

## SPWC12 SERIES

## 12W Single Constant Current Output LED Driver



- Wide Input Voltage 90 to 305VAC 47 to 63Hz or 110-400Vdc
- Over Voltage / Short Circuit / Over Temperature Protection
- High Efficiency (up to 85%), Active Power Factor Correction (PFC)
- IP20 Waterproof Rating
- Comply to worldwide safety regulations for lighting
- Cooling by free air convection
- Suitable for LED lighting & moving sign applications, for dry / damp / wet locations

3 Year Warranty

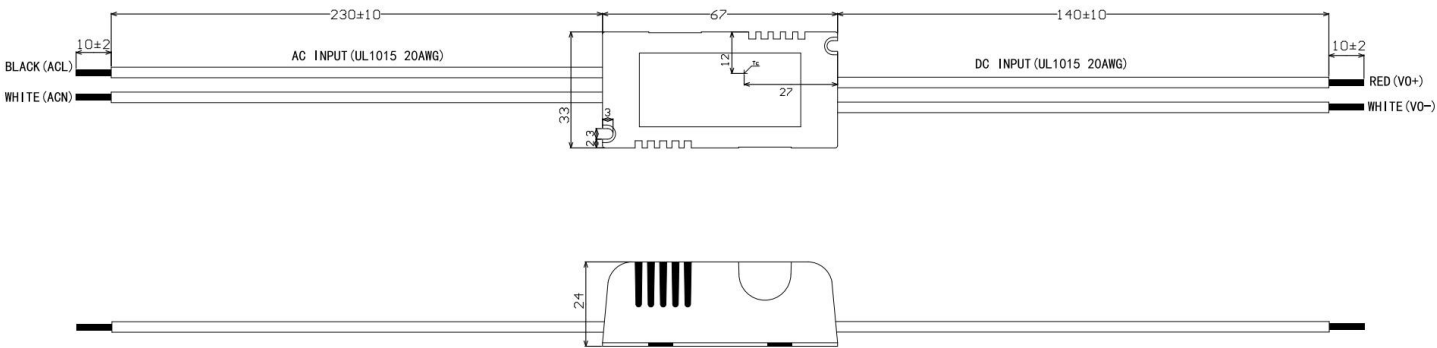
Approvals: IP20  

### SPECIFICATION

Part Number		SPWC12-0300SS	SPWC12-0600SS
OUTPUT	DC VOLTAGE	19-40V	9.5-20V
	CONSTANT CURRENT REGION Note.4	300mA	600mA
	RATED POWER	12W	
	RIPPLE & NOISE(max.) Note.2	1.5V	0.7V
	CURRENT TOLERANCE Note.3	±5.0%	
	LINE REGULATION	±2.0%	
	LOAD REGULATION	±3.0%	
	SETUP, RISE TIME(Typ.) Note.7	1900ms/50ms 115VAC at full load	680ms/50ms 230VAC
INPUT	VOLTAGE RANGE Note.5	90 ~305VAC or 110-400Vdc	
	FREQUENCY RANGE	47 ~ 63Hz	
	POWER FACTOR(Typ.)	0.99@115VAC 60HZ 0.91@230VAC 50HZ	
	EFFICIENCY(Typ.)	85%	84%
	AC CURRENT(Typ.)	150mA/115VAC 80mA/230VAC	
	INRUSH CURRENT(Typ.)	COLD START 9A ( Twidth=270us measured at 50% Ipeak ) at 230VAC	
	LEAKAGE CURRENT	<0.75mA/265VAC	
PROTECTION	OVER CURRENT Note.4	95 ~ 108% Protection type: Constant current limiting, recovers automatically after fault condition is removed	
	SHORT CURRENT	Hiccup mode, recovers automatically after fault condition is removed	
	OVER VOLTAGE	48V	25V
	OVER TEMP.	Hiccup mode, recovers automatically after fault condition is removed	
ENVIRONMENT	WORKING TEMP.	-35 ~ +70 °C (Refer to "Derating Curve")	
	WORKING HUMIDITY	10 ~ 100% RH non-condensing	
	STORAGE TEMP., HUMIDITY	-40 ~ +85 °C, 5 ~ 100% RH	
	TEMP. COEFFICIENT	±0.03% °C (0~50 °C)	
	VIBRATION	10 ~ 500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes	
SAFETY & EMC	SAFETY STANDARDS Note.6	UL8750, UL935, UL1012, CSA-C22.2 No.107.1, EN61347-1, EN61347-2-13	
	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 A	
OTHERS	MTBF	250khrs min. MIL-HDBK-217F (25 °C)	
	DIMENSION	67*33*24MM(L*W*H)	
	PACKING	52±5g	

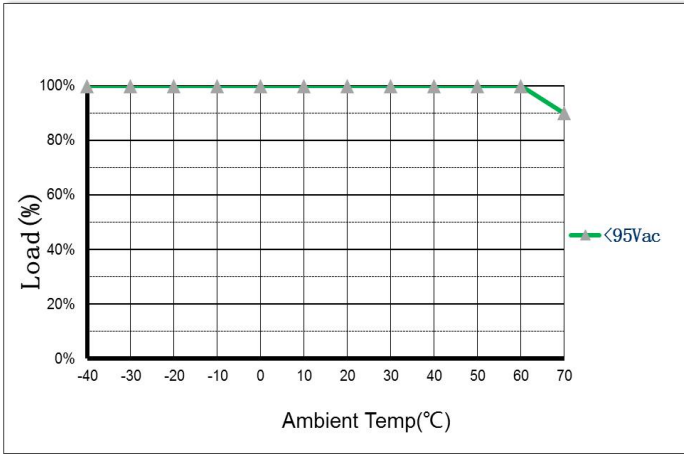
<b>NOTE</b>	<ol style="list-style-type: none"> <li>1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</li> <li>2. Ripple &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf &amp; 47uf parallel capacitor.</li> <li>3. Tolerance: includes set up tolerance, line regulation &amp; load regulation.</li> <li>4. Please refer to "DRIVING METHODS OF LED MODULE".</li> <li>5. Derating may be needed under low input voltages. Please check the static characteristics for details.</li> <li>6. Suitable for indoor use or outdoor use without direct sunlight exposure. Please avoid immerse in the water over 30 minutes.</li> <li>7. Length of set up time is measured at cold first start. Turning ON/OFF the power supply may lead to increase of the set up time.</li> <li>8. 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 manufactures must re-qualify EMC DIRECTIVE on the complete installation again.</li> <li>9. Direct connecting to LEDs is suggested, but is not suitable for using additional drivers.</li> <li>10. To fulfill requirements of the latest ERP regulation for lighting fixtures, this LED power supply can only be used behind switch without permanently connected to the mains.</li> </ol>
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## Mechanical Specification



## SPWC12-0300SS Derating Curve

**Derating Characteristics**



**Static Characteristics**

