

Constant Voltage LED Power Supply

SPF150-12/24/48VSP



Product description

SPF150 is an indoor constant voltage LED driver, with an input voltage range of 220-240Vac and a maximum conversion efficiency of up to 92%. 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

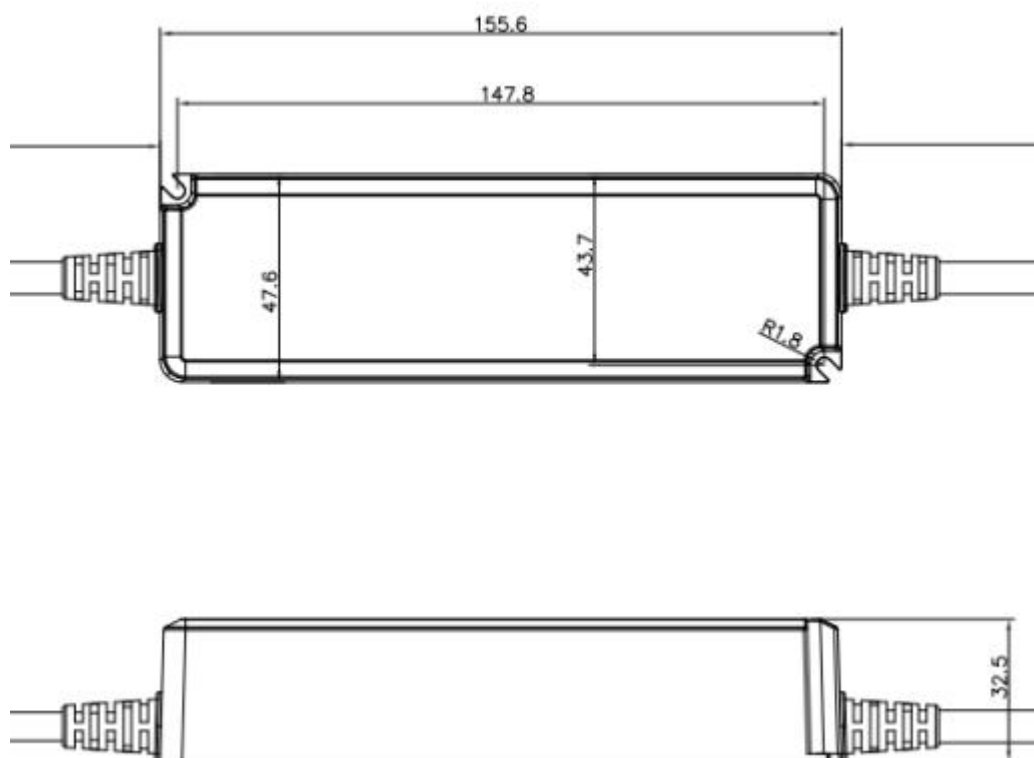
- AC input range (220-240VAC)
- With active PFC function
- Waterproof IP67
- Suitable for indoor environments
- Protection type: short circuit/over voltage protection
- Using plastic shell, internal potting
- Conforms to world lighting safety regulations
- Warranty 5 years

Specifications

Model		SPF150-12VSP	SPF150-24VSP	SPF150-48VSP
Output	turn on time(S)	<0.5	<0.5	<0.5
	output power(W)	150	150	150
	output voltage(V)	12	24	48
	output voltage tolerance	±5%	±5%	±5%
	ripple voltage(mV)	±3%	±3%	±3%
	Line Regulation	±3%	±3%	±3%
	Load Regulation	±3%	±3%	±3%
	working current range(A)	0-12.5	0-6.25	0-3.125
	SVM	Full load SVM≤0.4	Full load SVM≤0.4	Full load SVM≤0.4
	Pst	Full load Pst LM≤0.4	Full load Pst LM≤0.4	Full load Pst LM≤0.4
	dimming type	N/A	N/A	N/A
	dimming range	N/A	N/A	N/A
Input	rated DC supply voltage(Vdc)	--	--	--
	rated supply voltage(Vac)	220-240	220-240	220-240
	voltage range(Vac)	198-264	198-264	198-264
	line frequency(Hz)	50/60	50/60	50/60
	input current(A)	0.73/230V	0.73/230V	0.73/230V
	efficiency	90%@full load	92%@full load	91%@full load
	average efficiency 3	90%	91%	90%
	no load power consumption(W)	≤0.5W	≤0.5W	≤0.5W
	power factor	0.95@full load	0.95@full load	0.95@full load
	THD(typ.) THD	10%	10%	10%
	inrush current(lpk)	75A/240uS	75A/240uS	75A/240uS
	Leakage current	<0.7mA	<0.7mA	<0.7mA
Protection	short circuit protection	hiccup mode, restart automatically after fault correction.	hiccup mode, restart automatically after fault correction.	hiccup mode, restart automatically after fault correction.
	over load protection	exceed maximum rated load times 1.2-1.5	exceed maximum rated load times 1.2-1.5	exceed maximum rated load times 1.2-1.5
	Over voltage protection	N/A	N/A	N/A
	Over temperature protection	N/A	N/A	N/A
	surge capacity	L-N: 1000V	M-N: 1000V	N-N: 1000V
	Withstand voltage	Input-Output: 3750V/5mA/1min	Input-Output: 3750V/5mA/1min	Input-Output: 3750V/5mA/1min
Ambient and Life	Ta(C)	-20...40	-20...45	-20...45
	Tc max.(C)	90	90	85
	Storage Temperature(C)	-40...80	-	-40...80

			40...80	
	ambient humidity range	5%...85%RH, Not condensing	5%...85%RH, Not condensing	5%...85%RH, Not condensing
	nominal life-time(hrs)	30'000@Ta	50'000@Ta	50'000@Ta
Other	dimensions (L×W×H)(mm)	155.6*47.6*32.5	155.6*47.6*32.5	155.6*47.6*32.5
	weight(g)	460	460	460
	casing material	Plastic	Plastic	Plastic
	housing colour	White	White	White
	type of protection	IP67	IP67	IP67
	protection class	class II	class II	class II
	certificate			
Note	<p>1.Tolerance:includes set up tolerance, line regulation and load regulation.</p> <p>2.Tested at full load,230Vac.Refer to"Power Factor" and "EFFICIENT"curve graphs.</p> <p>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.</p> <p>4.All parameters NOT specially mentioned are measured at nominal voltage input, rated load and 25 of ambient temperature.</p> <p>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	SR plug H05RN-F 2*1.0mm ² VDE black cable sheath wire (brown blue wire) , L=343mm tinned end
DC OUTPUT CABLE	SVT 18AWG*2C 105°C 300V black (red/black) tinned end L=343mm

Electrical curves

SPF150-12VSP

Fig. 1 Output load-Temperature curve

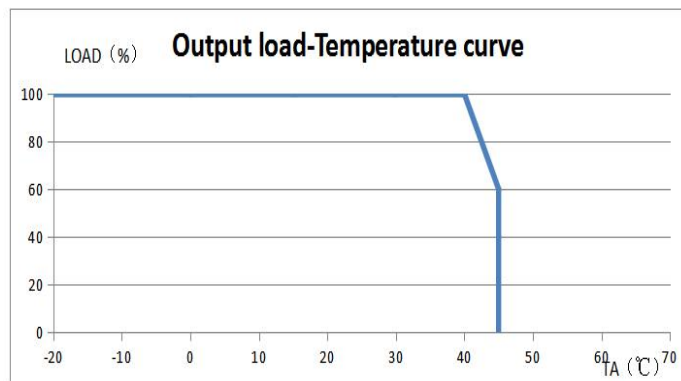


Fig. 2 Static characteristic curve

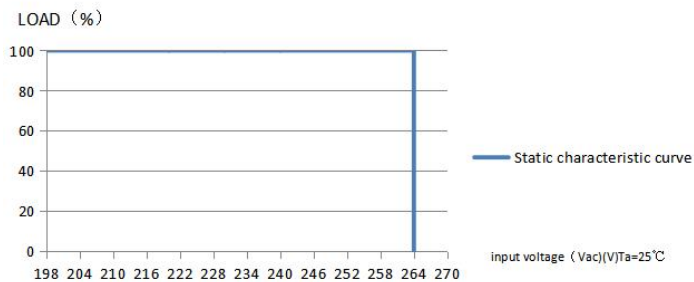


Fig. 3 I-V curve

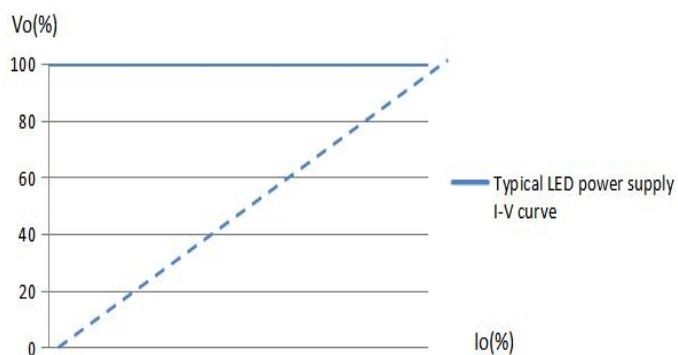


Fig. 4 Power factor characteristic curve

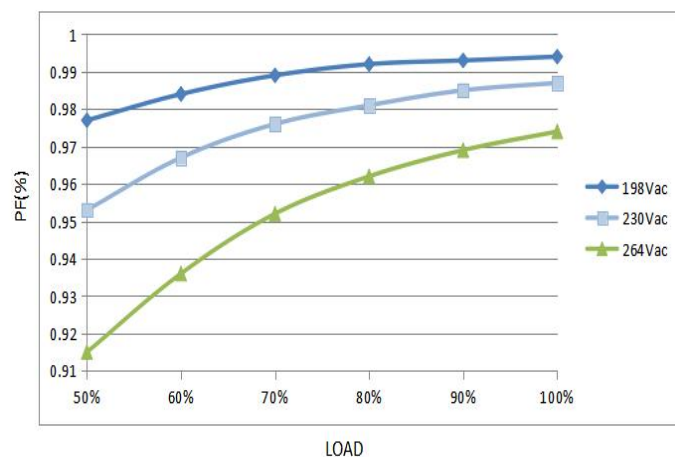


Fig.5 Total harmonic distortion curve (THD)

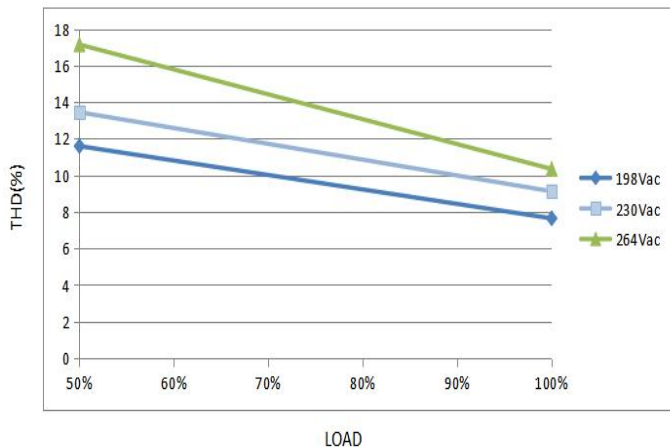
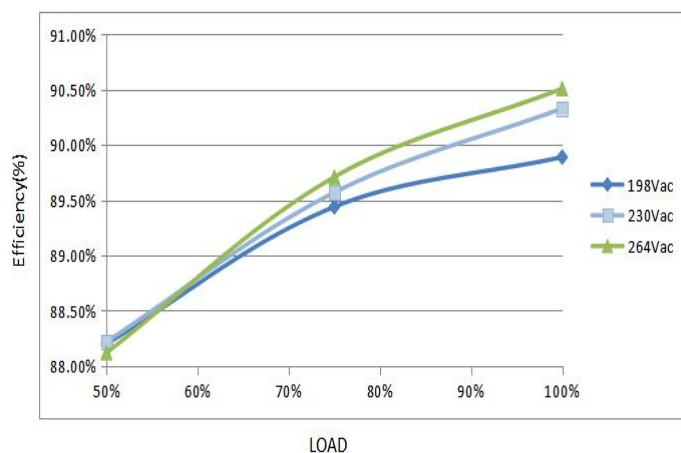


Fig.6 Efficiency-Load curve



Electrical curves

SPF150-24VSP

Fig. 1 Output load-Temperature curve

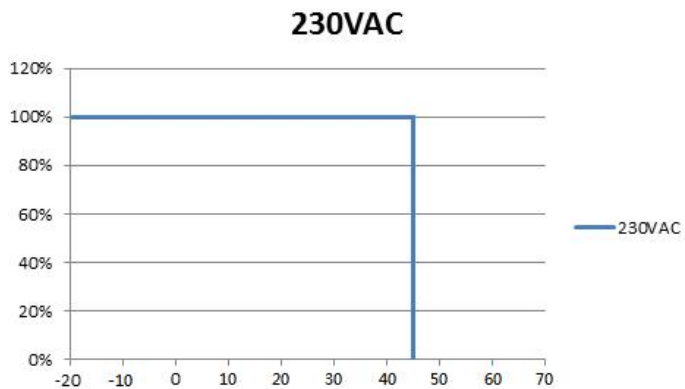


Fig. 2 Static characteristic curve

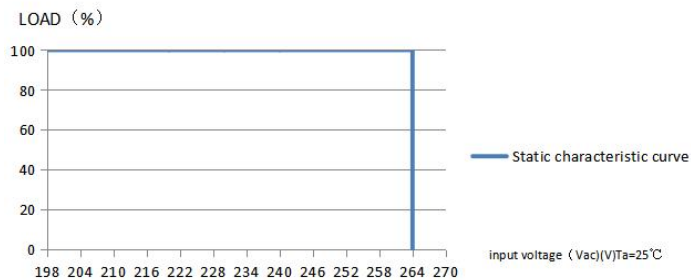


Fig. 3 I-V curve

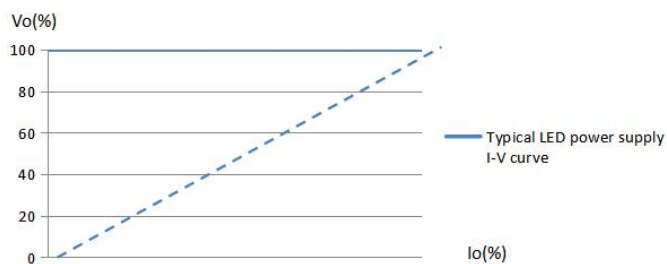


Fig. 4 Power factor characteristic curve

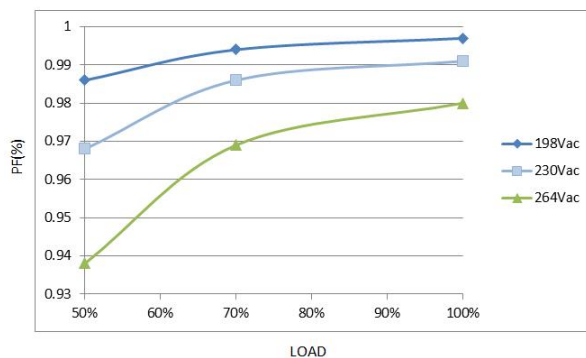


Fig.5 Total harmonic distortion curve (THD)

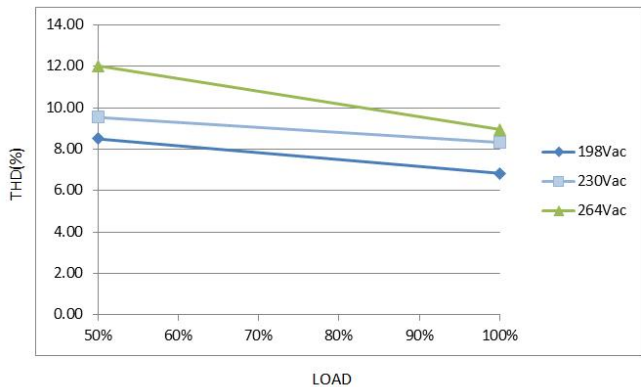
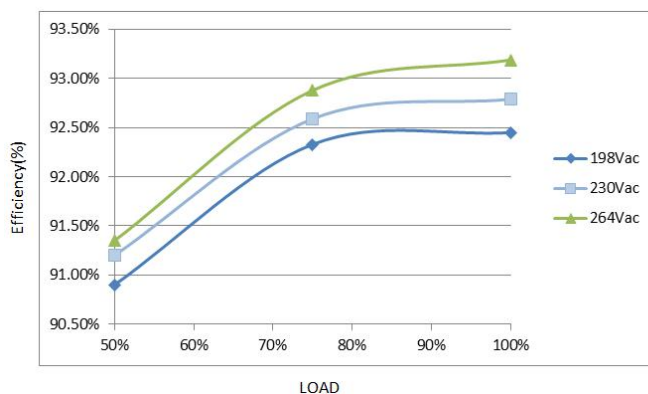


Fig.6 Efficiency-Load curve



Electrical curves

SPF150-48VSP

Fig. 1 Output load-Temperature curve

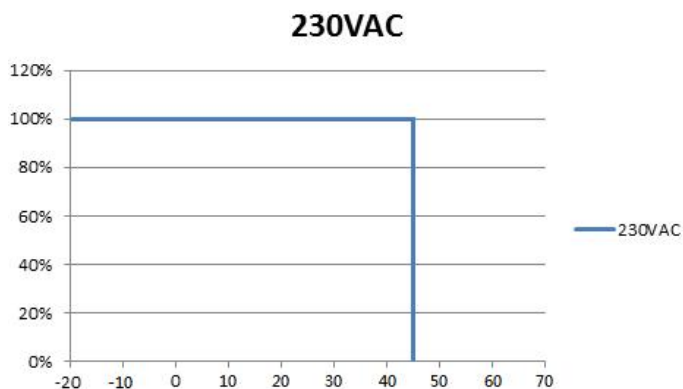


Fig. 2 Static characteristic curve

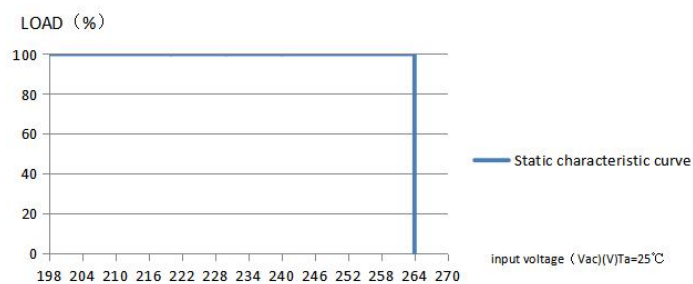


Fig. 3 I-V curve

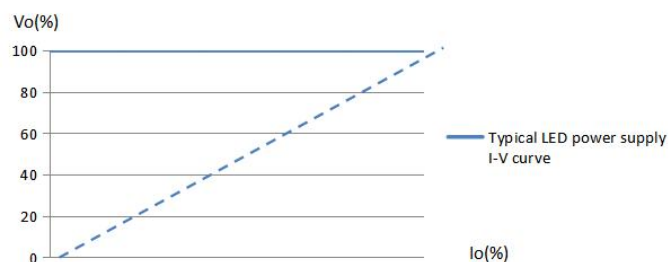


Fig. 4 Power factor characteristic curve

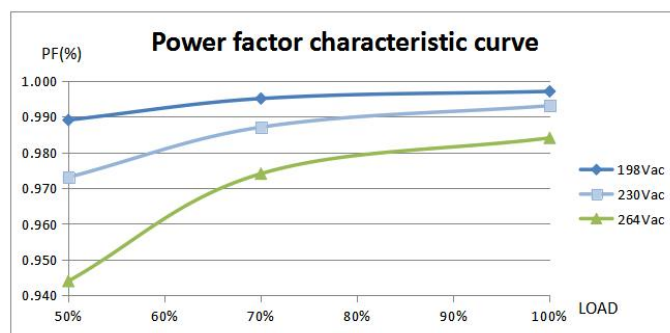


Fig.5 Total harmonic distortion curve (THD)

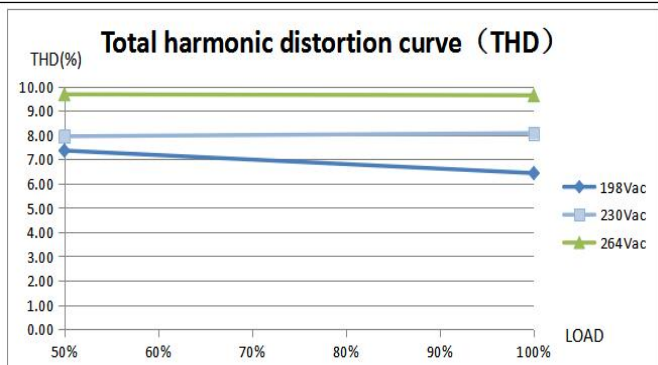


Fig.6 Efficiency-Load curve



MCBS

MCBS Model	B10	B13	B16	B20	C10	C13	C16	C20
SPF150-12VSP	4	6	7	9	8	10	13	16
SPF150-24VSP	4	6	7	9	8	10	13	16
SPF150-48VSP	4	6	7	9	8	10	13	16

Package

Model	Carton quantity(pcs)	Carton dimension(mm)	G.W./CTN(kg)
SPF150-12VSP			
SPF150-24VSP			
SPF150-48VSP			

Revision history

Date	Rev.	Remark
2023.8.17	A0	
2023.9.27	A01	Add model SPF150-48VSP