

Constant Voltage LED Power Supply

SPF60-12VSP SPF60-24VSP SPF60-48VSP



Product description

SPF60 is an indoor constant voltage LED driver, with an input voltage range of 220-240Vac and a maximum conversion efficiency of up to 89%. It operates in the temperature range of -20 ° C to +50 ° 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. This series is designed for LED lighting and suitable in various indoor applications where LED lamps can be installed. Comply with global lighting safety regulations, ensuring the safety of both users and lighting systems during installation.

Standards

EN61347-1:2015
EN 61347-2-13:2014+A1
EN62493:2015
AS/NZS 61347.2.13
EN 61347-2-13:2014 +A1
EN61347-1:2015

Characteristics

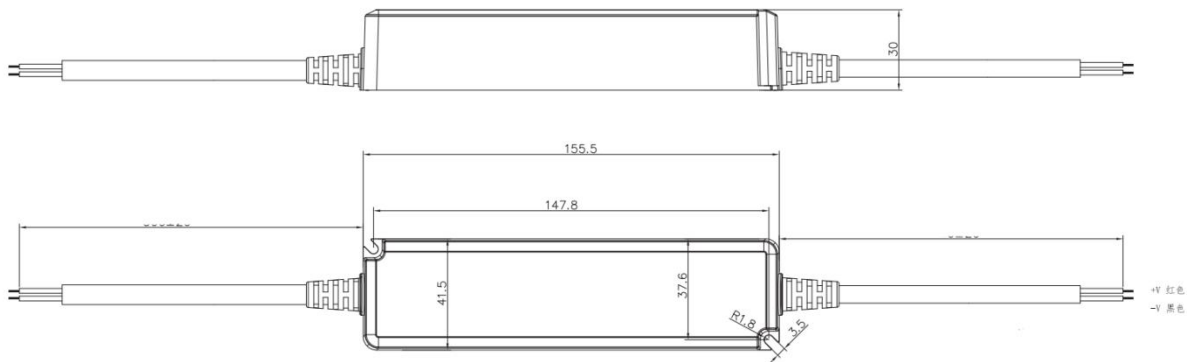
- European AC input (220-240VAC)
- With active PFC function
- IP67
- Suitable for indoor environment
- Protections: Short circuit / Over voltage
- Adopt plastic case and internal glue filling
- Compliance to worldwide safety regulations for lighting

Specifications

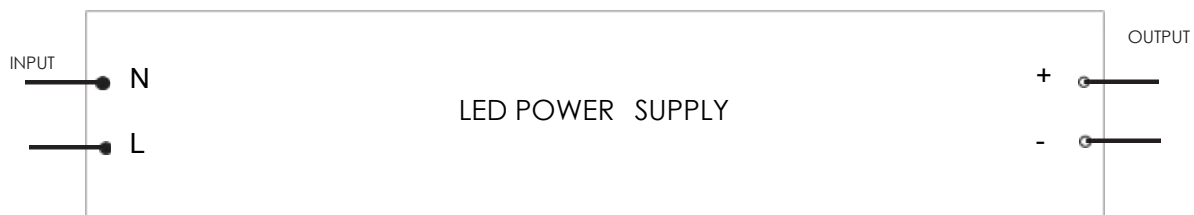
Model		SPF60-12VSP	SPF60-24VSP	SPF60-48VSP
Output	turn on time(S)	<0.5	<0.5	<0.5
	output power(W)	60	60	60
	output voltage(V)	12	24	48
	output voltage tolerance	±5%	±5%	±5%
	ripple voltage(mV)	±3%	±3%	±3%
	Line Regulation	±3%	±3%	±3%
	Load Regulation	±3%	±3%	±3%
	working current range(A)	0-5	0-2.5	0-1.25
	SVM	≤0.4	≤0.4	≤0.4
	Pst	≤1	≤1	≤1
	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)	0.3/230V	0.3/230V	0.3/230V
	efficiency	87%@full load	88%@full load	89%@full load
	average efficiency 3	≥87%	≥87%	≥88%
	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
	Displacement factor	≥0.9	≥0.9	≥0.9
	THD(typ.) THD	10%	10%	10%
	inrush current(Ipk)	36A/230uS	36A/230uS	40A/160uS
	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	-	-	-
	Over temperature protection	-	-	-
	surge capacity	L-N: 1KV	L-N: 1KV	L-N: 1KV
	Withstand voltage	Input-Output: 3750V/5mA/1min	Input-Output: 3750V/5mA/1min	Input-Output: 3750V/5mA/1min
Ambient and Life	Ta(C)	-20...50	-20...70 (refer to the curve)	-20...50
	Tc max.(C)	max.85	max.90	max.75
	Storage Temperature(C)	-40...80	-40...80	-40...80

	ambient humidity range	10%...95%RH, Not condensing	10%...95%RH, Not condensing	10%...95%RH, Not condensing
	nominal life-time(hrs)	50'000@Ta	50'000@Ta	50'000@Ta
Other	dimensions (L×W×H) (mm)	155.5*41.5*30	155.5*41.5*30	155.5*41.5*30
	weight(g)	344	350	350
	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	TUV CE	TUV CE	TUV CE
Note	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.			

Dimensions(mm)



Wiring Diagram



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)L=343mm tinned end

Electrical curves

SPF60-12VSP

Fig. 1 Output load-Temperature curve

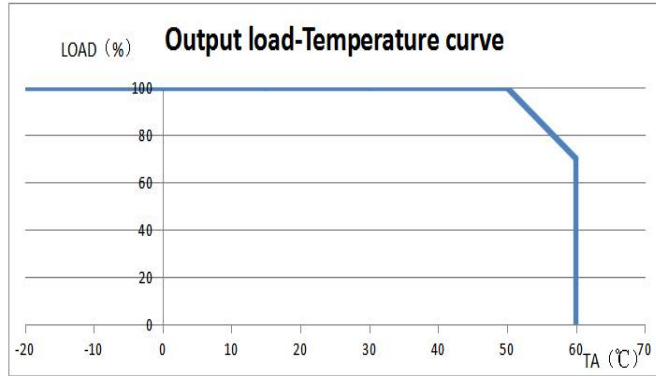


Fig. 2 Static characteristic curve

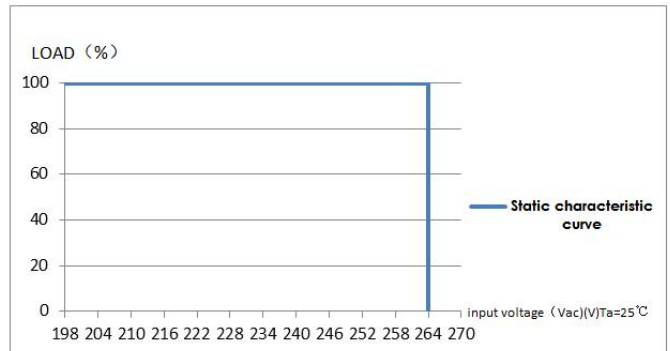


Fig. 3 I-V curve

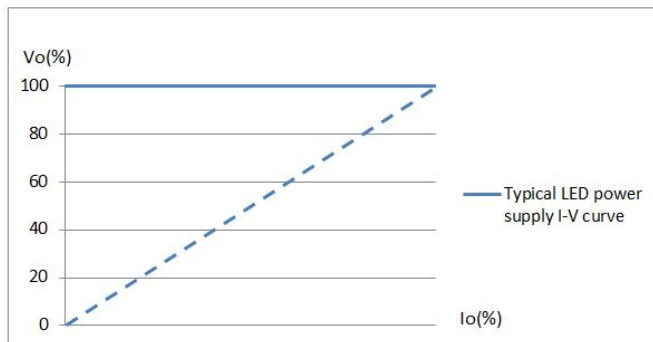


Fig. 4 Power factor characteristic curve

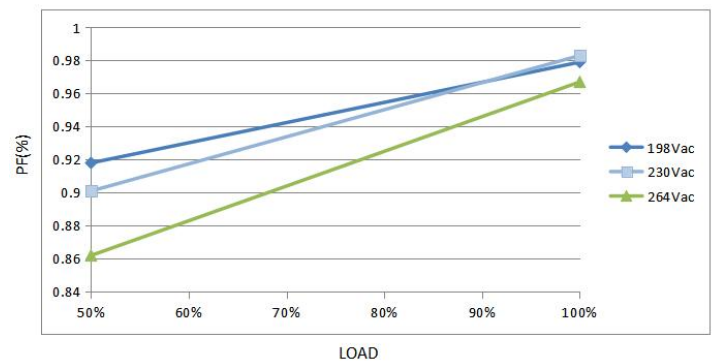


Fig.5 Total harmonic distortion curve (THD)

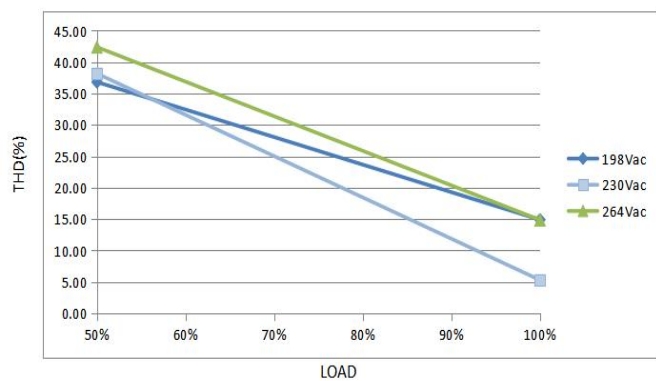


Fig.6 Efficiency-Load curve

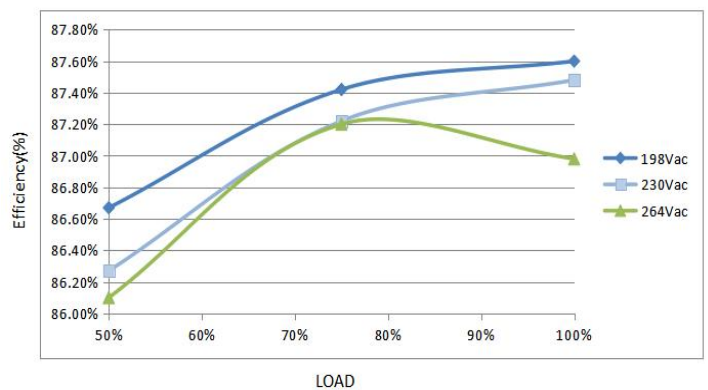


Fig. 1 Output load-Temperature curve

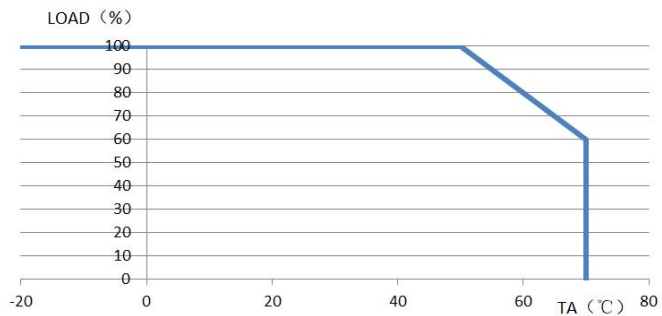


Fig. 2 Static characteristic curve

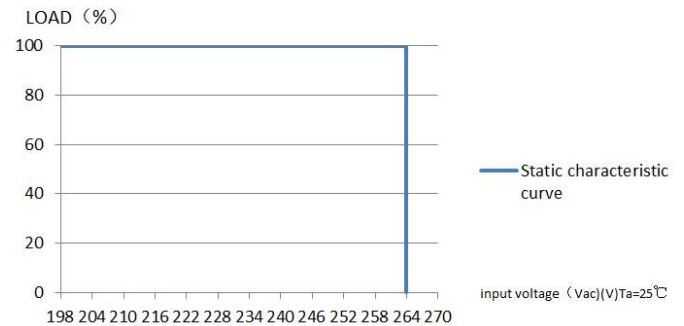


Fig. 3 I-V curve

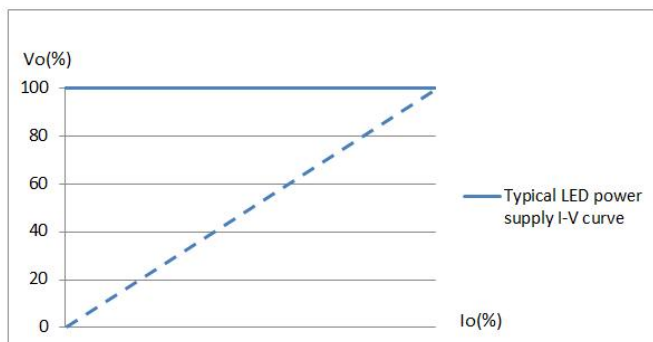


Fig. 4 Power factor characteristic curve

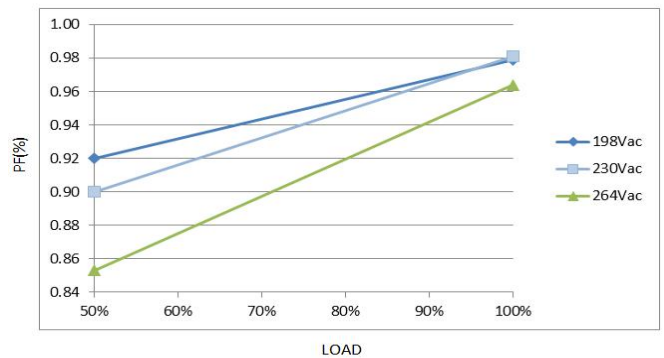


Fig.5 Total harmonic distortion curve (THD)

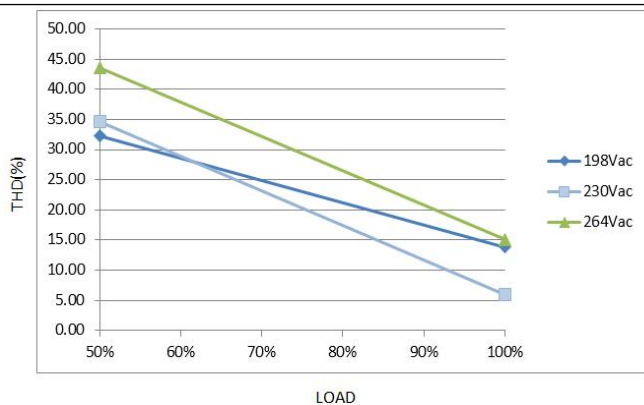


Fig.6 Efficiency-Load curve

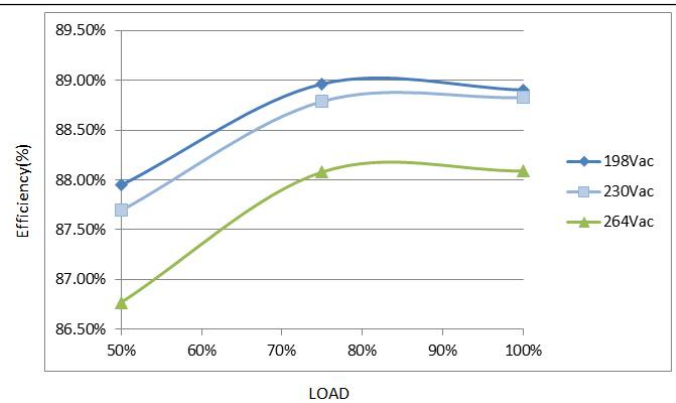


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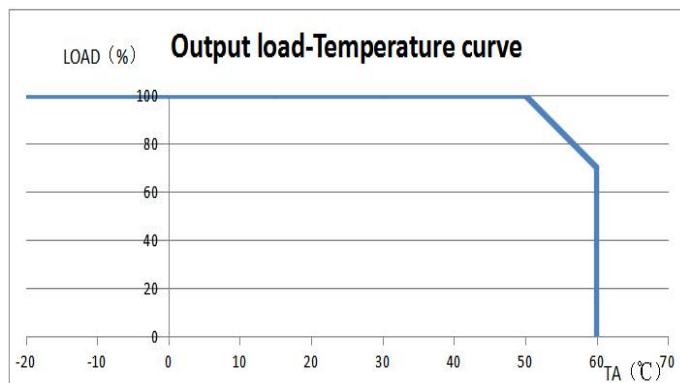


Fig. 2 Static characteristic curve

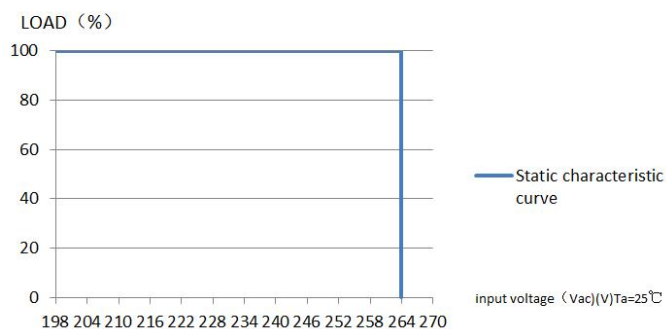


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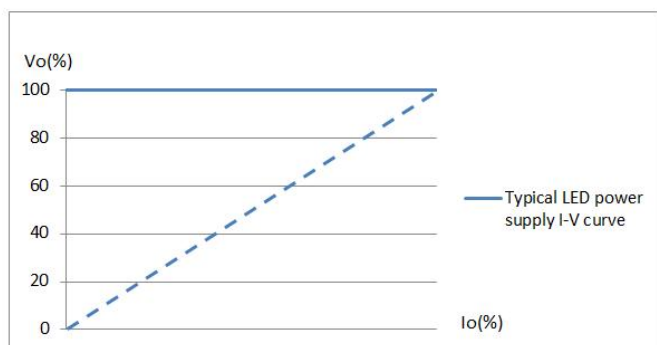


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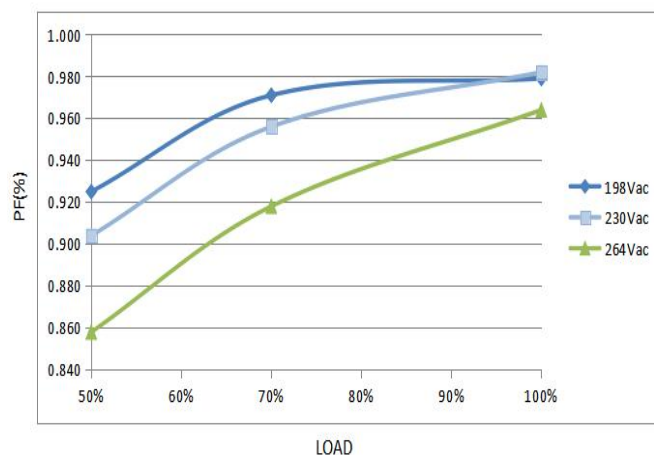


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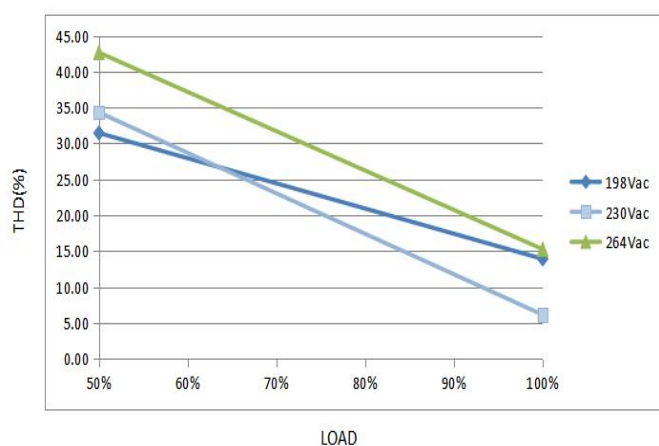
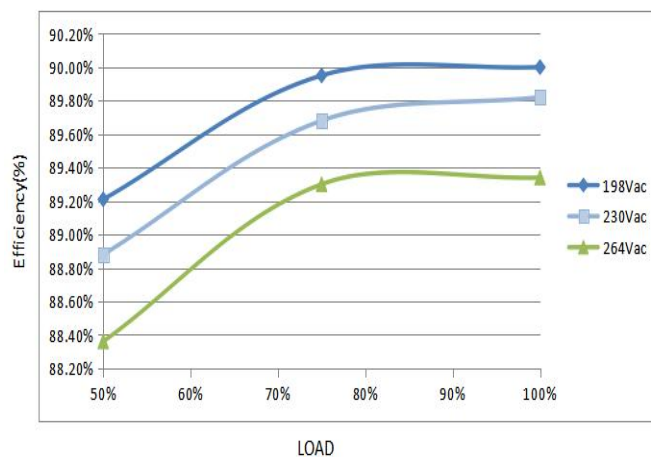


Fig.6 Efficiency-Load curve



MCBS

MCBS Model	B10	B13	B16	B20	C10	C13	C16	C20
SPF60-12VSP	8	11	13	17	14	18	23	28
SPF60-24VSP	8	10	13	16	13	18	22	28
SPF60-48VSP	14	18	22	28	23	31	38	48

Package

Model	Carton quantity(pcs)	Carton dimension(mm)	G.W./CTN(kg)
SPF60-12VSP			
SPF60-24VSP			
SPF60-48VSP			

Revision history

Date	Rev.	Remark
2023.7.28	A2	Add item SPF60-48VSP.
2023.8.24	A2	Updated Output load-Temperature curve.