

## 20W Constant Voltage-LS Series

LS-20-XX MI

■ Approve

SELV CE

### ■ Features

- Class II, SELV, independent
- Input Voltage 220-240VAC
- Protections: SCP/OLP/OVP/OTP
- Power Factor 0.85C
- Efficiency  $\geq 80\%$
- 5 years warranty

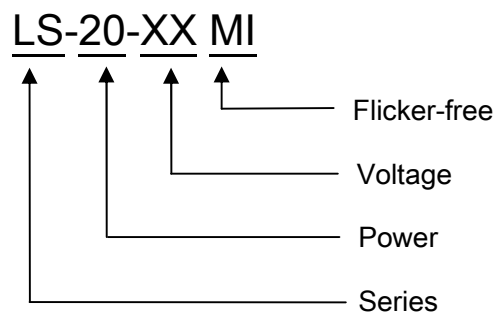
### ■ Applications

- LED strips
- Pendant light

### ■ Description

LS-20-XX MI is a 20W constant voltage LED driver that operates from 198-264Vac input with 12V or 24V output voltage. With its compact dimensions from 115 x 45 x 28 mm it is easy to integrate in LED strips and pendant light products. To ensure trouble-free operation, protection is provided against output short circuit and over Load.

### ■ Model code



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### ■ Specification

Input	Rated input voltage	220-240VAC	
	Range of input voltage	198-264VAC	
	Rated input voltage(DC)	198-254VDC	
	Range of input voltage(DC)	176-280VDC	
	Frequency(Hz)	0/50/60 Hz	
	Power Factor	0.85C@Full Load, 230VAC	
	Input Current max	0.18A MAX. @Full Load,198VAC	
	Start-up time	< 0.5S	
	Unload Power Consumption	≤0.5W	
	Inrush Current	10A Max. /95μs@230V, Full Load , 50%Ipk-50%Ipk	
	THD	< 70%@Full Load, 230VAC	
	Leakage Current	< 0.7mA(240VAC)	
Output	Constant Voltage	12VDC	24VDC
	Current Range	0-1.67A	0-0.83A
	Rated power	20W Max.	
	Voltage Accuracy	±5%@220-240VAC	
	Voltage Regulation	±5%@Full Load, 220-240VAC	
	Load Regulation	±5%@220-240VAC	
	Hold-up Time	1s max. @ Full load	
	Ripple& Noise *Note.2	≤±1%@Full Load,230VAC	
	Output LF current ripple(<120Hz)	≤±3%@Full Load,230VAC	
	Efficiency(Typ.)	≥80%	
Protection	Over Load Protection	105-150% Protection type: Auto Resume	
	Over Voltage Protection	> 12.6VDC	> 25.2VDC Protection type: Auto Resume
	Short circuit Protection	Protection type: Auto Resume	
	Over Temperature protection	Protection type: Auto Resume	
Environment	Operating Temperature	-20°C...+45°C	
	tc	75°C	
	Storage Temperature	-20°C...+60°C	
	Life time	> 30,000h@ 45°C	
	Temperature coefficient	±0.03%/°C(0-45°C)	
Humidity	20%-90%RH		
Others	Dimension	115 x 45 x 28(LXWXH)mm	
Safety & EMC	Safety standards	EN 61347-1; EN61347-2-13; EN62384	
	Withstand voltage	Input-Output : 3750V/5mA/1min	
	Isolation resistance	Input-Output : ≥4MΩ@500VDC	
	EMI	EN55015; EN61000-3-2 Class C; EN61000-3-3	
	EMS	EN 61547; EN 61000-4-2; EN 61000-4-5 —1000V;	

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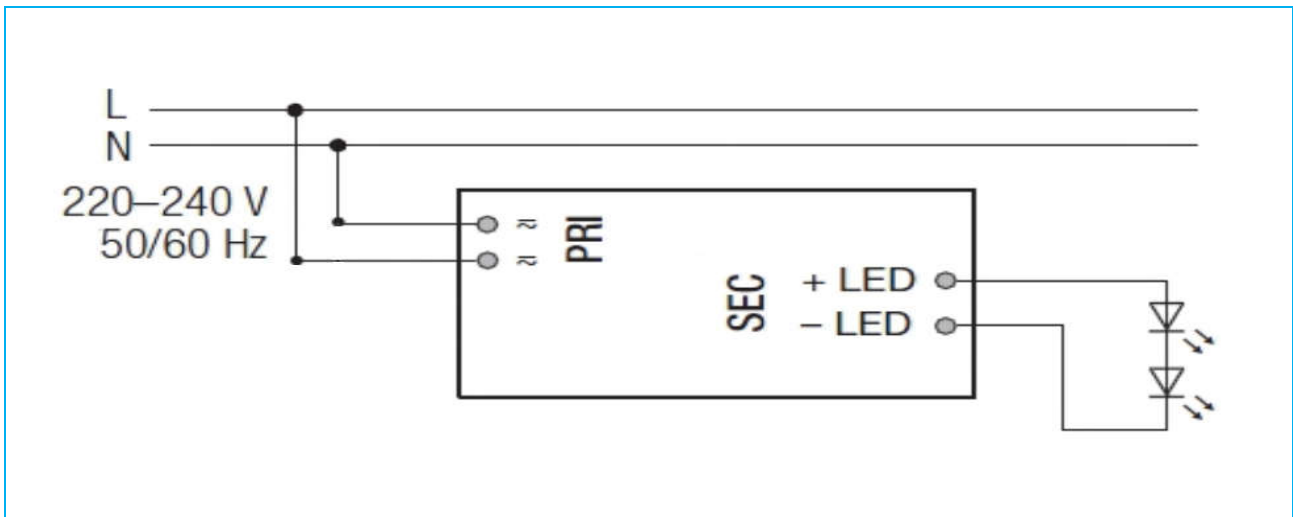
LS-20-XX MI

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.
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### ■Model list

No.	Model number	Input			Output		
		Voltage (VAC)	Current (A)	Frequency (Hz)	Constant voltage (VDC)	Normal working current (A)	P <sub>rated</sub> (W)
1	LS-20-12 MI	220-240	0.18	50/60	12	0-1.67	20
2	LS-20-24 MI	220-240	0.18	50/60	24	0-0.83	20

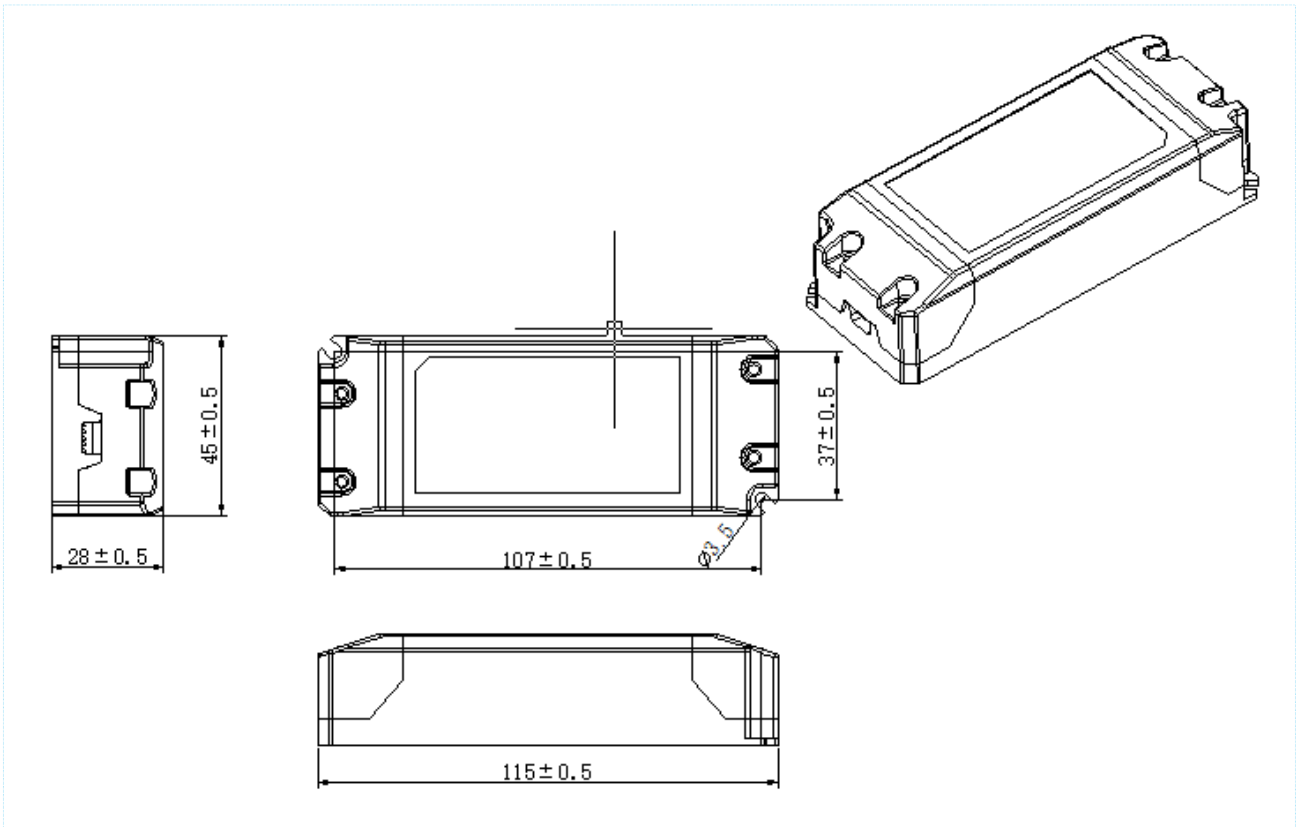
### ■Wiring diagram



## 20W Constant Voltage-LS Series

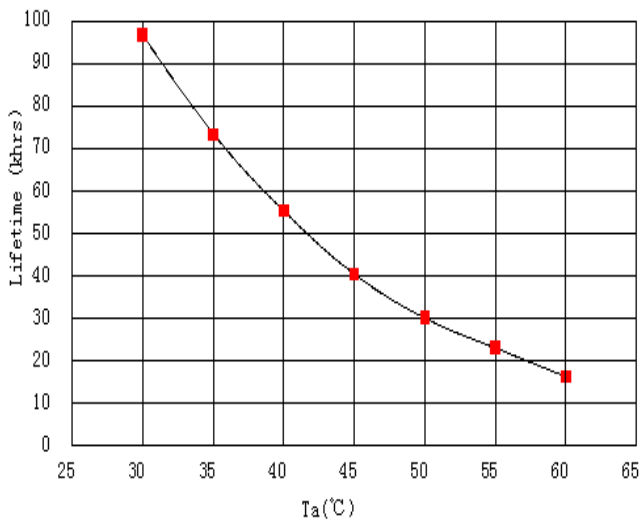
LS-20-XX MI

### 2D diagram

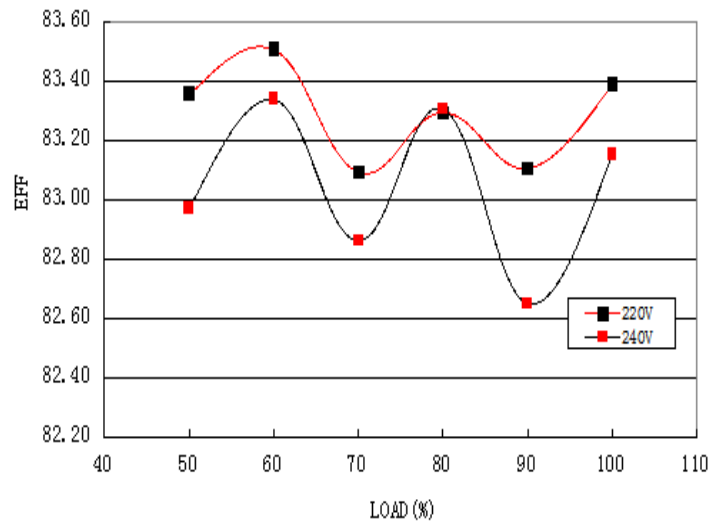


### Curve for LS-20-12 MI

#### Lifetime vs. Ambient Temperature Curve



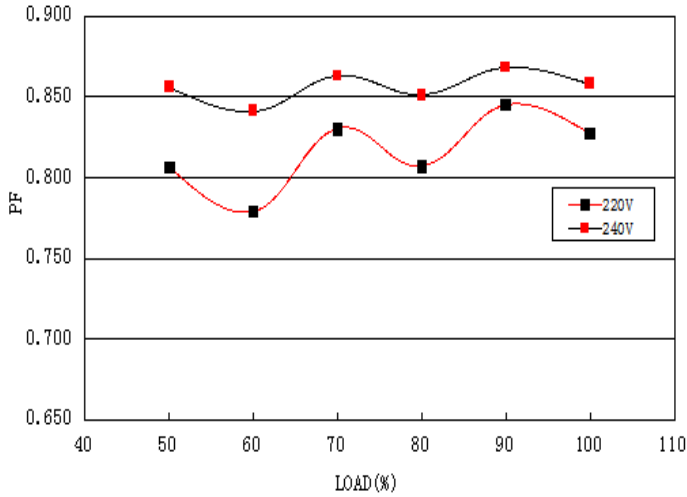
#### Efficiency vs. Load



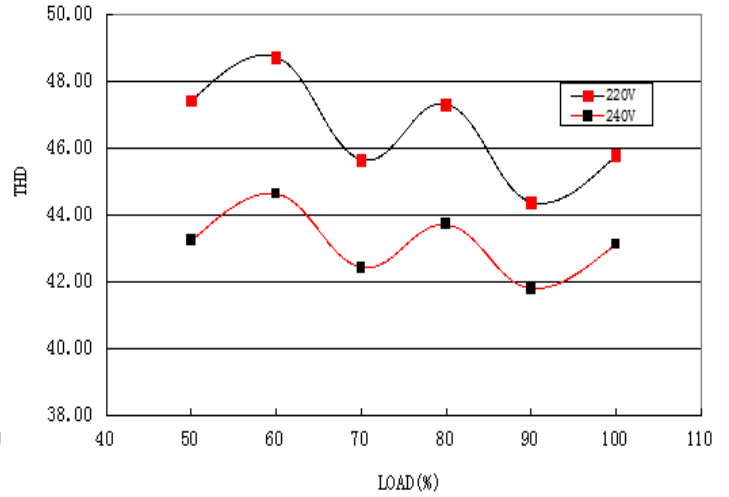
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**Power Factor Characteristics**



**THD vs. Load**



### ■ Operating window

