

Constant Voltage LED Power Supply

SP300-24VLT



Product description

SP300-24VLT is a constant voltage output LED driver. This driver supports leading edge phase cutting and trailing edge phase cutting dimmers, and can be used with many European brands of dimmers to achieve smooth dimming effects. The product complies with safety regulations and EMC certification, and has a lifespan of more than 30,000hrs.



Standards

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

Characteristics

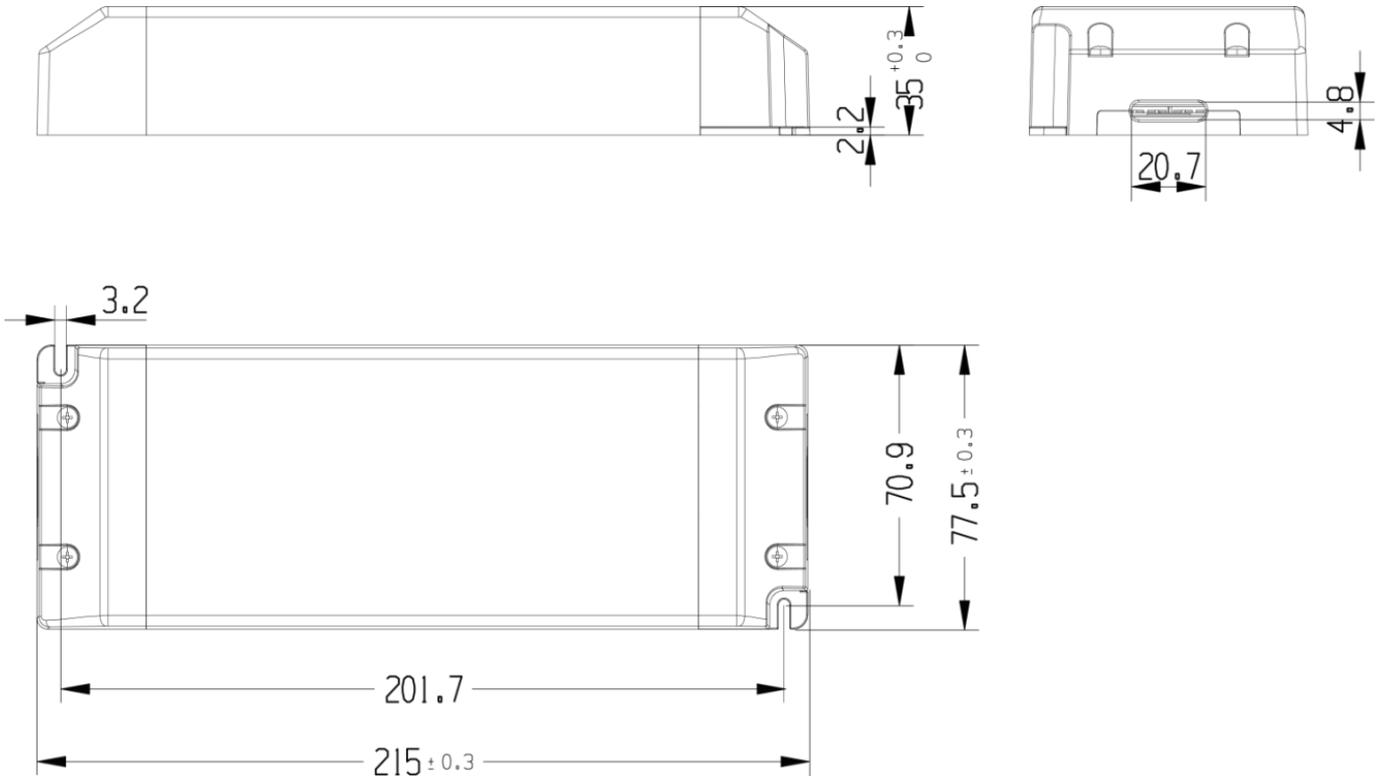
- Single channel 24V constant voltage output, maximum output current is 12.5A
- Supports leading edge (Triac) and trailing edge (ELV) dimming
- Full dimming without video flicker, 20K high-frequency PWM dimming exemption assessment level dimming curve smooth, no jitter
- High efficiency up to 94%
- Overcurrent protection; overvoltage protection; short circuit protection
- Suitable for indoor LED lights

Specifications

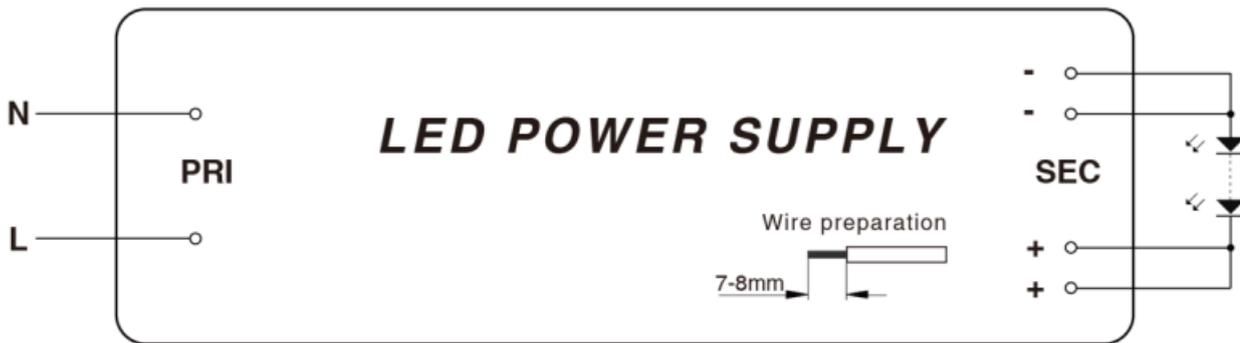
Model		SP300-24VLT
Output	turn on time(S)	<2S soft start up
	output power(W)	300
	output voltage(V)	24
	output voltage tolerance	5%
	ripple voltage	3%
	Line Regulation	3%
	Load Regulation	3%
	working current range(A)	6-12.5
	SVM	Full load SVM0.4
	Pst	Full loadPst LM1
	Dimming Frequency	20K
	dimming type	Triac
	dimming range	10%-100%
	Input	rated DC supply voltage(Vdc)
rated supply voltage(Vac)		220-240
voltage range(Vac)		198-264
line frequency(Hz)		50/60
input current(A)		1.5A/220V
efciency		94%@full load
average efciency 3 3		93.5%
power factor		0.95@full load
THD(typ.) THD		10%
inrush current(Ipk) Ipk		92A/470uS
Leakage current		0.7mA
Protection	short circuit protection	Recover after power on
	over load protection	Recover after power on
	Over voltage protection	N/A
	Over temperature protection	Y
	surge capacity	L-N: 2000V
	Withstand voltage	Input-Output:3750V/5mA/1min
	Ta(C)	-2045
	Tc max.(C)	max.90

Ambient and Life	Storage Temperature(C)	-40...85																
	ambient humidity range	5%...85%RH, Not condensing																
	nominal life-time(hrs)	30'000@Ta																
Other	dimensions (LWH)(mm)	215*77.5*35																
	weight(g)	890																
	casing material	Plastic																
	housing colour	White																
	type of protection	IP20																
	protection class	class II																
	certificate																	
Note	<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 models 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. 6. A switch needs to be added between the mains power supply and the LED power supply to meet the latest ErP regulatory requirements for lamps. 7. It is prohibited to use noisy dimmers (which may trigger protection and have no output). It is recommended to use trailing edge (ELV) dimmers (the matching dimmers are as follows:</p> <table border="1" data-bbox="635 1120 1149 1563"> <thead> <tr> <th>Brand</th> <th>P/N</th> </tr> </thead> <tbody> <tr> <td>GIRA</td> <td>2385 00/I03</td> </tr> <tr> <td>LK FUGA SCHNEIDER</td> <td>506DA219</td> </tr> <tr> <td>SC POWER</td> <td>TDR300-T1</td> </tr> <tr> <td>FUGA</td> <td>506DA120</td> </tr> <tr> <td>Berker</td> <td>2909</td> </tr> <tr> <td>FUGA</td> <td>506DA109</td> </tr> <tr> <td>Yokis</td> <td>MTV500M 5454062</td> </tr> </tbody> </table>		Brand	P/N	GIRA	2385 00/I03	LK FUGA SCHNEIDER	506DA219	SC POWER	TDR300-T1	FUGA	506DA120	Berker	2909	FUGA	506DA109	Yokis	MTV500M 5454062
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Dimensions(mm)



Wiring Diagram



:	
AC	H03VVH2-F 2*1mm ²
DC	H03VVH2-F 2*1mm ² *2

Electrical curves

SP300-24VLT

Fig. 1 Output load-Temperature curve

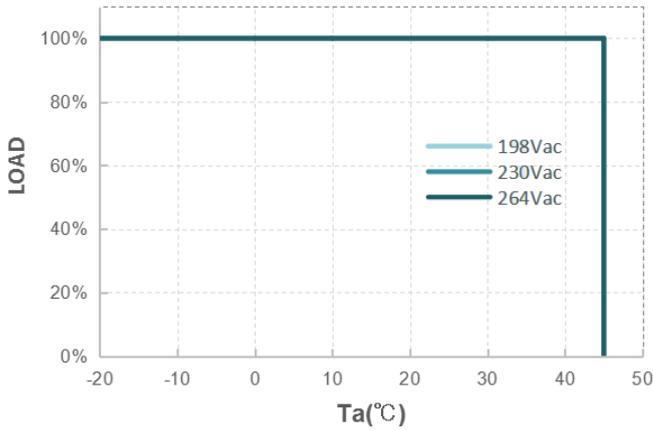


Fig. 2 Static characteristic curve

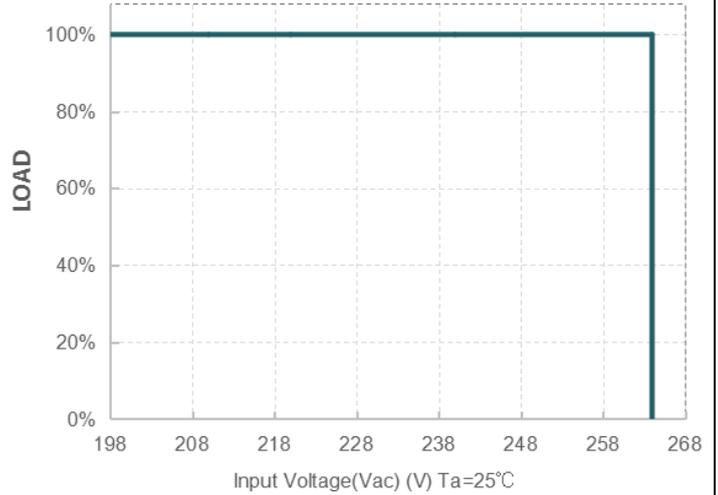


Fig. 3 I-V curve

Typical LED power supply I-V curve

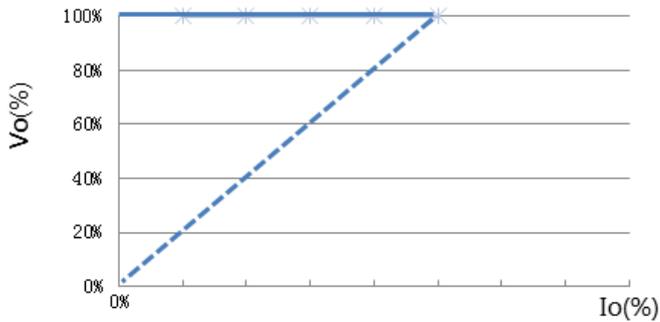


Fig. 4 Power factor characteristic curve

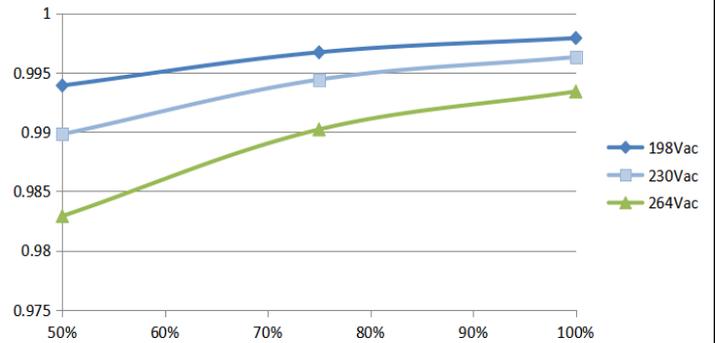


Fig.5 Total harmonic distortion curve THD

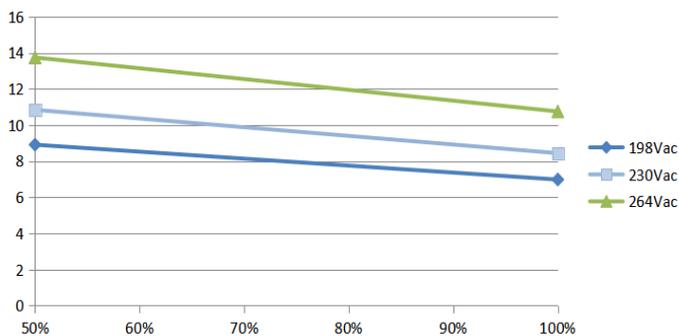
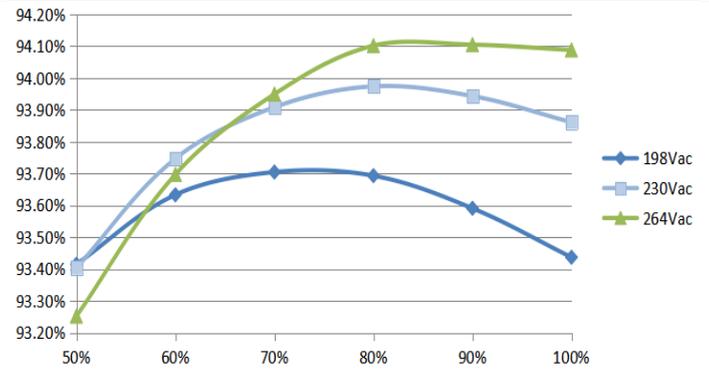


Fig.6 Efficiency-Load curve



MCBS

MCBS Model	B10	B13	B16	B20	C10	C13	C16	C20
SP300-24VLT	2	3	4	5	3	4	5	6

Package

Model	Carton quantity(pcs)	Carton dimension(mm)	G.W./CTN(kg)
SP300-24VLT			

Revision history

Date	Rev.	Remark
2023.10.24	A1	