Constant Voltage LED Power Supply

SEA180-24VL SEA180-48VL

Product description

SEA180 is an indoor constant voltage LED driver with an input voltage range of 220-240Vac and a conversion efficiency of up to 93%. It works in the natural cooling case temperature range of -20°C~+45°C and has Ultra-high power factor, ultra-low total harmonic distortion, low standby power consumption, and all-round protection functions not only greatly improve product reliability, but also ensure product life cycle. This series of products is designed for LED lighting design and used in indoor lighting. Suitable for various application environments in almost all indoor places where LED lamps can be installed. Complies with world lighting equipment safety regulations while ensuring the safety of users and lighting systems during installation.

Standards

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

Characteristics

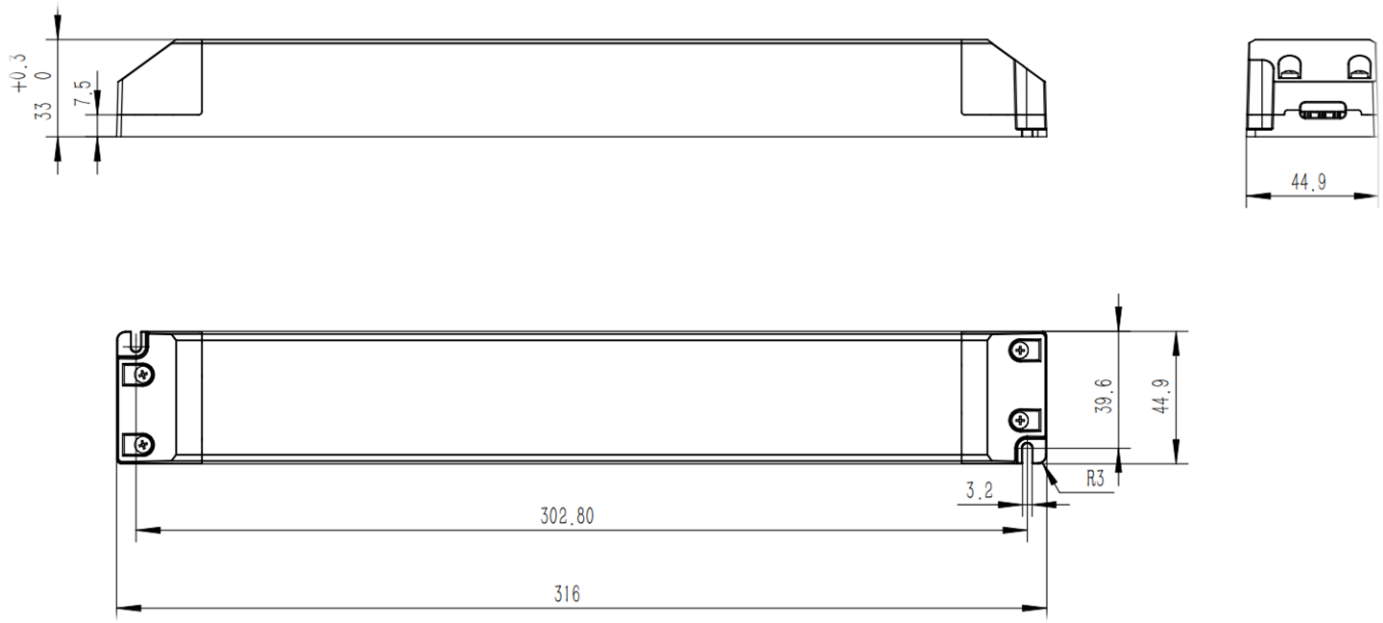
- AC input range (220-240VAC)
- With active PFC function
- IP20
- Suitable for indoor environments
- Protection type: short circuit/overvoltage/overtemperature protection
- Plastic shell, filled with glue inside
- Comply with world lighting equipment safety regulations
- 5 years warranty

Specifications

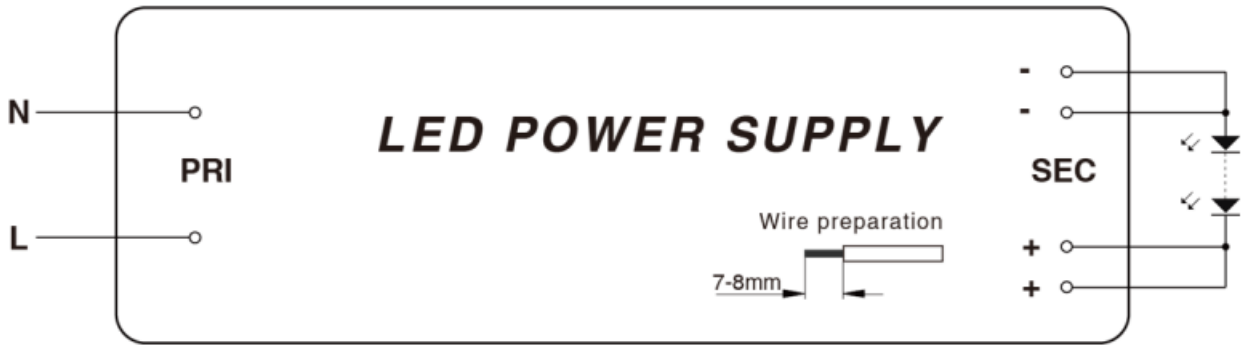
Model		SEA180-24VL	SEA180-48VL
Output	Turn on time(S)	<0.5s	<0.5s
	Output power(W)	180	180
	Output voltage(V)	24	48
	Output voltage tolerance	±5%	±5%
	Ripple voltage	±3%	±3%
	Line Regulation	±3%	±3%
	Load Regulation	±3%	±3%
	Working current range(A)	0-7.5A	0-3.75A
	SVM	SVM≤0.4	SVM≤0.4
	Pst	Pst LM≤1	Pst LM≤1
	Dimming Frequency	-	-
	Dimming type	-	-
	Dimming range	-	-
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)	0.95A/220V	0.95A/220V
	Efficiency	93%@full load	92.5%@full load
	Average efficiency 3 3	92.5%	92%
	Power factor	0.95@full load	0.95@full load
	THD(typ.) THD（）	10%	10%
	Inrush current(Ipk) （Ipk）	60A/400uS	60A/400uS
	Leakage current	＜0.7mA	＜0.7mA
Protection	Short circuit protection	Automatic recovery after short circuit removal	Automatic recovery after short circuit removal
	Over load protection	Cancel overload and automatically recover	Cancel overload and automatically recover
	Over voltage protection	N/A	N/A
	Over temperature protection	Y	Y
	Surge capacity	L-N: 1000V	L-N: 1000V
	Withstand voltage	Input-Output：3750V/5mA/1min	Input-Output：3750V/5mA/1min

Ambient and Life	Ta(℃)	-20…45	-20…45
	Tc max.(℃)	max.85	max.90
	Storage Temperature(℃)	-40...85	-40...85
	Ambient humidity range	5%...85%RH, Not condensing	5%...85%RH, Not condensing
	Nominal life-time(hrs)	50'000@Ta	50'000@Ta
Other	Dimensions (L×W×H)(mm)	316*44.9*33	316*44.9*33
	Weight(g)	590	590
	Casing material	Plastic	Plastic
	Housing colour	White	White
	Type of protection	IP20	IP20
	Protection class	Class II	Class II
	Certificate		
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	Terminal block H03VVH2-F 2*0.75mm^2
DC	Terminal block H03VVH2-F 2*0.75mm2 *2

Electrical curves

SEA180-24VL

Fig. 1 Output load-Temperature curve

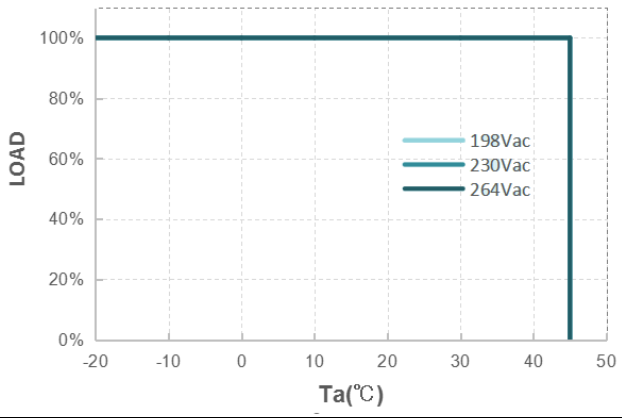


Fig. 2 Static characteristic curve

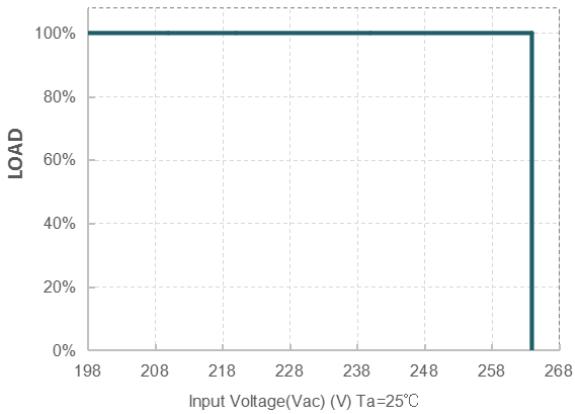


Fig. 3 I-V curve

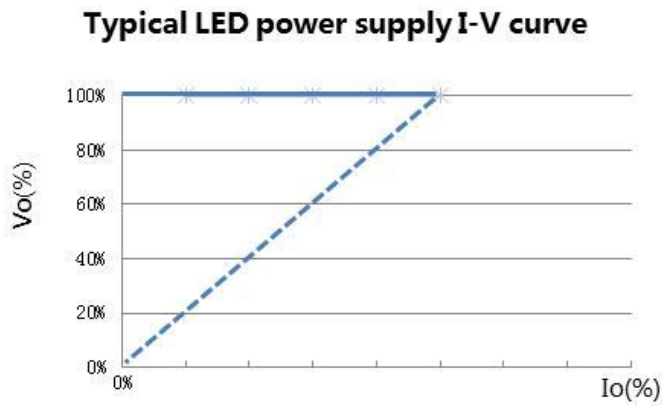


Fig. 4 Power factor characteristic curve

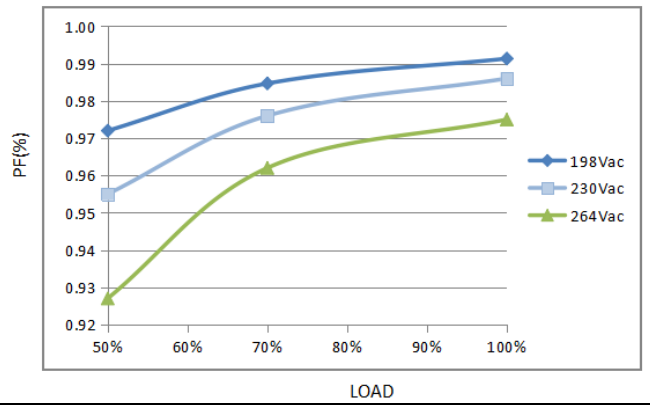


Fig.5 Total harmonic distortion curve（THD）

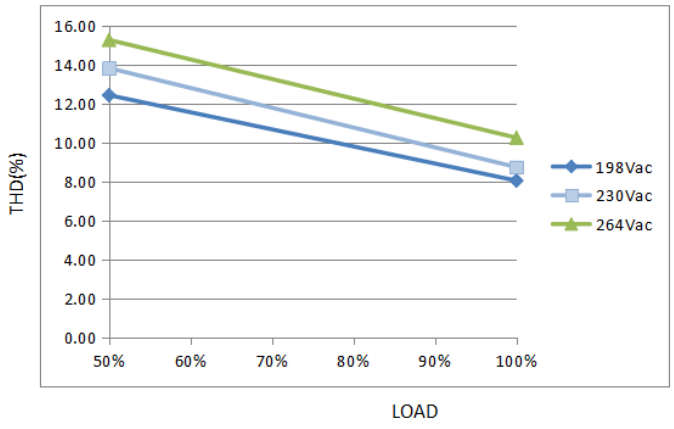
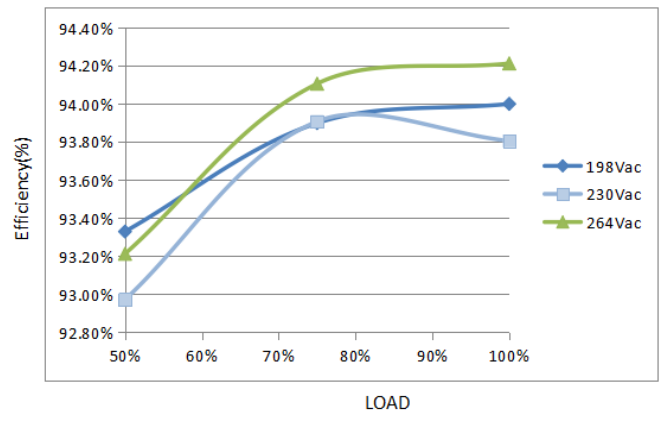


Fig.6 Efficiency-Load curve



Electrical curves

SEA180-48VL

Fig. 1 Output load-Temperature curve

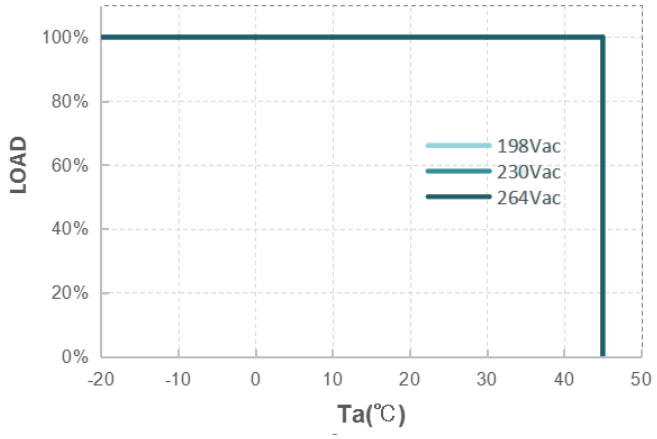


Fig. 2 Static characteristic curve

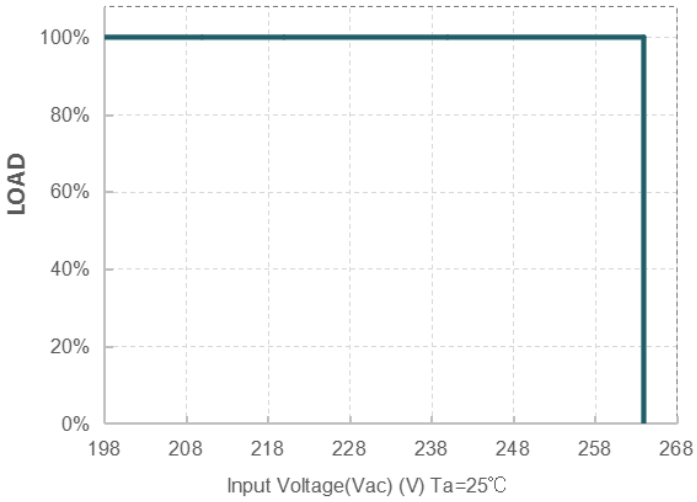


Fig. 3 I-V curve

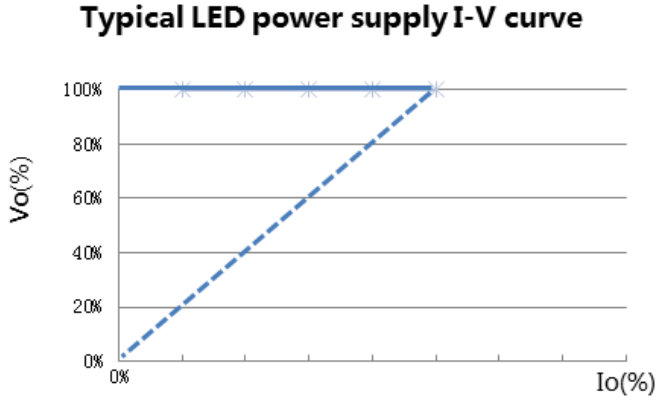
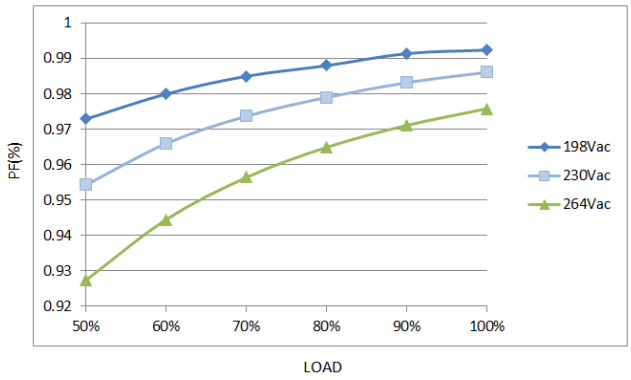


Fig. 4 Power factor characteristic curve



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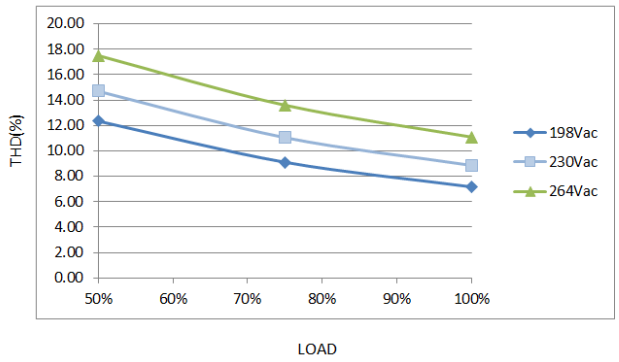
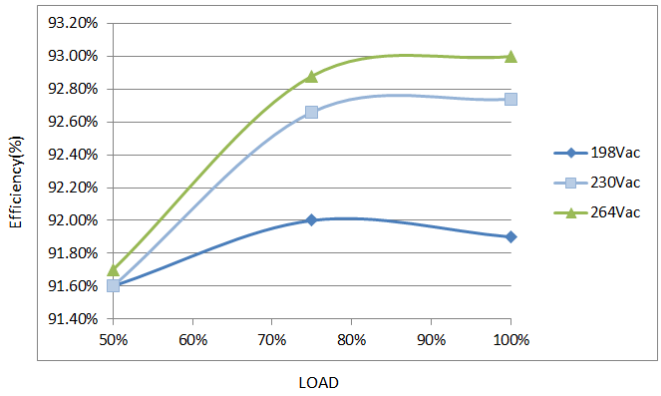


Fig.6 Efficiency-Load curve



MCBS

MCBS / Model	B10	B13	B16	B20	C10	C13	C16	C20
SEA180-24VL	2	3	4	5	4	6	7	8
SEA180-48VL	2	3	4	5	4	6	7	8

Package

Model	Carton quantity(pcs)	Carton dimension(mm)	G.W./CTN(kg)
SEA180-48VL			

Revision history

Date	Rev.	Remark
2023.11.06	A0	