PEC-V09L

90W Single Output LED Lighting Power Supply

Case No: 8015FG
161 x 61 x 36 mm

Features

- Universal AC input / Full range (up to 305VAC)
- Built in active PFC function
- High efficiency up to 91%
- Protections: SCP, OCP, OVP, OTP
- Fully isolated plastic case encapsulated to IP67 level
- Class II power unit, no FG
- Cooling by free air convection
- Class 2 power unit,
- Suitable for LED lighting and moving sign applications
- Suitable for dry / damp / wet locations
- 5 years warranty

SELV IP67

Specification

INPUT	**Voltage**	90V ~ 305VAC 127 ~ 431VDC
	Frequency	47 ~ 63 Hz
	Power Factor	PF>0.97/115VAC PF>0.96/230VAC, PF>0.95/277VAC at full load (Please refer to 'Power Characteristic' curve)
	Total Harmonic Dist	THD< 20% when output loading ≧60% at 115VAC/230VAC input and output loading ≧75% at 277VAC input
	Efficiency	91%
	Current	0.95A@115VAC 0.5A@230VAC 0.4A@277VAC
	Inrush Current (Typ.)	70A(twidth=435μs measured at 50% Ipeak) @230VAC, Cold Start
	Leakage Current	<0.75mA@277VAC
OUTPUT	**MODEL No.**	**PEC-V09L**
	Voltage	42V
	Rated Current	2.15A
	Constant Current	25.2~42V
	Rated Power	90.3W
	Ripple Noise MAX.	200Vp-p
	Voltage Tolerance	± 4.0%
	Line Regulation	± 0.5%
	Load Regulation	± 0.5%
	Setup Rise Time	1200ms, 200ms / 115VAC at full load 500ms, 200ms / 230VAC at full load
	Holdup Time (Typ.)	16ms / 230VAC 16ms / 115VAC at full load
PROTECTION	**Over Current**	95~108%
		Protection Type: Constant current limiting, recovers automatically after fault condition is removed
	Over Voltage	47~53V
		Protection Type: Shut down o/p voltage, re-power on to recover
	Over Temperature	Shut down o/p voltage, re-power on to recover
ENVIRONMENT	**Working Temp.**	-40 ~ +70°C (Refer to "Derating Curve")
	Working Humidity	20~95% RH non-condensing
	Storage Temp., Humidity	-40 ~ +80°C, 10~95%RH
	Temp. Co-efficient	±0.03% / °C (0~50°C)
	Vibration	10 ~ 500Hz, 5G 12min./1cycle, period for 72 min. each along X, Y, Z axes
SAFETY & EMC	**Safety Standards**	Designed to meet UL8750, ENEC EN61347-1, EN61347-2-13 independent, EN63284, J61347-1, J61347-2-13, IP67; design refers to UL60950-1, TUV EN60950-1
	Withstand Voltage	I/P-O/P:3.75KVAC
	Isolation Resistance	I/P-O/P:100M Ohms / 500VDC/ 25°C / 70%RH
	EMC Emission	Compliance to EN55015, EN61000-3-2 Class C (≧60% load); EN61000-3-3
	EMC Immunity	Compliance to EN61000-4-2,3,4,5,6,8,11, EN61547, EN55024, light industry level (surge 2KV), criteria B
OTHERS	**M.T.B.F.**	301.6K hrs min. MIL-HDBK-217F (25°C)
	Packaging	0.7Kg; 20pcs/15Kg/0.73CUFT

1. All parameters NOT specially mentioned are measure at 230VAC input, rated load and 25°C of ambient temperature.
2. Ripple and noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.
3. Tolerance: includes set up tolerance, line regulation and load regulation.
4. Constant current operation region is within 60% ~ 100% rated output voltage. This is the suitable operation region for LED related applications, but please reconfirm special electrical requirements for specific system design.
5. De-ration may be needed under low input voltages. Please check the static characteristics for more details.
6. Suitable for indoor or outdoor use without direct sunlight exposure. Please avoid immersion in water for over 30 minutes.
7. 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.

Sunpower Technology LLP Orion House, Calleva Park, Aldermaston, Berkshire RG7 8SN Tel: +44 (0)118 981 1001 • E-mail: sales@sunpower-uk.com

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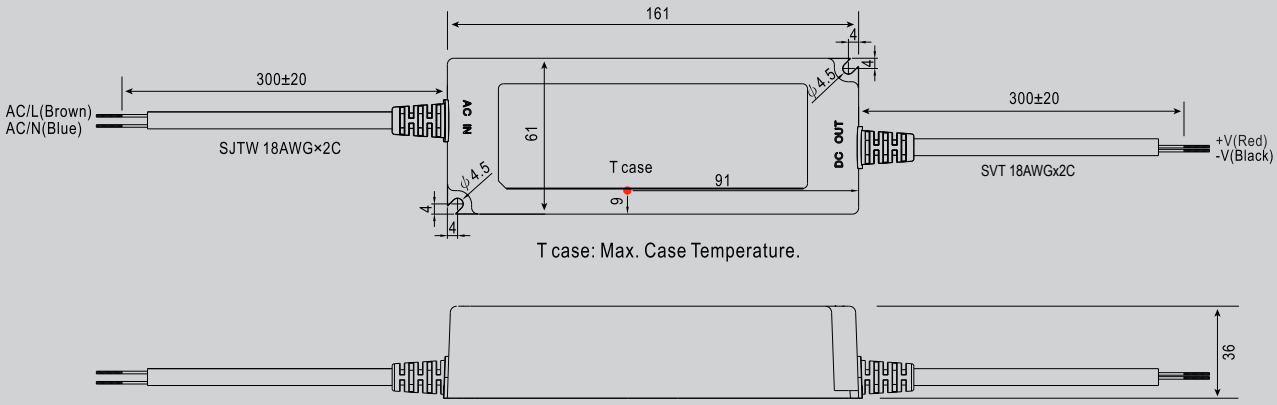
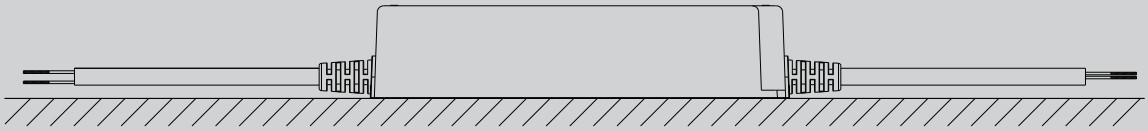
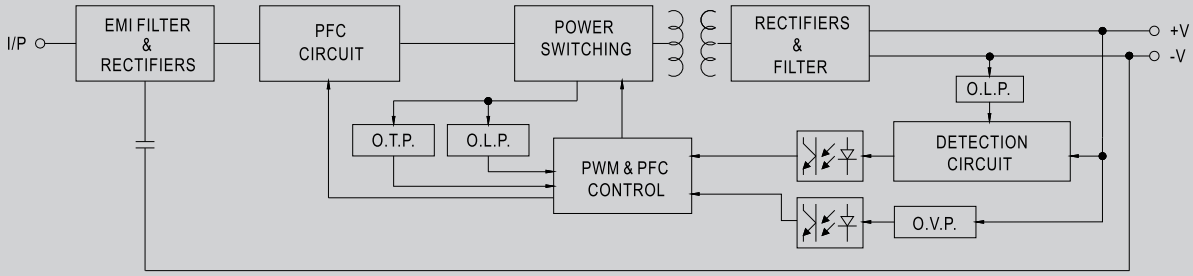
Mechanical Specification



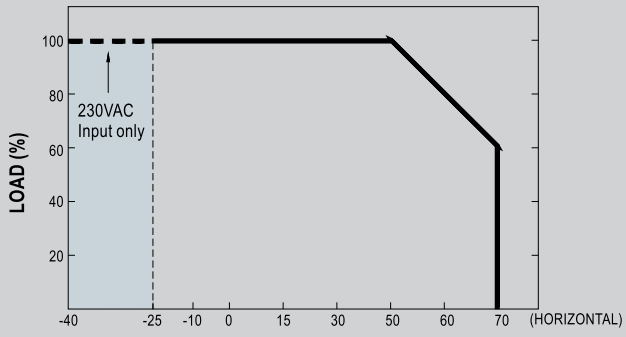
Recommended Mount Direction



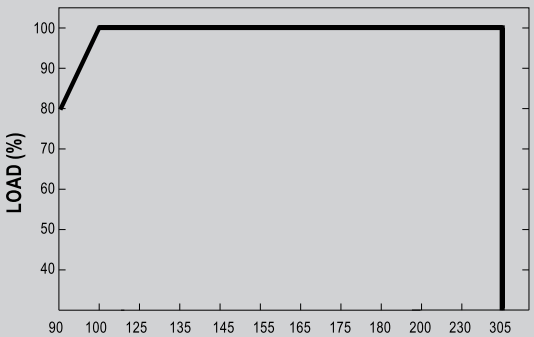
Block Diagram



Derating Curve



Static Characteristics



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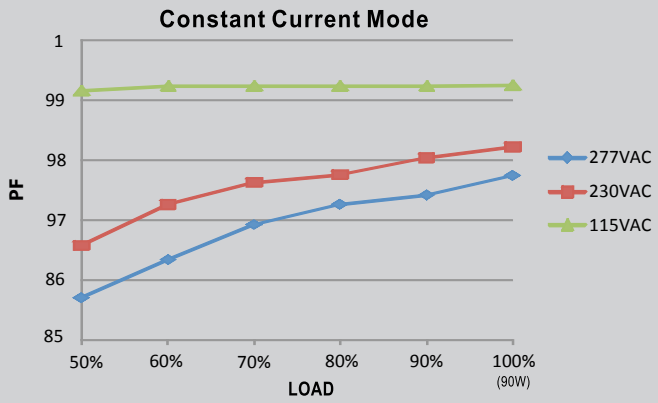
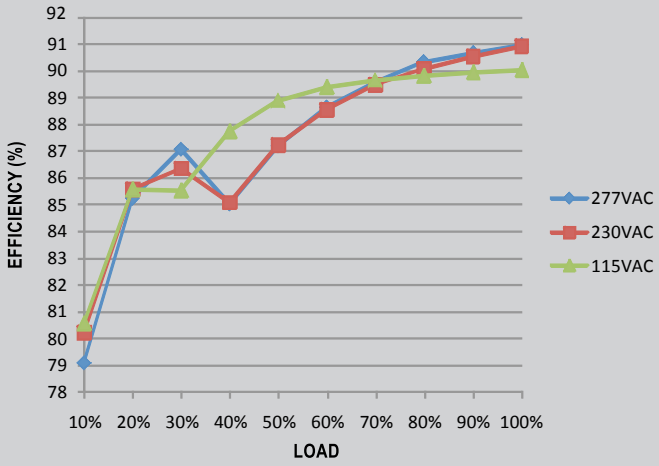
Power Factor Characteristic



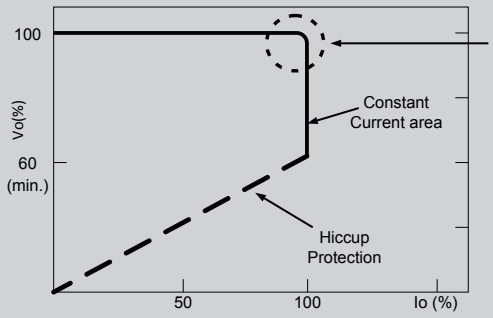
Efficiency vs Load (48 Model)

PEC-V09-PD series possess superior working efficiency that up to 90.5% can be reached in field applications.



Driving Methods of LED Module

This LED power supply is suggested to work in constant current mode area (CC) to drive the LEDs.



Typical LED power supply I-V curve

In the constant current region, the highest voltage at the output of the driver depends on the configuration of the end systems.