

## SMWC100 SERIES

## 100W 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 92%), 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  

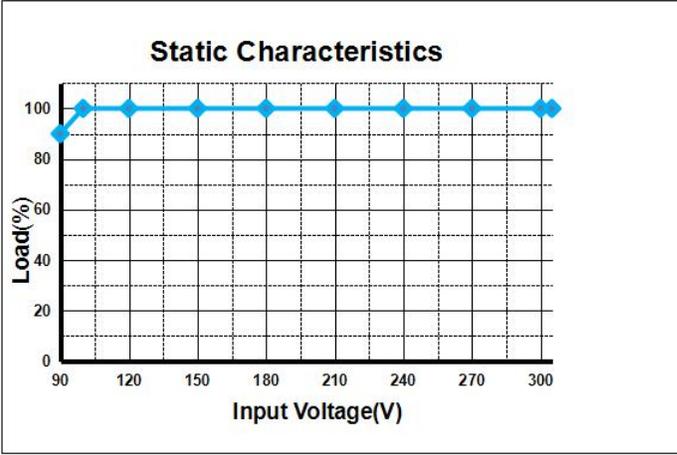
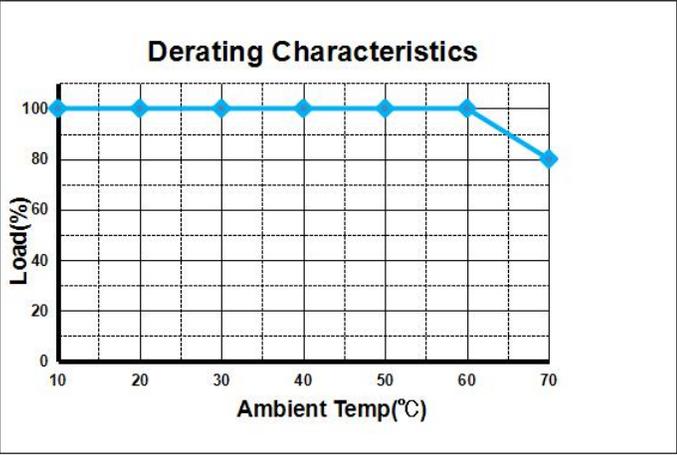
### SPECIFICATION

Part Number		SMWC100-0350SS-E	SMWC100-0700SS-E	SMWC100-1050SS-E	SMWC100-1400SS-E	SMWC100-3150SS-E
OUTPUT	DC VOLTAGE	172-286V	86-143V	57 -95V	43-72V	19-32V
	CONSTANT CURRENT REGION Note.4	350mA	700mA	1050mA	1400mA	3150mA
	RATED POWER	85W				
	RIPPLE & NOISE(max.) Note.2	9.0	4.5V	3.0V	2.6V	1.0V
	CURRENT TOLERANCE Note.3	±5.0%				
	LINE REGULATION	±2.0%				
	LOAD REGULATION	±3.0%				
	SETUP, RISE TIME(Typ.) Note.7	1000ms/50ms 115VAC at full load		400ms/50ms 230VAC		
INPUT	VOLTAGE RANGE Note.5	90 ~305VAC				
	FREQUENCY RANGE	47 ~ 63Hz				
	POWER FACTOR(Typ.)	0.99@115VAC 60HZ 0.96@230VAC 50HZ				
	EFFICIENCY(Typ.)	92%	91%	91%	90%	90%
	AC CURRENT(Typ.)	0.91A/115VAC	0.42A/230VAC			
	INRUSH CURRENT(Typ.)	COLD START 50A ( 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	315V	158V	105V	79V	35V
		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°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	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				
	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 4kV), criteria A				
OTHERS	MTBF	314khrs min. MIL-HDBK-217F (25°C)				
	DIMENSIION	158.5(188.5)*78*37MM(L*W*H)				
	PACKING	900±10g				

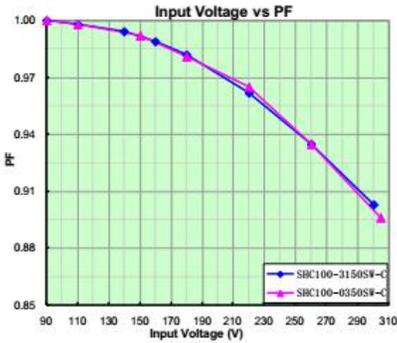
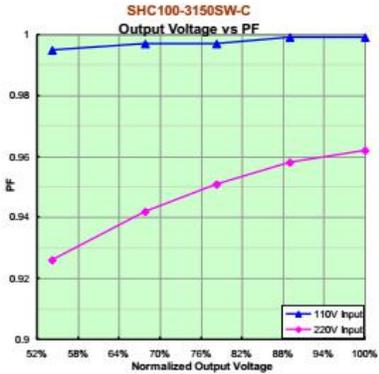
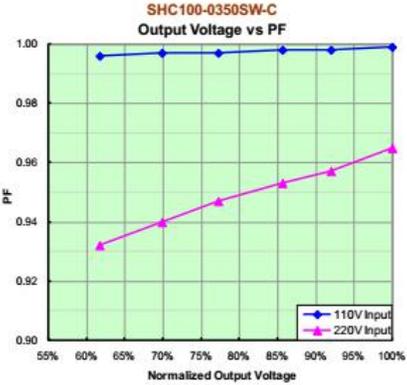
<b>NOTE</b>	<ol style="list-style-type: none"> <li>1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</li> <li>2. Ripple &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf &amp; 47uf 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 manufacturers 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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## Derating Curve

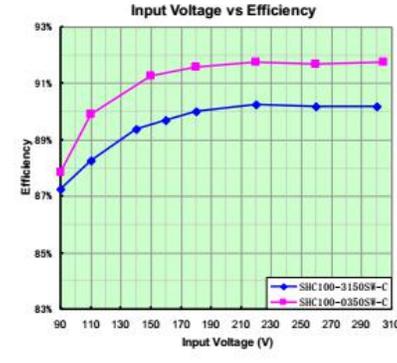
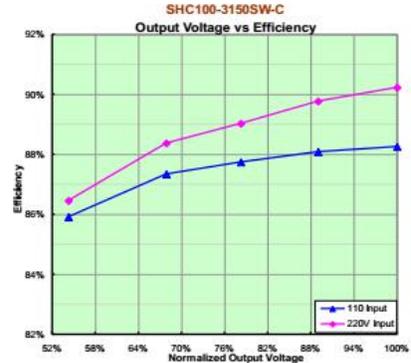
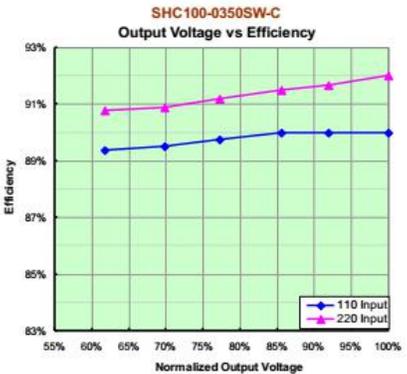
### DERATING CHARACTER



### POWER FACTOR CHARACTERS

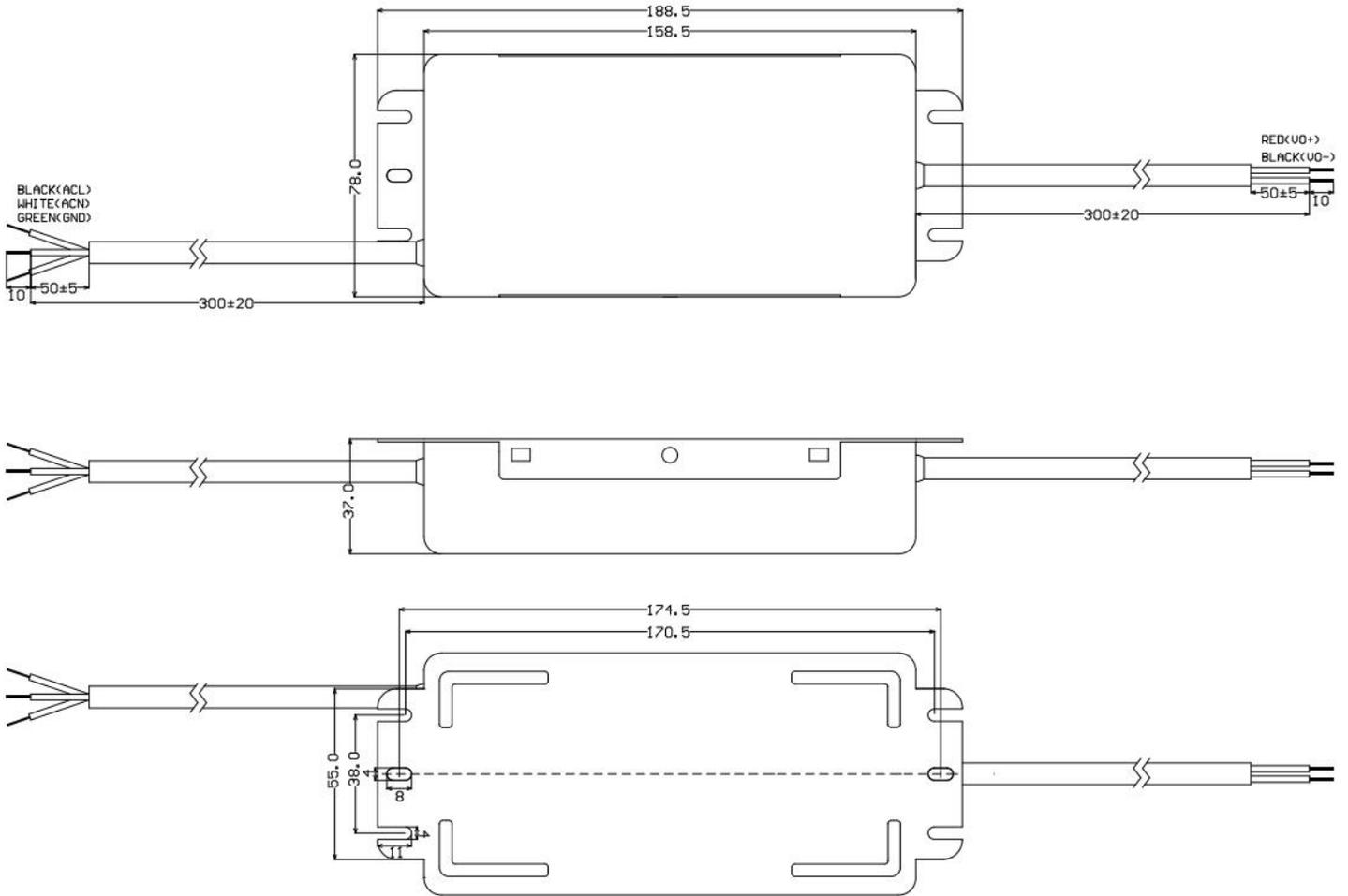


### EFFICIENCY vs LOAD

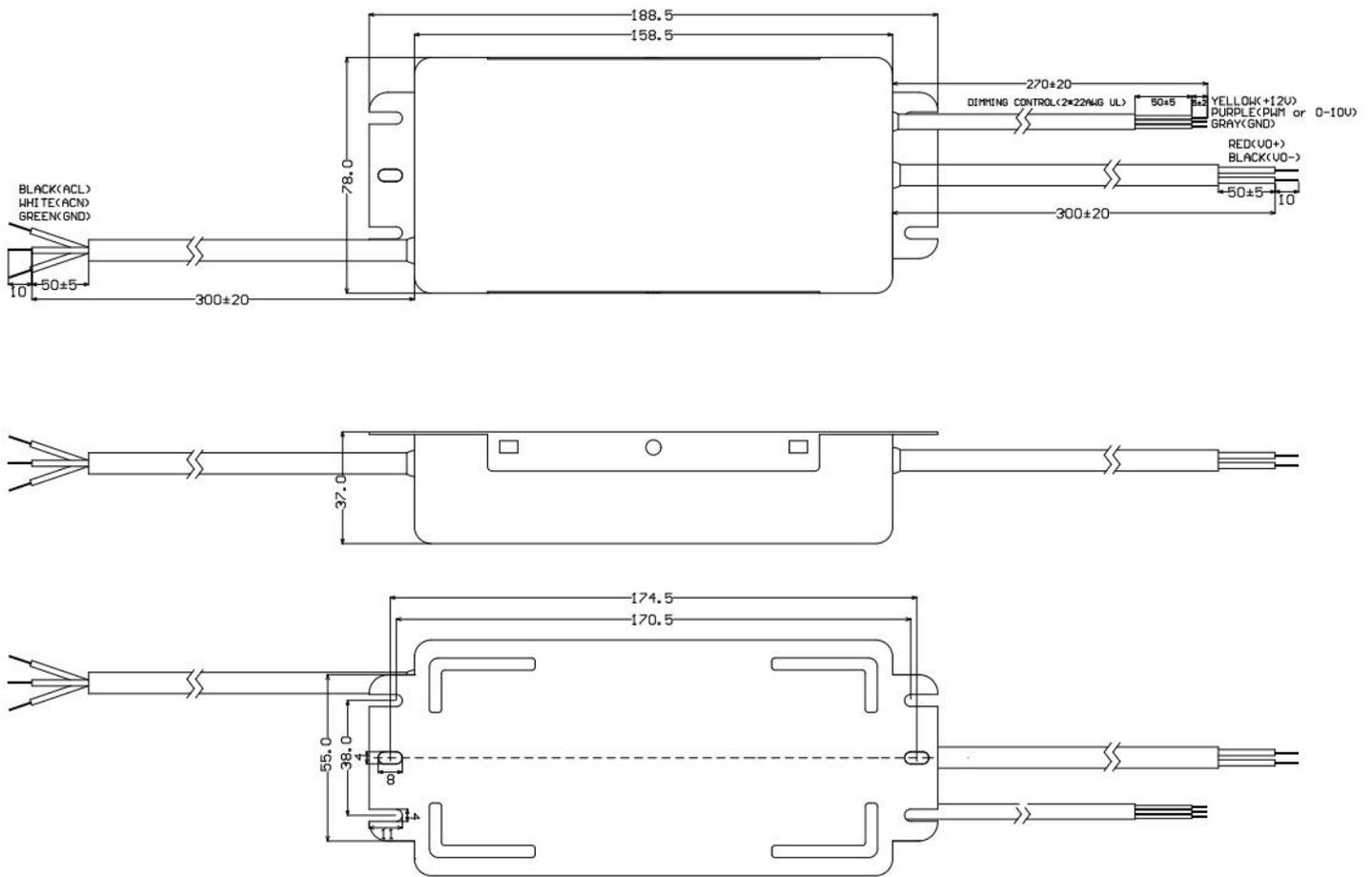


# Mechanical Specification

## NO or TIMER Dimming Function Mechanical

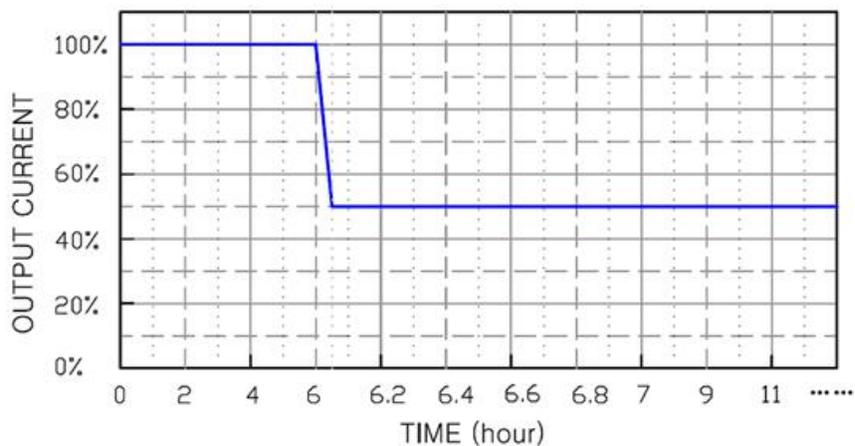


## 0-10V or PWM Dimming Function Mechanical



## Dimming Function

### TIMER Dimming

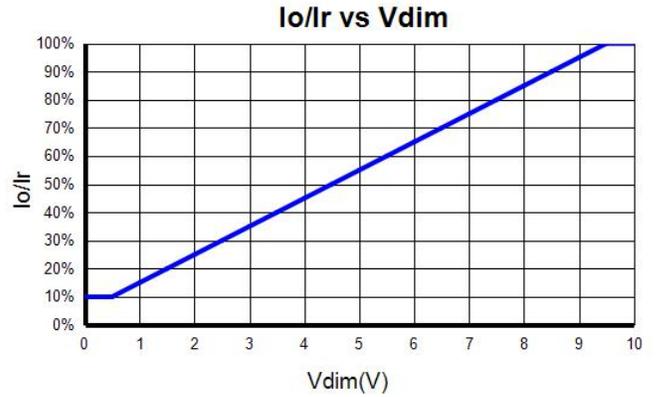


#### NOTE:

1. The dimming time can be customized according to different orders.

### 0-10V Analog Dimming

<b>Input Dimming Voltage</b>	0-12V	Normal 10-11V
<b>Input Source Current</b>	0-10mA	47 ~ 63Hz



**NOTE:**

1. If the dimming function is not used, all wire NC.
2.  $I_o$  is actual output current and  $I_r$  is rated current without dimming control.
3. For the driver to operate properly, the load voltage must be maintained above the input voltage  $t$ , proximately 50% of the max. output voltage for any given mode.
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 dimming (gray)** to the output. Otherwise, the LED driver can not work normally.

**PWM Dimming**

