SMWC50 SERIES

50W 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)
- IP67 Waterproof Rating, Fully isolated
- Comply to worldwide safety regulations for lighting
- Cooling by free air convection
- Suitable for LED lighting & moving sign applications, for dry / damp / wet locations
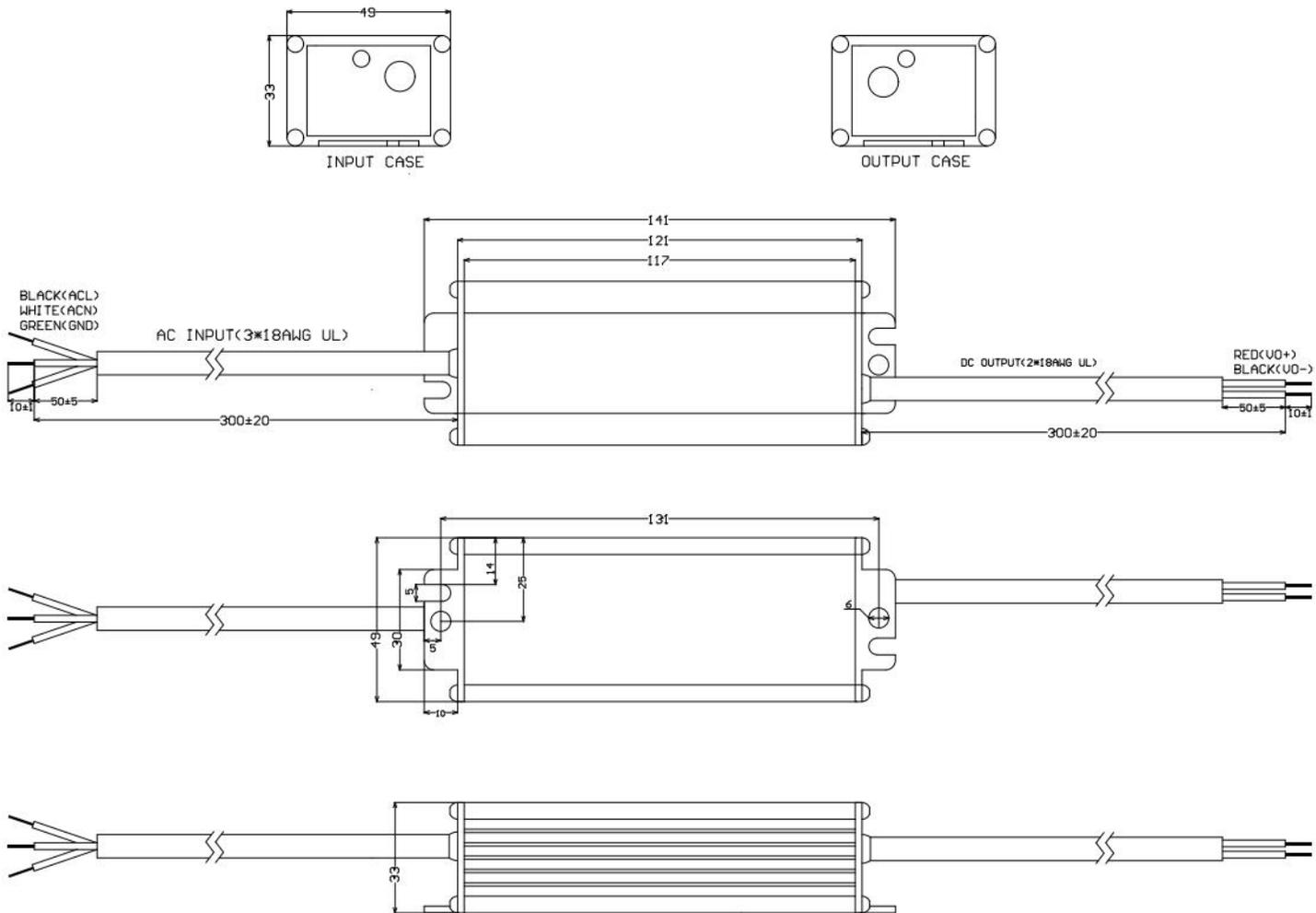
5 Year Warranty

Approvals: IP67 RoHS CE

SPECIFICATION

Part Number		SMWC050-0350SS/D	SMWC050-0700SS/D	SMWC050-1050SS/D	SMWC050-1400SS/D
OUTPUT	DC VOLTAGE	86-143V	43 -71V	29-48V	21-36V
	CONSTANT CURRENT REGION Note.4	350mA	700mA	1050mA	1400mA
	RATED POWER	50W			
	RIPPLE & NOISE(max.) Note.2	6.8V	4.8V	3.8V	3.7V
	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%	89.5%	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	160V	90V	63V	48V
		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,I/P-FG：2KVAC			
	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	340khrs min. MIL-HDBK-217F (25℃)			
	DIMENSIION	117(121)*49*33MM(L*W*H)			
	PACKING	380±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 will 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 without permanently connected to the mains.

Mechanical Specification

Derating Curve

Derating Characteristics

Static Characteristics

PF vs Output

THD vs Output

Efficiency vs Output

Lifetime vs Case Temp