

# Constant Voltage LED Power Supply

## SPF24-12/24VSP

### Product description



SPF24 is an indoor constant voltage LED driver, with an input voltage range of 220-240Vac and a maximum conversion efficiency of up to 86%. It operates in the temperature range of -20 ° C to +45 ° C natural cooling and cooling casing, and has ultra-high power factor, ultra-low total harmonic distortion, low standby power consumption, and comprehensive protection functions. It not only greatly improves product reliability, but also ensures product life cycle. Comply with global lighting safety regulations, ensuring the safety of both users and lighting systems during installation.

### Standards

EN61347-1  
EN61347-2-13  
AS/NZS  
61347.2.13  
EN55015  
EN61000-3-2  
EN62493

### Characteristics

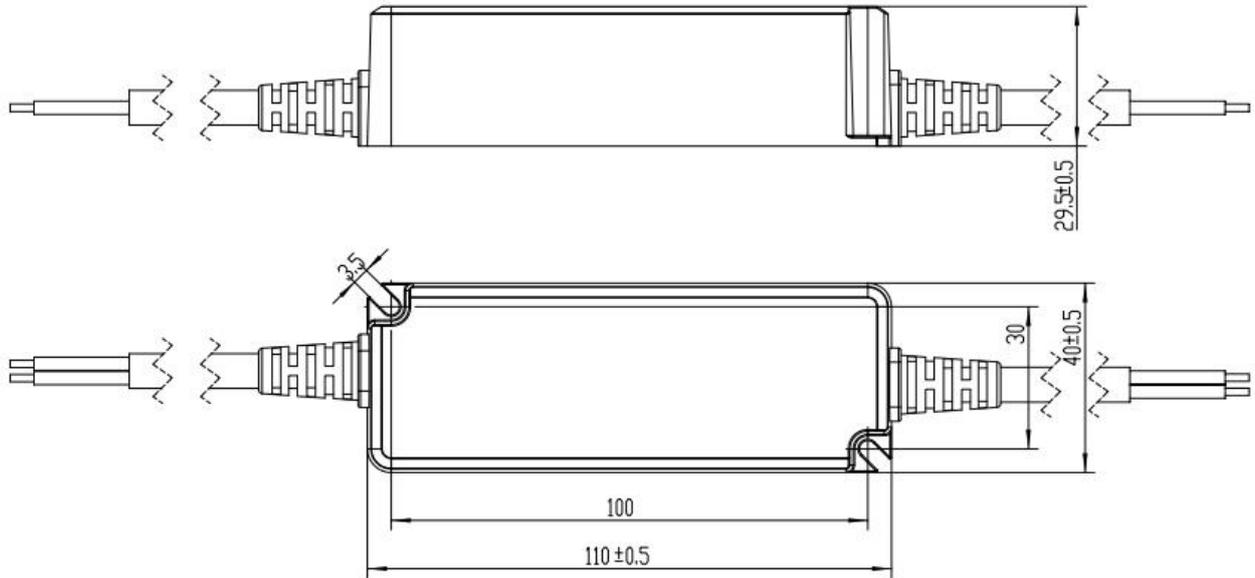
- European AC input (220-240VAC)
- With active PFC function
- IP67
- Suitable for indoor environment
- Protections: Short circuit / Over voltage
- Adopt plastic case and internal glue filling
- Compliance to worldwide safety regulations for lighting

## Specifications

Model		SPF24-12VSP	SPF24-24VSP		
Output	turn on time(S)	<0.5	<0.5		
	output power(W)	24	24		
	output voltage(V)	12	24		
	output voltage tolerance	±5%	±5%		
	ripple voltage(mV)	135	135		
	Line Regulation	±3%	±3%		
	Load Regulation	±3%	±3%		
	working current range(A)	0-2	0-1		
	SVM	Full load SVM≤0.4	Full load SVM≤0.4		
	Pst	Full load Pst LM≤1	Full load Pst LM≤1		
	dimming type	N/A	N/A		
dimming range	N/A	N/A			
Input	rated DC supply voltage(Vdc)	--	--		
	rated supply voltage(Vac)	220-240	220-240		
	voltage range(Vac)	198-264	198-264		
	line frequency(Hz)	50/60	50/60		
	input current(A)	0.126/230V	0.126/230V		
	efficiency	≥86%@full load	≥86%@full load		
	average efficiency 3	≥86%	≥86%		
	no load power consumption(W)	≤0.5W	≤0.5W		
	power factor	0.95@full load	0.95@full load		
	THD(typ.) THD	10%	10%		
	inrush current(Ipk)	25.7A/306uS	25.7A/306uS		
	Leakage current	--	--		
	Protection	short circuit protection	hiccup mode, restart automatically after fault correction.	hiccup mode, restart automatically after fault correction.	
over load protection		exceed maximum rated load times 1.2	exceed maximum rated load times 1.2		
Over voltage protection		N/A	N/A		
Over temperature protection		N/A	N/A		
surge capacity		L-N: 500V	M-N: 500V		
Ambient	Withstand voltage	Input-Output: 3750V/5mA/1min	Input-Output: 3750V/5mA/1min		
	Ta(C)	-20...45	-20...45		
	Tc max.(C)	max.90	max.90		
	Storage Temperature(C)	-30...80	-30...80		

<b>and Life</b>	ambient humidity range	5%...85%RH, Not condensing	5%...85%RH, Not condensing		
	nominal life-time(hrs)	30'000@Ta	30'000@Ta		
<b>Other</b>	dimensions (L×W×H)(mm)	114*38.5*29	114*38.5*29		
	weight(g)	266G	266G		
	casing material	Plastic	Plastic		
	housing colour	White	White		
	type of protection	IP67	IP67		
	protection class	class II	class II		
	certificate	CE TUV	CE TUV		
<b>Note</b>	<p>1.Tolerance:includes set up tolerance, line regulation and load regulation.  2.Tested at full load,230Vac.Refer to"Power Factor" and "EFFICIENT"curve graphs.  3.Calculate the model's average efficiency for each test voltage by testing at 100%, 75%, 50%, and 25% of rated current and then computing the simple arithmetic average of these four values.  4.All parameters NOT specially mentioned are measured at nominal voltage input, rated load and 25 of ambient temperature.  5.The power supply is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by the complete installation, the final equipment manufacturers must re-qualify EMC Directive on the complete installation again.</p>				

## Dimensions(mm)



### Remark:

AC INPUT  
CABLE

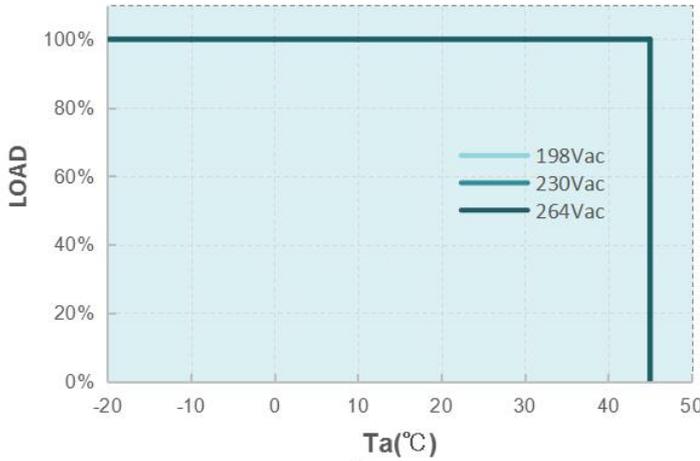
With SR AWM1015 18AWG\*1 UL brown/blue (tinned) 105°600V L=150mm

DC OUTPUT  
CABLE

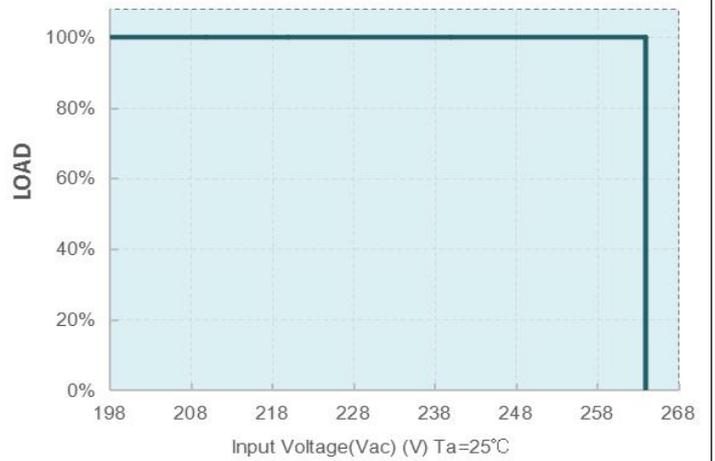
With SR AWM1007 UL 16AWG\*1 80°C 300V red/black SNP-023002

# Electrical curves

**Fig. 1 Output load-Temperature curve**



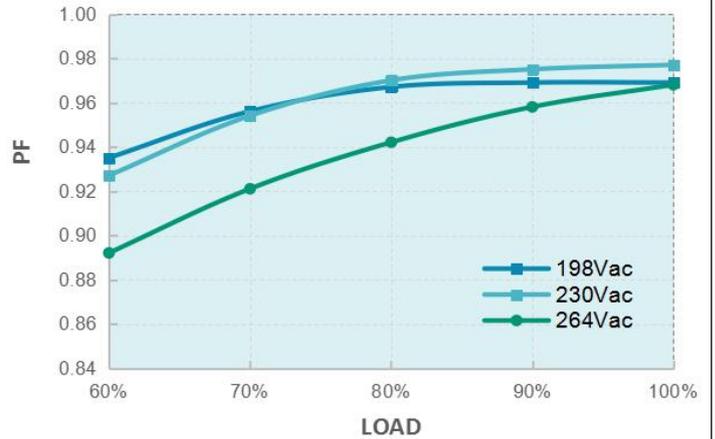
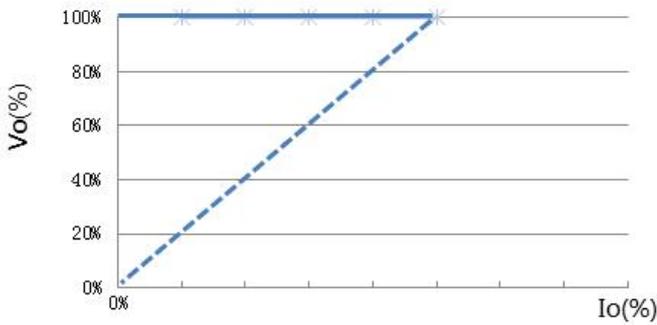
**Fig. 2 Static characteristic curve**



**Fig. 3 I-V curve**

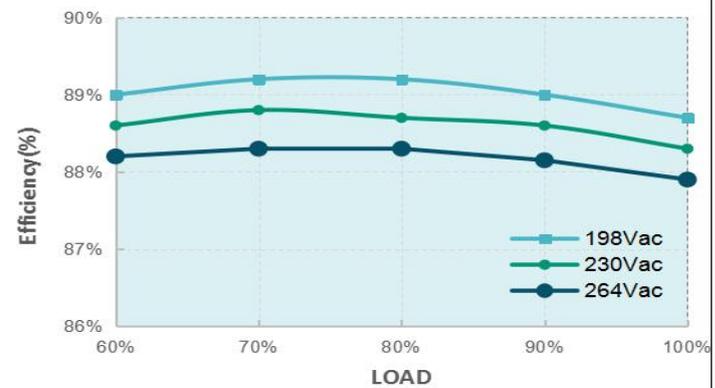
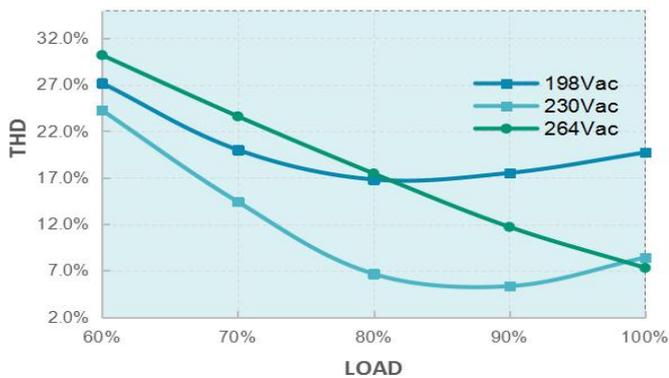
**Fig. 4 Power factor characteristic curve**

**Typical LED power supply I-V curve**



**Fig.5 Total harmonic distortion curve (THD)**

**Fig.6 Efficiency-Load curve**



## MCBS

MCBS Model	B10	B13	B16	B20	C10	C13	C16	C20
SPF24-12VSP	21	28	34	43	36	47	58	72
SPF24-24VSP	26	34	42	53	44	58	71	88

## Package

Model	Carton quantity(pcs)	Carton dimension(mm)	G.W./CTN(kg)
SPF24-12VSP			
SPF24-24VSP			

## Revision history

Date	Rev.	Remark
2023.4.18	A1	Initial release.