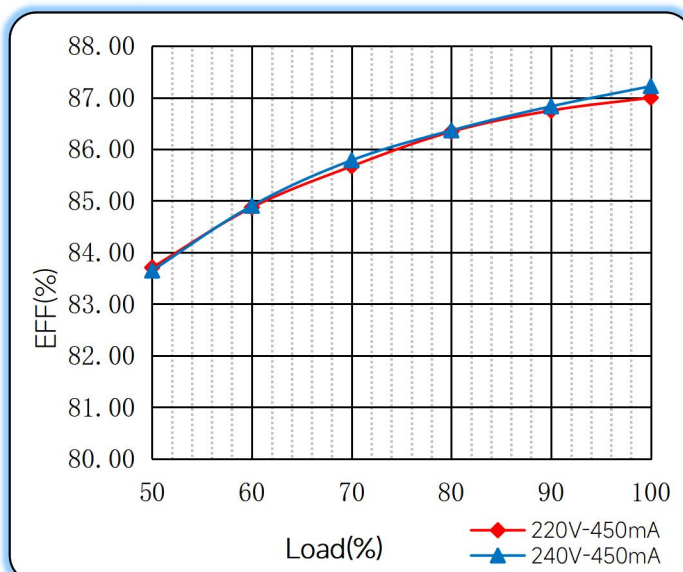
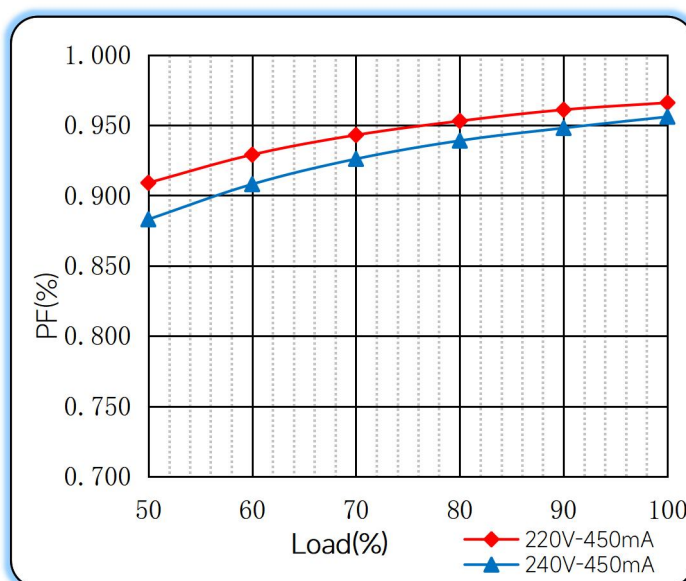
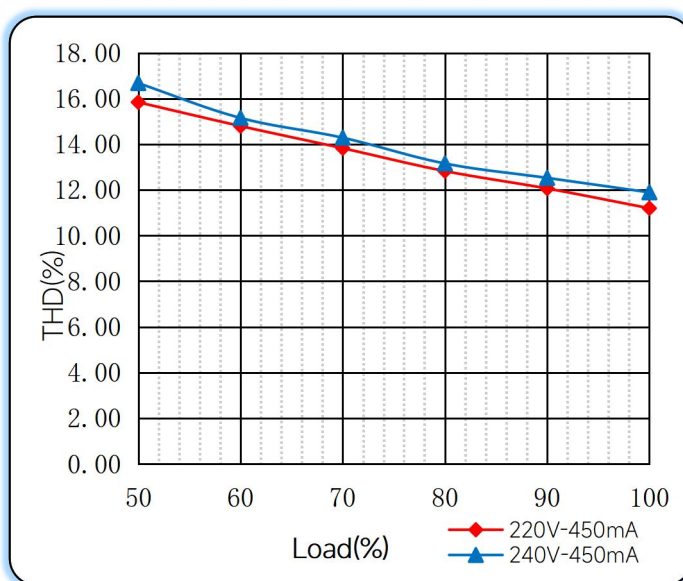
◆ 2D diagram



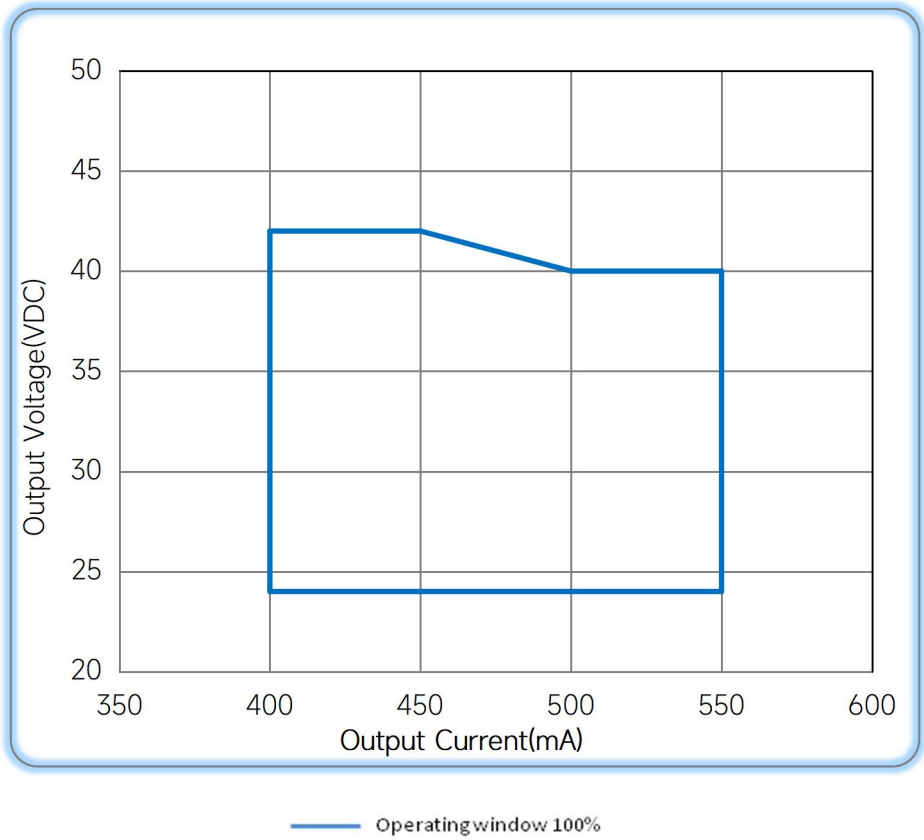
◆ Wiring & Connections

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

◆ Curve for MS-20-450 LI, I_o=450mA

Lifetime vs. Temperature Curve

Efficiency vs. Load

Power Factor Characteristics

THD vs. Load


◆ Operating window



◆ Revision Updates

ITEM	BEFORE	AFTER	VERSION	DATE
Initial			A	2023/05/23

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Manual