

**SPECIFICATION**

**SS-100G High Output Voltage  
Series LED Driver**

**Model: SS-100G-XX**

**Description: 100W LED DRIVER**

**Rev.: V05**

**Release Date: 2019-04-10**

**SHENZHEN SOSEN ELECTRONICS CO.,LTD**

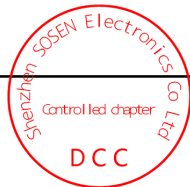
A3 Building, Gonghe Fourth Industrial Area, Shajing Street, Baoan District  
Shenzhen, China 518104



**SHENZHEN SOSEN ELECTRONICS CO., LTD**  
**G Series, 100W High Output Voltage Outdoor LED Driver, V05**

**REVISION HISTORY**

Rev.	Description of Change	Changed Date	Remarks
V00	Original release	2016/10/12	
V01	Update company name	2017/02/15	
V02	Template Update	2017/10/28	
V03	Update structure diagram	2018/04/03	
V04	Update start-up time	2018/07/04	
V05	Update warranty time	2019/04/10	



### Features

- Efficiency up to 92.5%
- Optional dimming function: 0-10V, PWM, Resistor, Timing
- IP67 rated
- Protections: SCP, OTP, OVP
- Metal case with full potted for hazardous scenarios
- Surge Protection: L/N-PE: 12kV, L-N: 6kV
- 7 years warranty



### Description

SS-100G series are constant current LED driver with universal input voltage 180-305Vac and high power factor. They are specifically designed for LED luminaries such as high bay, high mast and street lights with low standby power, high efficiency, compact housing and good thermal management, which greatly enhance the reliability and lifespan. Comprehensive protections, including Over Voltage Protection, Short Circuit Protection and Over Temperature Protection, ensure proper functioning.

### Model List

Model	O/P Voltage	O/P Current	Max. O/P Power	O/P Current Tolerance	THD (Typ.)	PF (Typ.)	Efficiency (Typ.)
SS-100G-116*	58-116V	0.6-1.4A	100W	±5%	8%	0.98	92.5%

**Note:**

1. Default Tested at 230Vac, full load, Ta 25°C.
  2. Optional B, T or space in the place of \* means additional function.
- Space is the base model without any optional function;
- Suffix B for model with 3-in-1 dimming (0-10V, PWM, Resistor);
  - Suffix T for model with timing control.



# SHENZHEN SOSEN ELECTRONICS CO., LTD

## G Series, 100W High Output Voltage Outdoor LED Driver, V05

### Input Characteristics

Parameter	Min	Typ.	Max	Remarks
Rated AC input range	200 Vac		277 Vac	
AC input range	180 Vac		305 Vac	
Input frequency range	47Hz		63Hz	
Max input current			0.65A	180Vac, full load
Inrush current			60A	Cold start , 230Vac/50Hz , Twidth=450us measured at 50% Ipeak
No load power		0.75W	1W	277Vac/50Hz, No load
Power factor	0.96	0.98		230Vac/50Hz, full load
	0.95			200-277Vac/50Hz, 70-100% Load
THD		8%	10%	230Vac/50Hz, full load
			20%	200-277Vac/50Hz, 70-100% Load

### Output Characteristics

Parameter	Min	Typ.	Max	Remarks	
Output voltage range	SS-100G-116*	58V		116V	Power derated @ 58-72Vdc, see Fig. 1
Rated output voltage	SS-100G-116*	72V		116V	$P_o = V_o \cdot I_o = 100W$ , full load, see Fig. 1
Rated output current	SS-100G-116*	0.86A		1.4A	1.4A for 72V, 0.86A for 116V
Current adjustable range	SS-100G-116*	0.6A		1.4A	Rated $I_o$ 70%-100% adjustable
No load voltage	SS-100G-116*	116.5V	118.5V	120V	
Efficiency @230Vac	SS-100G-116*	91%	92.5%		Output 116V/0.86A, see Fig. 5
Output current tolerance		-5%		+5%	
Output Voltage Ripple (PK-PK)			1%	2%	Full load
Output current ripple (PK-PK)			5%	10%	Full load
Start-up current overshoot				10%	
Start-up time			1.2S	2S	230Vac
Line Regulation		-1%		+1%	Full load
Load Regulation		-2%		+2%	

### Other Characteristics

Parameter		Min	Typ.	Max	Remarks
0-10V Dimming (Optional)	Dim Vmax	0V		14V	3 in 1 Dimming; 0-5V Dimming Optional; Negative Logic Dim Optional; Dim-off(Optional, contact SOSEN for more details)
	Dim Range	10%Iomax		100%Ioset	
	Voltage	1V		10V	
PWM Dimming (Optional)	High	5V		10V	
	Low	-0.3V		-0.6V	
	Frequency	200Hz		2KHz	
	PWM Duty	1%		99%	
Resistor Dimming (Optional)	Resistance	10K ohm		100K ohm	
	Dimming	10%Iomax		100%Ioset	
Timing Curve (Optional)	IC Control	By programming			Typically 3-4 sections
	Timing	5H/6H/7H/8H per section			Default Mode: 24Hour/Circle with 50% load
Protection	OTP	90°C	100°C	110°C	Tc, Self-recovery
	Short Circuit Protection	Driver will not damaged with short-circuit power <10W			Hiccup mode
Life time			55,000hrs		230Vac, full load, Tc 75°C, See Fig. 6
MTBF			200,000hrs		230Vac, full load, Ta= 25°C, (MIL-HDBK-217F)
Temperature Coefficient		-0.03%/°C		+0.03%/°C	Tc: 0°C~90°C
Tc				90°C	
Warranty			7years		Tc: 70°C
Net Weight			615g		
Dimension		152mm*63mm*36.85mm			L x W x H

**NOTE:** All the parameters above are tested Ta 25°C, unless specified.

### Environmental Requirements

Parameter	Min	Typ.	Max	Remarks
Operating Temperature	-40°C	25°C	+60°C	See Fig. 2
Storage Temperature	-40°C	25°C	+85°C	
Operation Humidity	10%RH		90%RH	
Storage Humidity	5%RH		95%RH	
Altitude	-65m		4,000m	
Cooling Method	Air Cooling			

### Safety and EMI/EMS Standards

Certification	Standard	Status	Remark
TUV	EN 61347-2-13:2014 EN61347-1:2008+A1:2011+A2:2013 EN62493:2015	✓	
SAA	AS/NZS61347.2.13	✓	
CCC	GB 19510.14-2009	✓	
CE	EN 61347-2-13:2014 EN61347-1:2008+A1:2011+A2:2013	✓	

Item	Standard	Remark	
Insulation strength	Input-output	3200Vac/5mA Max/60s	Reinforced insulation
	Primary-Earth	1600Vac/5mA Max/60s	Basic insulation
	Sec.- Earth	1000Vac/5mA Max/60s	Function insulation
Insulation resistance	Input-output	≥10MΩ	Testing Voltage: 500Vdc
Ground resistor		≤0.1Ω	25A/1min
Leakage current		≤0.75mA	277Vac

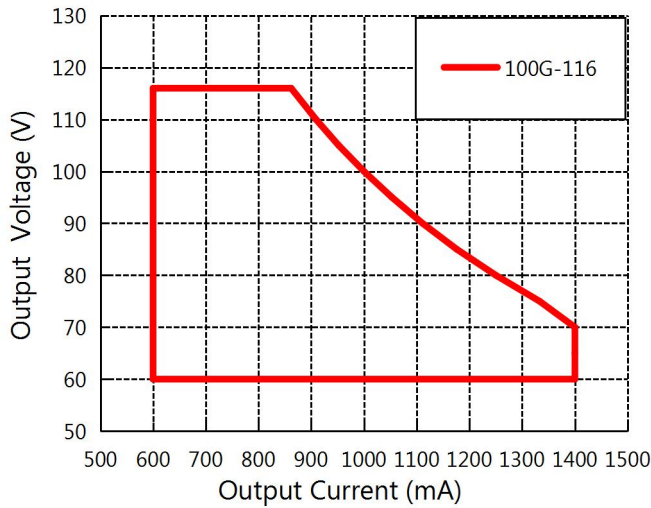
Item	Criterion	Remark
Conduction Emission	EN55015:2013+A1:2015	
Radiation Emission	EN55015:2013+A1:2015	
Harmonic Current Emissions	IEC/EN 61000-3-2	Class C
Surge	IEC/EN61000-4-5	Difference mode 6kV, Common mode 12kV Criterion B

#### NOTE:

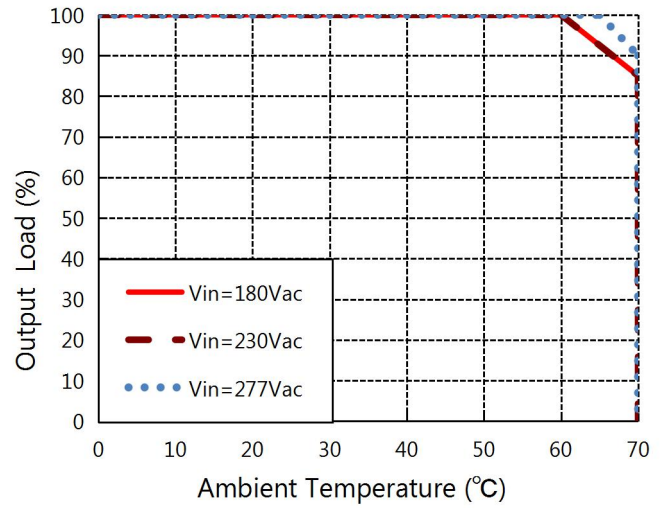
- SOSEN warrants the LED Driver itself complies with EMC standard. However, LED Driver's EMC should be re-checked when integrated into lighting systems due to unexpected interference as component.
- Please short Line and Nature, V+ and V-, Dim+ and Dim - when conduct Hi-pot test.

### Performance Curves

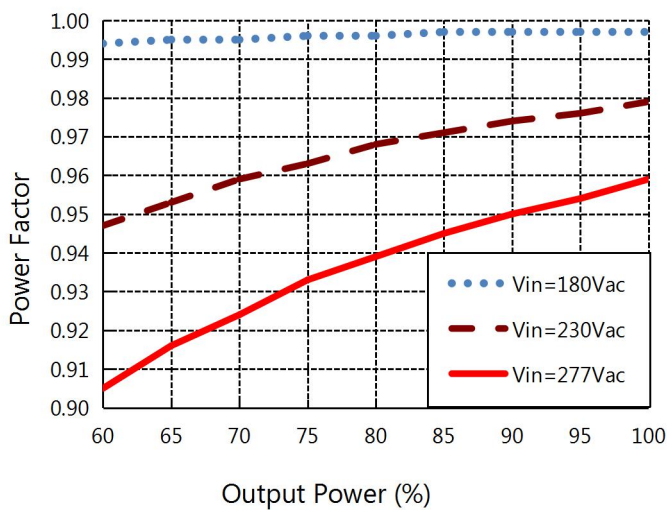
**Fig. 1 O/P Voltage VS Output Current**



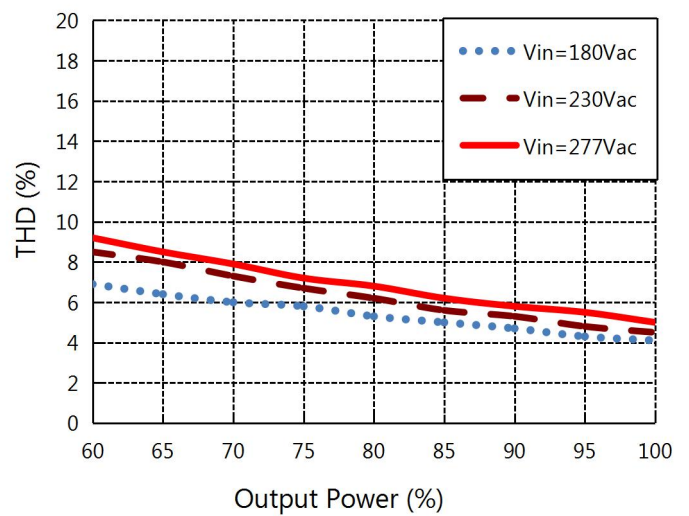
**Fig. 2 O/P Power VS Ambient Temperature**



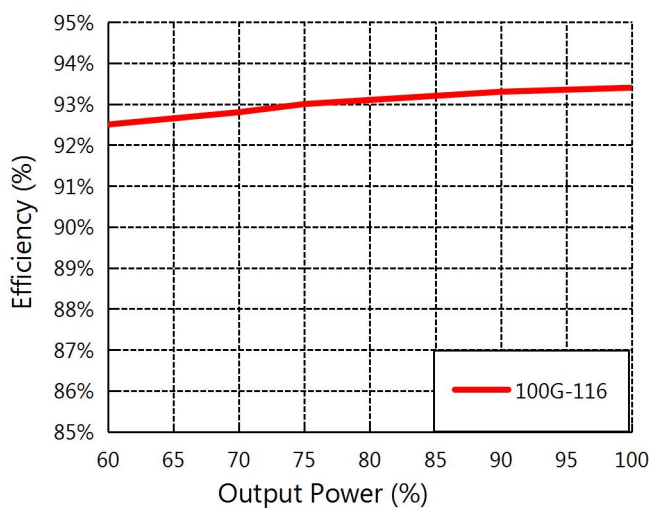
**Fig. 3 Power Factor VS Output Power**



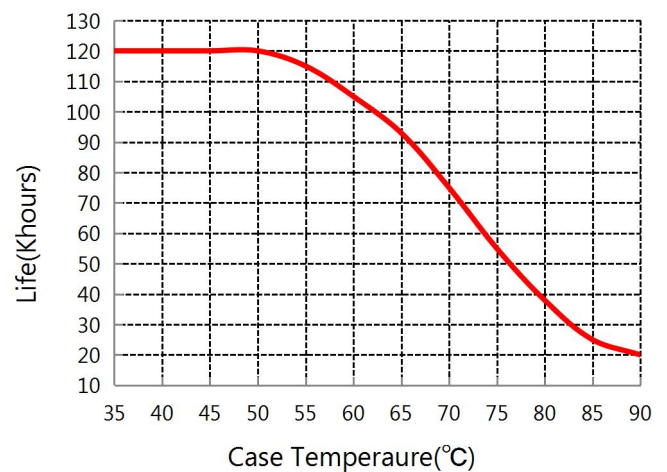
**Fig. 4 THD VS Output Power**



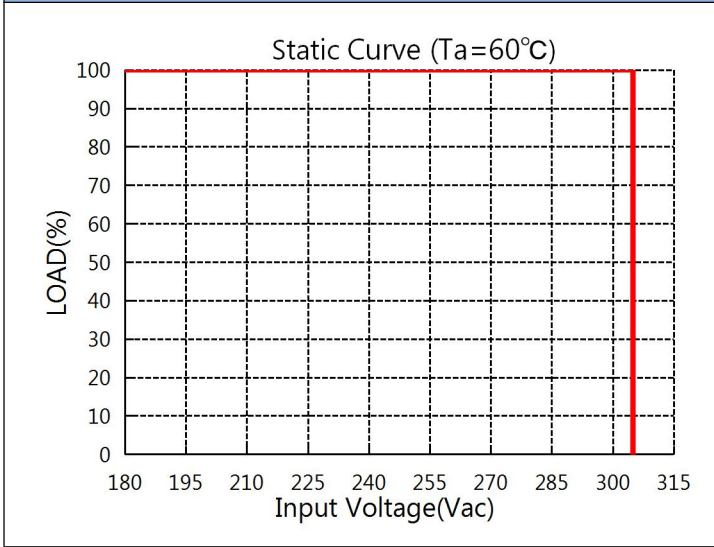
**Fig. 5 Efficiency VS Output Power**



**Fig. 6 Lifespan VS Case Temperature**

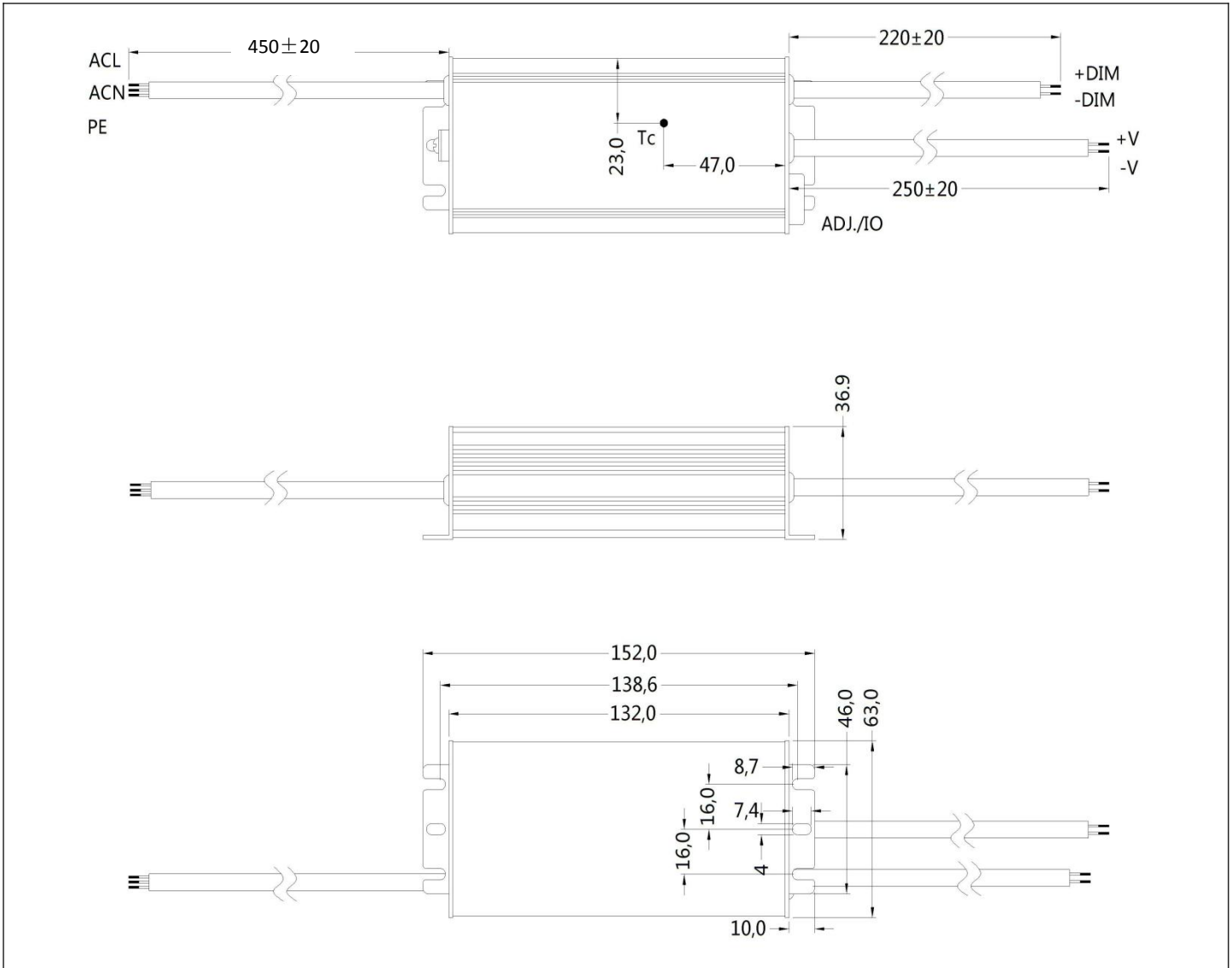


**Fig. 7 Output Power VS Input Voltage**





### Mechanical Characteristics(Unit: mm)



**NOTE:**

Input Wire	VDE H05RN-F 3*1.0 mm <sup>2</sup> , O.D: 7.4mm, BROWN: L, BLUE: N, YELLOW/GREEN: PE
Output Wire	VDE H05RN-F 2*1.0 mm <sup>2</sup> , O.D: 7.0mm, BROWN: V+, BLUE: V-
Suffix B DIM	SJTW #18AWG 2*0.824 mm <sup>2</sup> , O.D: 7.3mm, PURPLE: DIM+, GRAY: DIM-

### Labels

TUV/SAA/CE

○ ACL --- BROWN

○ ACN --- BLUE

○ --- GREEN/YELLOW

MADE IN CHINA

HTTP://www.szsofen.com

**MODEL:SS-100G-116B**

SOSEN LED Driver

Manufacturer: Shenzhen Sosen Electronics Co.,Ltd

A3 building, Gonghe Fourth Industrial Area, Shajing Street, Baoan District, 518104 Shenzhen, PEOPLE'S REPUBLIC OF CHINA

INPUT : 200-277V ~ Max. 0.65A 50/60Hz PF> 0.95

OUTPUT : 58-116V= 0.6-1.4A Max.119V= Max.100W

Suitable for Dry, Damp and Wet Locations For LED modules only

Io ADJ.

V+ ---BROWN ○

V- ---BLUE ○

DIM+ ---PURPLE ○

DIM- ---GRAY ○

RoHS SELV IP67

CCC

○ ACL --- BROWN (棕)

○ ACN --- BLUE (蓝)

○ --- GREEN/YELLOW (绿/黄)

HTTP://www.szsofen.com

MADE IN CHINA 制造地:中国

**MODEL(型号):SS-100G-116B**

SOSEN LED DRIVER (LED模块用交流电子控制装置)

Manufacturer: Shenzhen Sosen Electronics Co.,Ltd

制造商: 深圳市崧盛电子股份有限公司

INPUT(输入):220-240V ~ 0.65A 50/60Hz

277V ~ 0.4A 50/60Hz

(277V~ 只适用于北美) 内置防雷管

OUTPUT(输出): 58-116V= 0.6-1.4A Max.120V 输出功率:100W(LED模块)

Io ADJ.

(电流可调)

V+--- BROWN (棕) ○

V--- BLUE (蓝) ○

DIM+---PURPLE (紫) ○

DIM- ---GRAY (灰) ○

RoHS SELV IP67

### Dimming Diagram



- Output current could be adjusted by connecting 0-10V or PWM signal between DIM+ and DIM-
- DO **NOT** connect DIM- and V- to avoid abnormal output

#### 0-10V Dimming(Typ.), See Fig. 8

Voltage Range	1V	2V	3V	4V	5V	6V	7V	8V	9V	10V	OPEN
Rated current percentage	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	95%-108%

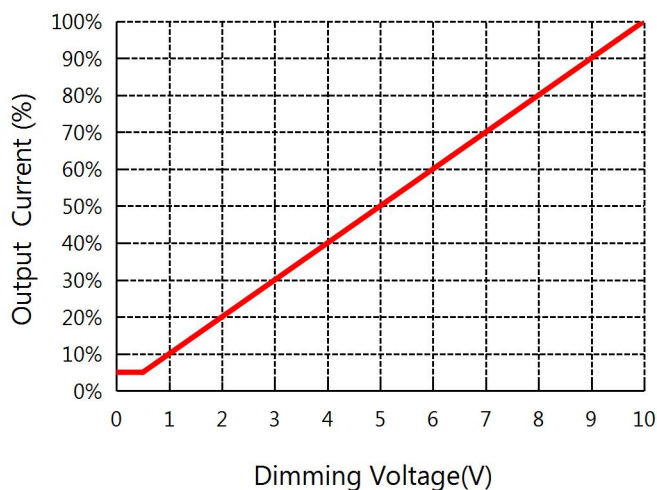
#### 10V PWM frequency range(Typ.): 200Hz-2KHz, See Fig. 9

PWM duty	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	OPEN
Rated current percentage	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	95%-108%

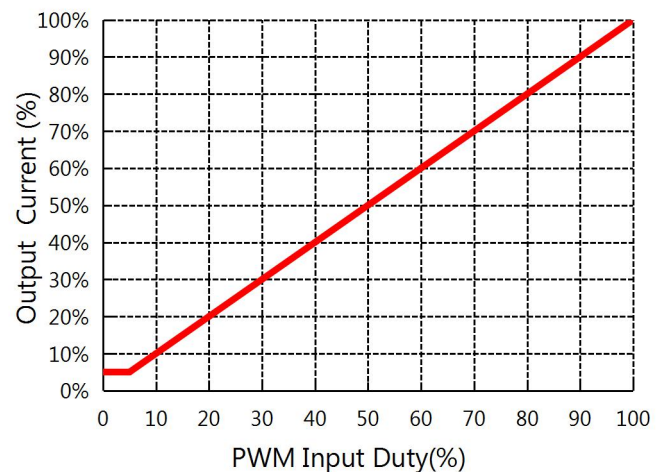
#### Resistor(Typ.), N represents the number of power supplies

Resistor	10KΩ	20KΩ	30KΩ	40KΩ	50KΩ	60KΩ	70KΩ	80KΩ	90KΩ	100KΩ	OPEN
	/N	/N	/N	/N	/N	/N	/N	/N	/N	/N	
Rated current percentage	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	95%-108%

**Fig. 8 0-10V Dimming Curve**



**Fig. 9 PWM Dimming Curve**



## Installation Tips

1. Highly recommended to seal the adjustable hole with silicon glue (#704 preferred) after adjusting the driver's output current. Torsion should be taken off with proper strength to avoid permanent damage to the potentiometer inside.
2. Remove the out screw for Hi-pot test, and fasten it back and connect to the metal case appropriately after it done to maintain the 12kV/6kV surge protection per IEC 50598-1-10.2, refer to below:
3. Dimming leads should be capped if not in use to avoid dimming circuit damage caused by external signals.



## Package, Transportation & Storage

### 1. Package

- Outside carton dimension: L×W×H =500mm×390mm×170mm;
- 14PCS/Carton;
- Net weight/PC: 0.615kg;
- Gross weight/Carton: 10.6kg.

### 2. Transportation

Packaging is designed suitable for transportation by trucks, vessels and flights. The products should be shielded from direct sunshine, loaded/unloaded with caution.

### 3. Storage

The product storage meets the standard of the GB 3873—83.

Products should be rechecked if stock for over 1 year before installation.