SPWC60 SERIES

60W Single Constant Current Output LED Driver

- Wide Input Voltage 90 to 305VAC, 47 to 63Hz
- Over Voltage / Short Circuit / Over Temperature Protection
- High Efficiency (up to 88%), Active Power Factor Correction (PFC)
- IP66 Waterproof Rating, Fully isolated
- Selectable dimming function (0~5V / 0~10V)
- Cooling by free air convection
- Input Surge Protection:4KV line-line

3 Year Warranty

Approvals: IP66 RoHS CE

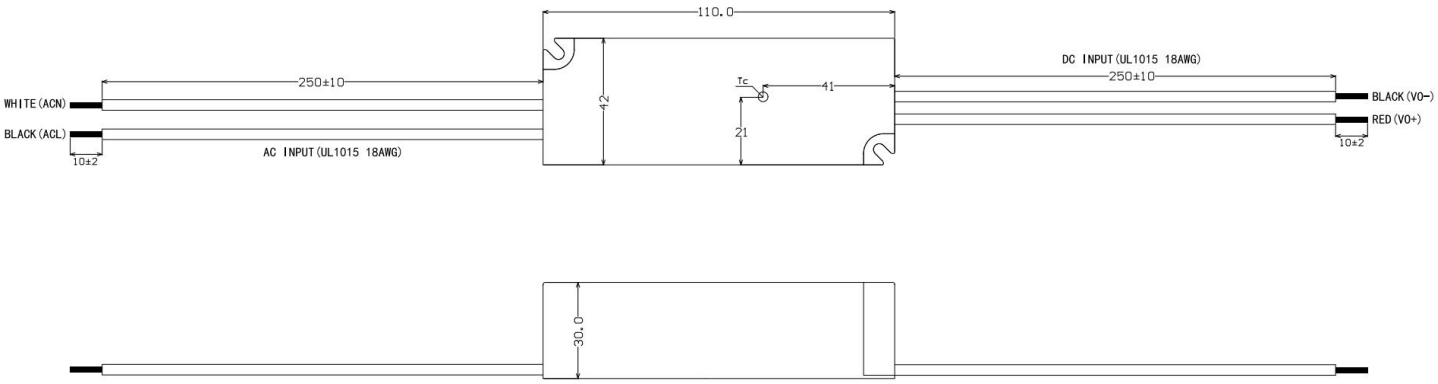
SPECIFICATION

Part Number		SPWC60-0700SS/SD	SPWC60-1050SS/SD	SPWC60-1400SS/SD	SPWC60-1750SS/SD
OUTPUT	DC VOLTAGE	51-86V	34-57V	26-43V	21-36V
	CONSTANT CURRENT REGION Note.4	700mA	1050mA	1400mA	1750mA
	RATED POWER	60W			
	RIPPLE & NOISE(max.) Note.2	4.8V	4.0V	3.7V	4.1V
	CURRENT TOLERANCE Note.3	±5.0%			
	LINE REGULATION	±2.0%			
	LOAD REGULATION	±3.0%			
	SETUP, RISE TIME(Typ.) Note.7	1500ms/50ms 115VAC at full load 500ms/50ms 230VAC			
INPUT	VOLTAGE RANGE Note.5	90 ~305VAC			
	FREQUENCY RANGE	47 ~ 63Hz			
	POWER FACTOR(Typ.)	0.99@115VAC 60HZ	0.99@115VAC 60HZ	0.99@115VAC 60HZ	0.99@115VAC 60HZ
	EFFICIENCY(Typ.)	90%	89%	89%	88.5%
	AC CURRENT(Typ.)	0.6A/115VAC 0.3A/230VAC			
	INRUSH CURRENT(Typ.)	COLD START 48A (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	90V	63V	48V	39V
		Protection type: Hiccup mode, recovers automatically after fault condition is removed			
	OVER TEMP.	Hiccup mode, recovers automatically after fault condition is removed			
ENVIRONMENT	WORKING TEMP.	-35 ~ +70℃ (Refer to “Derating Curve”)			
	WORKING HUMIDITY	10 ~ 100% RH non-condensing			
	STORAGE TEMP., HUMIDITY	-40 ~ +85℃, 5 ~ 100% RH			
	TEMP. COEFFICIENT	±0.03%℃ (0~50℃)			
	VIBRATION	10 ~ 500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes			
SAFETY & EMC	SATETY 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			
	ISOLTATION RESISTANCE	I/P – O/P: 100M Ohms / 500VDC /25℃ / 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	125khrs min. MIL-HDBK-217F (25℃)			
	DIMENSIION	110*42*30MM(L*W*H)			
	PACKING	210±10g			

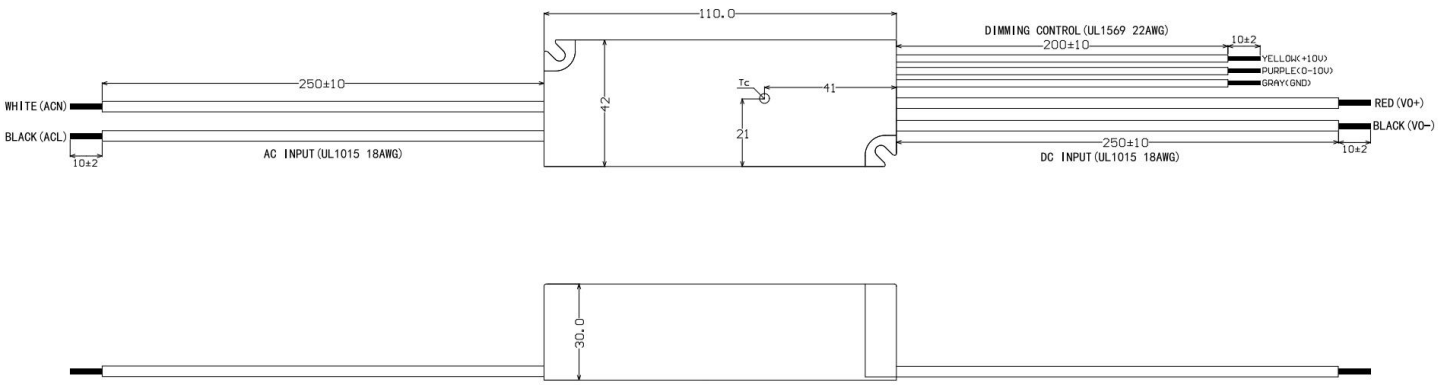
NOTE	1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ of ambient temperature. 2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. 3. Tolerance: includes set up tolerance, line regulation & load regulation. 4. Please refer to "DRIVING METHODS OF LED MODULE". 5. Derating may bee needed under low input voltages. Please check the static characteristics for details. 6. Suitable for indoor use or outdoor use without direct sunlight exposure. Please avoid immerse in the water over 30 minutes. 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. 8. The power supply is considered as a component that will be operated in combination with final equipment. Since EMC performance wil be affected by the complete installation, the final equipment manufactures must re-qualify EMC DIRECTIVE on the complete installation again. 9. Direct connecting to LEDs is suggested, but is not suitable for using additional drivers. 10. To fulfill requirements of the latest ERP regulation for lighting fixtures, this LED power supply can only be used behind switch withou permanently connected to the mains.

Mechanical Specification

-SS SERIES NO Dimming Function Mechanical

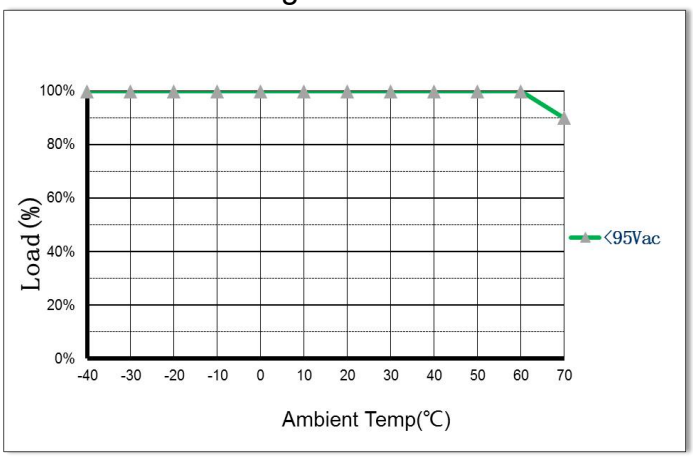


-SD SERIES Dimming Function Mechanical

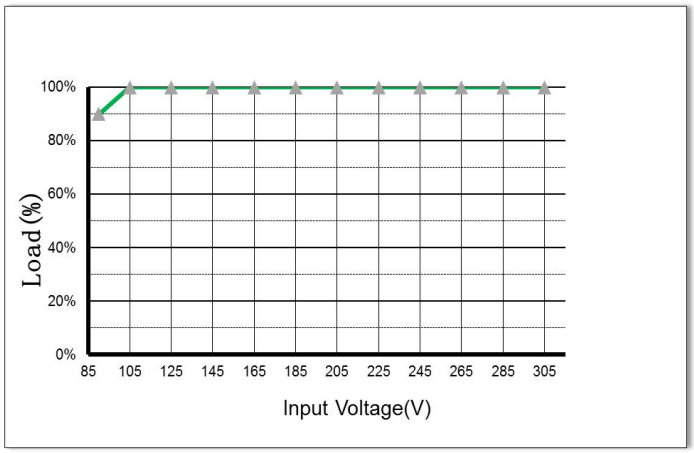


Derating Curve

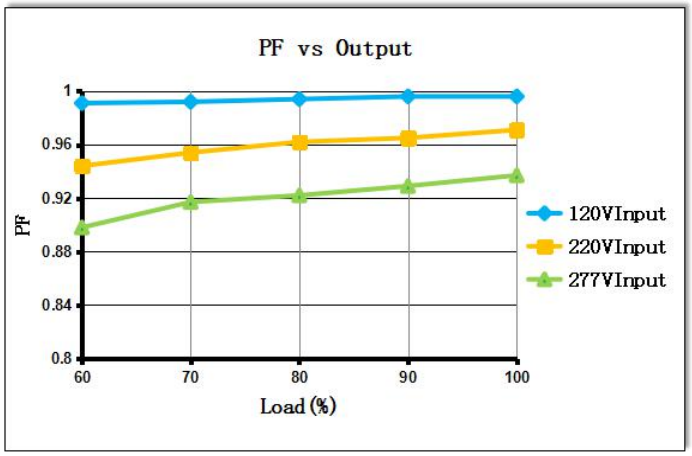
Derating Chatacteristics



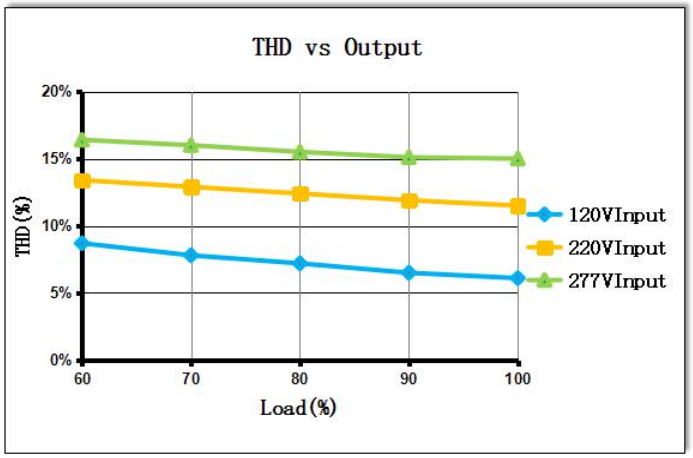
Static Chatacteristics



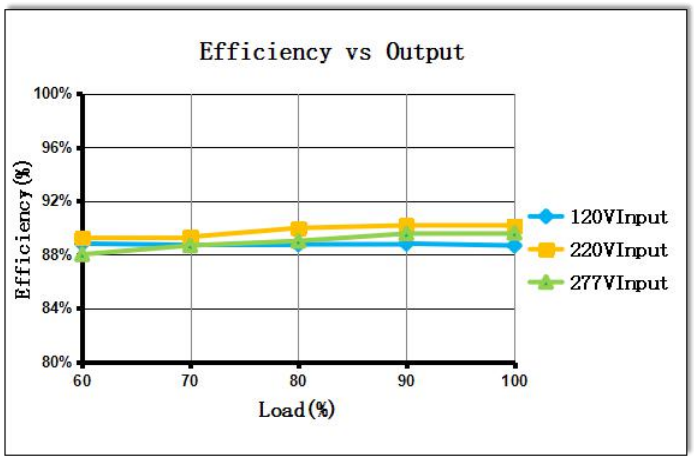
PF VS Load



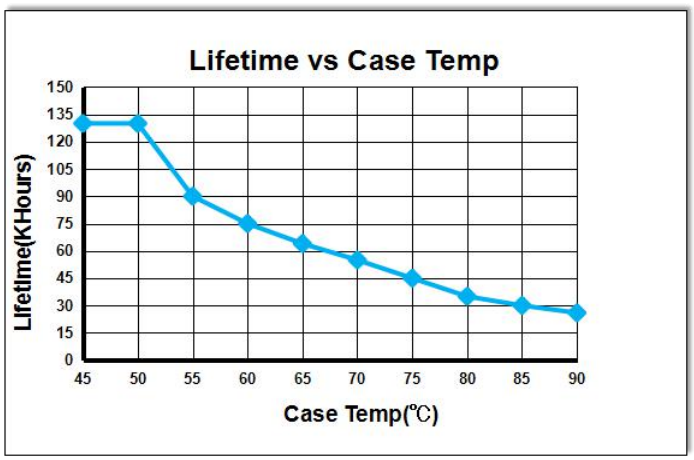
THD VS Load



Efficiency VS Load

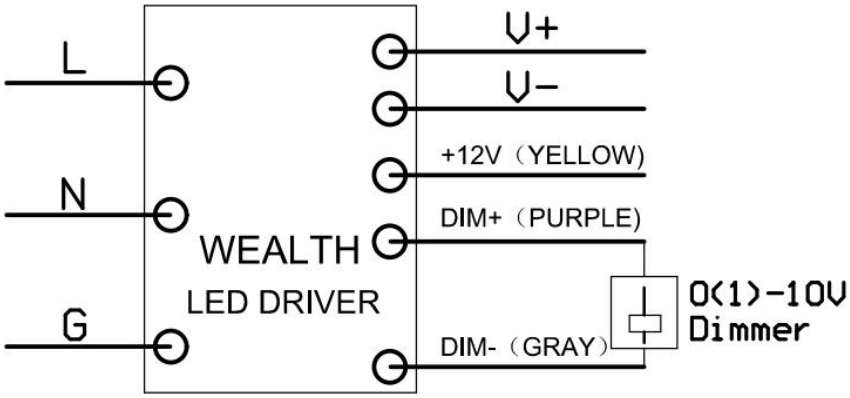


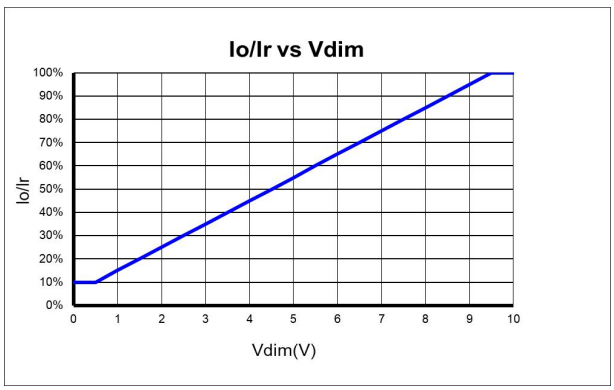
Lifetime VS Case Temp



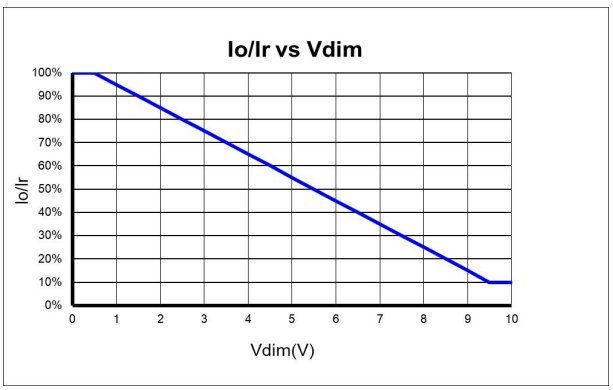
Dimming Function

0-10V Analog Dimming





1:Positive logic



2:Negative logic

DIMMING SPECIFICATIONS	**12V AUXILIARY OUTPUT VOLTAGE**	10.8-13.2V
	12V AUXILIARY OUTPUT SOURCE CURRENT(MAX)	20mA
	DIM+ PIN SOURCE CURRENT(MAX)	250uA
	DIMMING INPUT RANG	0-10V

NOTE:

1.If the dimming function is not used,all wire NC.

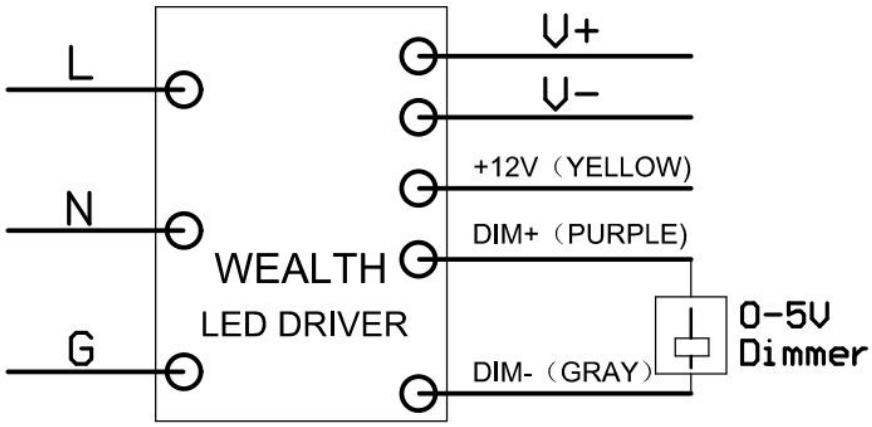
2. Io is actual output current and Ir is rated current without dimming control.

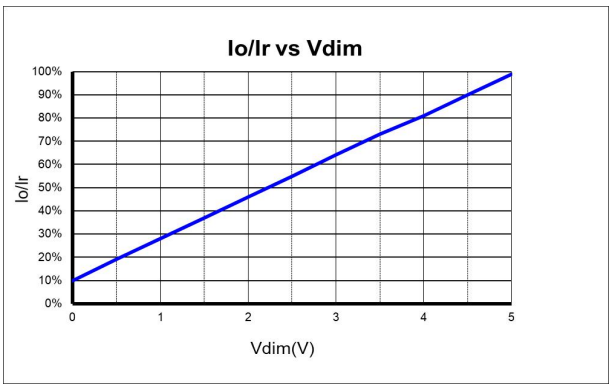
3. The dimmer can also be replaced by an active 0-10V voltage source signal or passive camponents like resisitors and zener

4. The dimming signal is allowed to be less than 1V, when it for 0-1V, the connected LEDs may flicker. Keeping dimming voltage greater than 1V in application is strongly recommended.

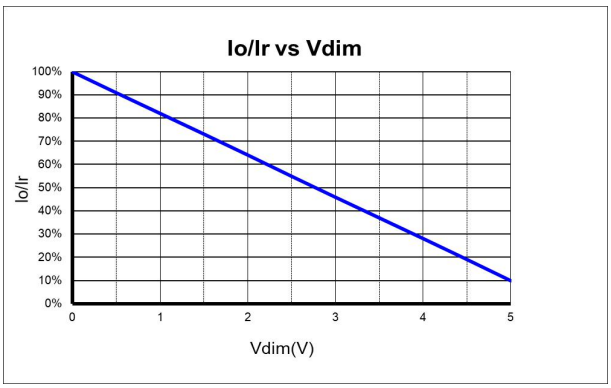
5. Do not connect the **GND of DIM-(gray)** to the output. Otherwise, the LED driver can not work normally.

0-5V Analog Dimming





1:Positive logic



2:Negative logic

DIMMING SPECIFICATIONS	**12V AUXILIARY OUTPUT VOLTAGE**	10.8-13.2V
	12V AUXILIARY OUTPUT SOURCE CURRENT(MAX)	20mA
	DIM+ PIN SOURCE CURRENT(MAX)	250uA
	DIMMING INPUT RANG	0-5V

NOTE:

1.If the dimming function is not used,all wire NC.

2. Io is actual output current and Ir is rated current without dimming control.

3. The dimmer can also be replaced by an active 0-5V voltage source signal or passive components like resisitors

4. Do not connect the **GND of DIM-(gray)** to the output. Otherwise, the LED driver can not work normally.