

The logo for DONE, featuring the word "DONE" in a bold, teal, sans-serif font. The letter "D" is stylized with a circular element on its left side. The logo is contained within a white rounded square with a thin teal border.

# PLS SERIES LED DRIVER

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DL-1200W-X/T-PLS SPEC V1.0

## Features

- Class I type for insulation(pending)
- Input voltage range: 120-277 V ~ 50/60 Hz
- Efficiency :97%(Typ.)
- Constant current output ,with power limitation for control mode
- Metal case, protection grade against water and dust: IP67
- Surge level:
  - differential mode :6kV,
  - common mode :10kV
- available version :
  - A version: Output current is dimmed by external potentiometer
  - P version: Output current is dimmed by Isolated 3 in 1 dimmer
- guaranteed Lifetime : 5 years



## Applications

Street lighting、 Industrial lighting、 Venue lighting  
 Floodlight lighting、 Landscape lighting 、 Plant lighting



## Model list

Model NO.	Input voltage	Output power	Output voltage	The default current	Eff.	NTC
DL-1200W-V300X-PLS	120-277V	1200W	180-300Vdc	4A	>97%	
DL-1200W-V300T-PLS	50/60Hz					✓

**Note :**

1. Test conditions: Ta=25°C , under 230Vac input,after running for 30 minutes with full load .
2. IWhen the input is less than 108Vac,Users must reduce the output power to 50% ± 10%.When the input 120-277VAC,rated power 1200W.Please refer to “THE OUTPUT POWER VS INPUT VOLTAGE” curve chart for details.

For details, see the input voltage VS output power curve.

## Input characteristics

Parameter	Min	Typ.	Max	remark
Rated input voltage	120Vac	230Vac	277Vac	
Input voltage range	90Vac	230Vac	305Vac	
Rated frequency range	47Hz	50/60Hz	63Hz	
Power factor	-	0.97	-	@230Vac input ,with full load
T.H.D.	-	7%	10%	@230Vac input ,with full load
T.H.D.	-	-	20%	@120-277Vac input ,with 70% load
Input current	-	-	5.5A	@230Vac input ,with full load
Inrush current	-	-	75A	230Vac, cold start (25°C)

## Output characteristics

Parameter	Min	Typ.	Max	remark
Rated current DL-1200W-V300X/T-PLS	-	4A	-	
Output current range DL-1200W-V300X/T-PLS	3.9A	-	6A	
Output voltage range DL-1200W-V300X/T-PLS	180V	-	300V	
Available power(120-277Vac)	-	1200W	1210W	Users must reduce the output power to 50% ± 10%, when the input voltage is less than 108Vac
Rated power(120-277Vac)	-	1200W	-	
No-load voltage DL-1200W-V300X/T-PLS	-	-	340V	
Efficiency@120Vac DL-1200W-V300X/T-PLS	-	95%	-	full load @ 120 vac Output current 4A(300V), 1200W

## Output characteristics

Parameter	Min	Typ.	Max	Note
Efficiency@230Vac DL-1200W-V300X/T-PLS	-	97%	-	full load @ 230 vac Output current 4A, 1200W
Accuracy of output current	N/A	N/A	N/A	no requirement
Current Accuracy	-5%	-	+5%	full load
Line regulation	-3%	-	+3%	full load
Load regulation	-3%	-	+3%	full load
Starting time	-	3000ms	-	Full load @230Vac

**Note:** 1.The output current is limited by the input and output voltage, please refer to “I-V WORKING AREA” for details;

## Dimming characteristics

Dimming function		Min	Typ.	Max	Instructions
0-10V Dimming ( Optional )	Safe operation voltage range	1V	-	12V	Damage may occur if the external voltage is greater than or equal to 12V
	Dimming output range	10%	-	100%	-
	Rated operation voltage range	1V	-	10V	-
PWM Dimming ( Optional )	PWM high level	9.5V	-	10.5V	-
	PWM low level	0V	-	0.3V	-
	Rated dimming frequency	300Hz	-	2000Hz	-
	PWM duty cycle	10%	-	99%	Full power output at 99% duty cycle
Resistor Dimming ( Optional )	Rated external resistance value	10KΩ	-	100KΩ	-
	Dimming output range	10%	-	100%	-

**Note:**

1. Output current of dimming port: 100uA (typical value);
2. The maximum operation voltage for the dimming port is 12V. Wrong voltage beyond the range or a reverse connection may lead to a critical failure of the driver.
3. The default dimming setting of this product is three-in-one positive logic dimming (it can be set as timed dimming, 0-5V or other voltage dimming by programming software).

## Protection

Protection	description
Over Load Protection	Protection mode: hiccup restart mode, which automatically recovers after abnormal load conditions are removed
Output short circuit protection	Hiccup mode, which automatically recovers after abnormal conditions are removed
Over temperature protection	Self-recovery type; When the casing temperature is greater than 90° C, the output power decreases with the casing temperature increasing.

### Note:

1. Unless otherwise specified, all parameters should be measured at the condition of 230Vac (50Hz) input ,with rated load ,and ambient temperature of 25°C;

## Environmental

Environmental categories	Parameter
Working temperature	120-200Vac ring temperature -40 ~40°C; 200-277Vac ring temperature -40 ~55°C(refer to "service life curve ")
Safety shell temperature	shell temperature =+90°C
Working humidity	20 ~ 95% RH
Storage temperature、humidity	-40~+80°C, 10 ~ 95% RH
Resistant to vibration	10 ~ 500Hz, 5G 12 min/cycle, X, Y, Z axis 72 min each
MTBF	50Khrs min. MIL-HDBK-217F (Ta=25°C)
Lifetime	50000 h @ housing temperature ≤75 ° c, 230Vac, 100% load, see section "housing temperature and life"

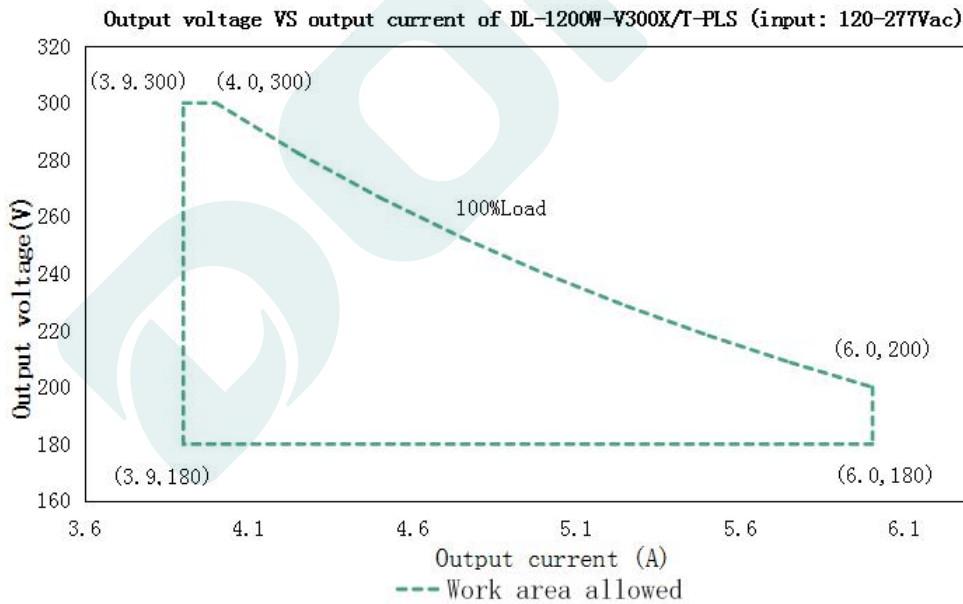
## Safety and EMC

Safety categories	Standard
Safety	EN61347-1、EN61347-2-13、EN62384、IEC61347-1、IEC61347-2-13、AS/NZS61347.1、AS61347.2.13、EN 62384、UL8750;
EMC	EN IEC 55015、EN IEC 61000-3-2、EN 61000-3-3
Surge leve	Differential mode L-N $\pm 6KV$ ( 2 ohm ) ,common mode L, N-PE $\pm 10KV$ ( 12 ohm ); Refer to IEC61000-4-5 2014 Criterion B
High-pot test	I/P-PE :1.5KVac O/P-PE : 1.5KVac I/P-DIM:1.5KVac O/P-DIM:1.5KVac
Insulation impedance	I/P-PE:100M $\Omega$ / 500VDC; O/P-P/E:100M $\Omega$ / 500VDC / 25 $^{\circ}C$ / 70% RH
Leakage current	<0.7mA@230Vac

### Note:

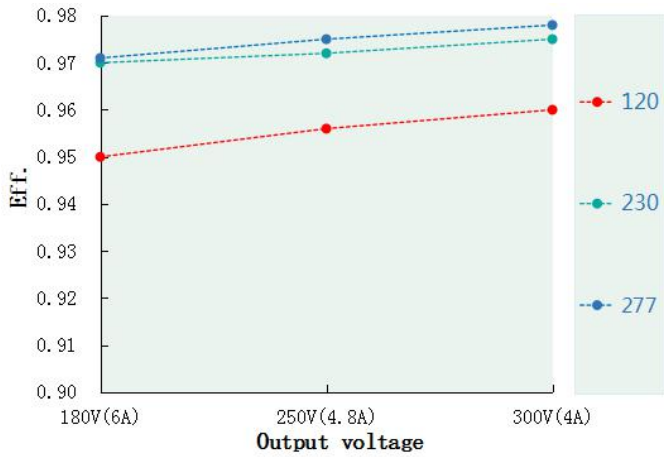
- Attention! As a component of the whole, the EMC performance of the final product is not only decided by the driver, even if the driver is well-designed and fulfil all the required compliance. The final equipment manufacturers must re-qualify EMC Directive on the complete product.

## I-V Working area

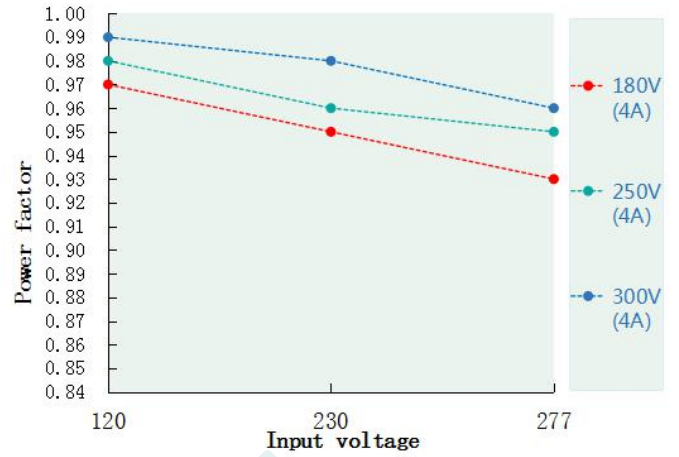


Load	Output								
Load working Voltage	180V	200V	220V	240V	250V	260V	270V	290V	300V
Io_MAX	6A	6A	5.45A	5A	4.8A	4.615A	4.44A	4.137A	4A
Po_MAX	1080W	1200W	1200W	1200W	1200W	1200W	1200W	1200W	1200W

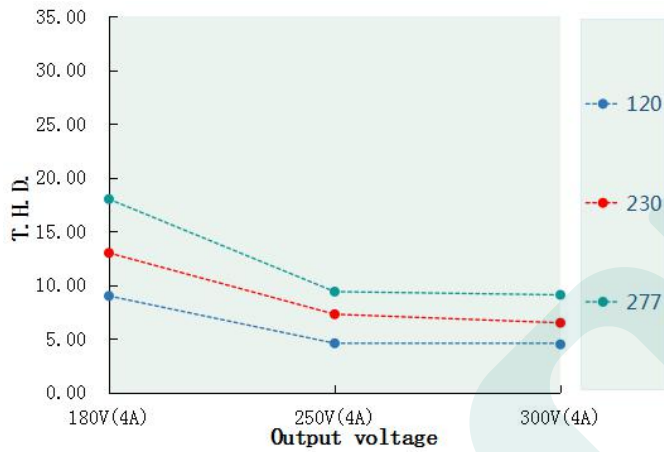
**Eff. VS Output voltage(DL1200W-V300X/T-PLS)**



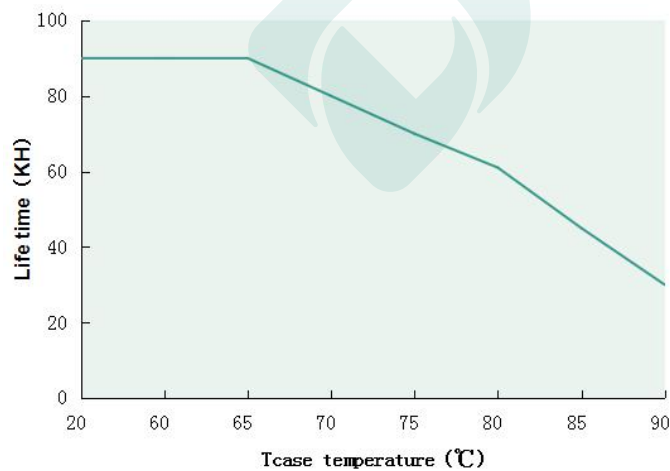
**Power factor VS Input voltage(DL1200W-V300X/T-PLS)**



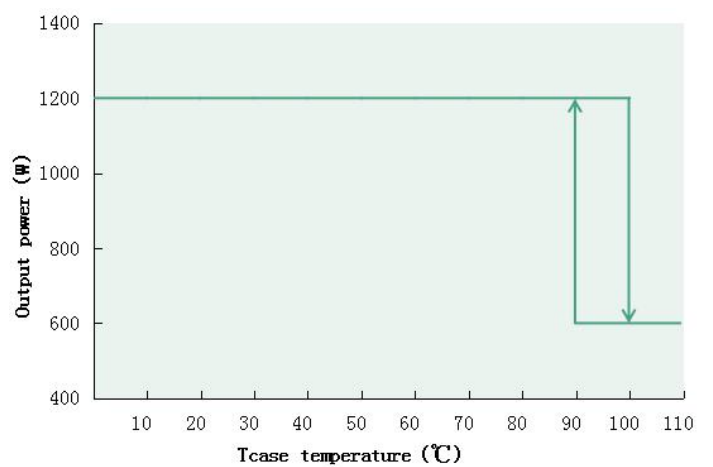
**T.H.D. VS Output power(DL1200W-V300X/T-PLS)**



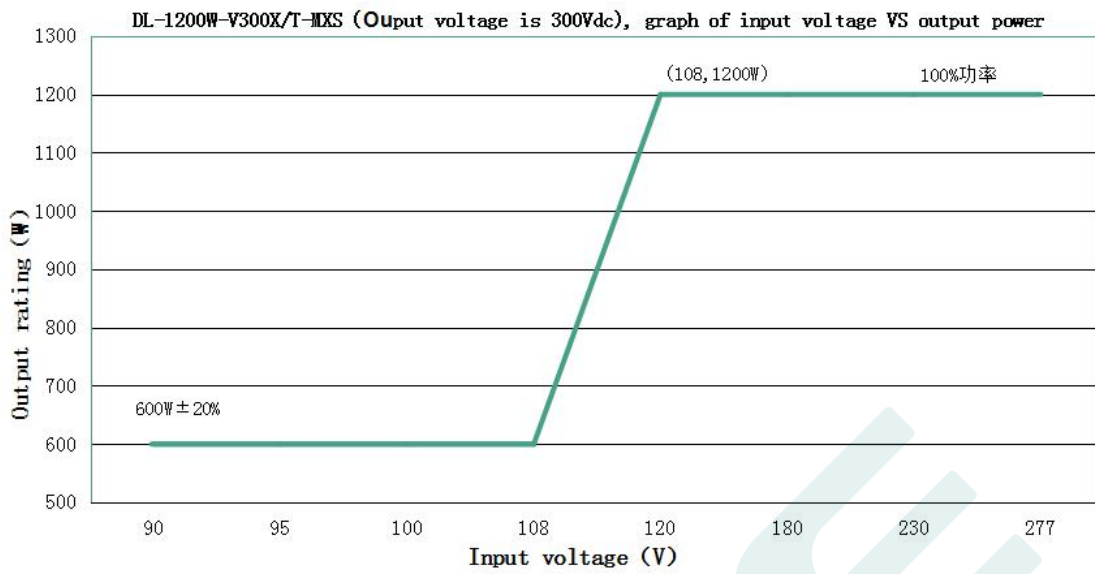
**Tcase VS Lifetime(DL1200W-V300X/T-PLS)**



**Output power VS Tcase (DL1200W-V300X/T-PLS)**



**Output power VS Input voltage**



DL-1200W-V300X/T-PLS (For output 300Vdc, the rated output current & power under different input voltage)

Input Voltage	108Vac	120Vac	150Vac	180Vac	200Vac	230Vac	250Vac	277Vac
Iout	2A	4A	4A	4A	4A	4A	4A	4A
Pout	600W	1200W	1200W	1200W	1200W	1200W	1200W	1200W

**Note:**

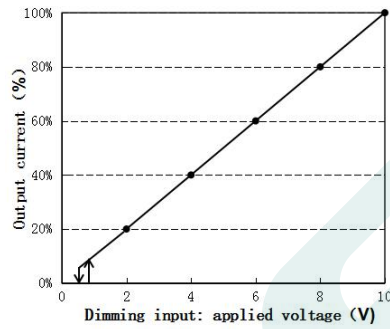
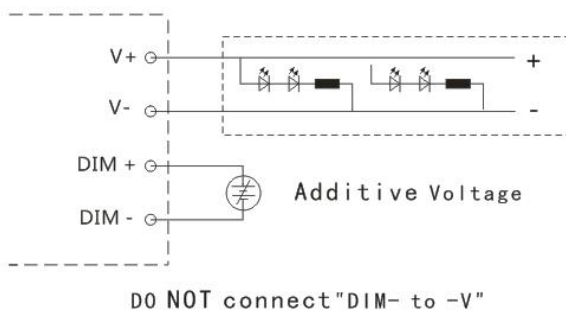
1. When the input voltage is 90-108Vac, Users must reduce the output power to 50% ± 10%.

## Dimming function

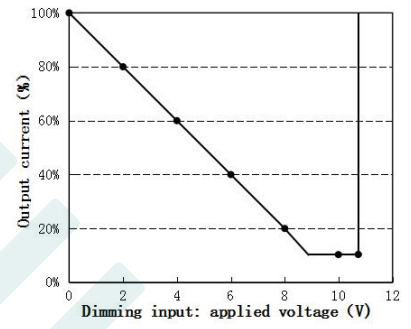
### ※ Three-in-one dimming function (P version only)

- A. To adjust the output current, applying one of the three methods between DIM+ and DIM- : a resistor of 0-100K, or any voltage of 0-10V , or a PWM signal with amplitude of 10V. .
- B. output current of dimming port: 100uA (typical value).

#### ◎ With 0-10V dimming voltage(for both logic,negative and positive):

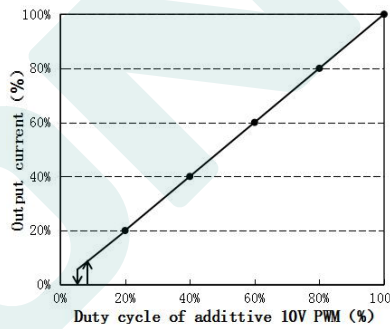
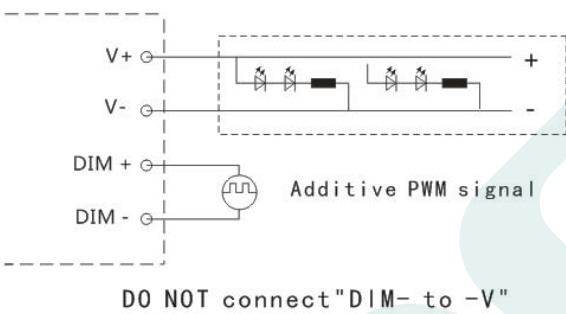


Positive logic dimming curve

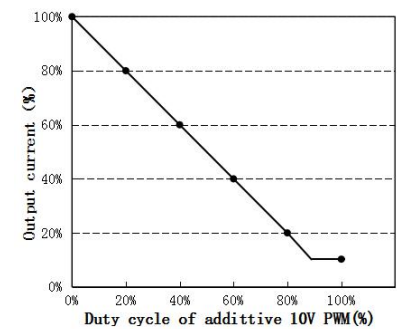


Negative logic dimming curve

#### ◎ With 10V PWM signal (Frequency range: 300Hz-2K Hz) :

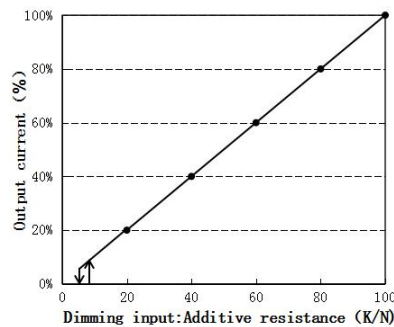
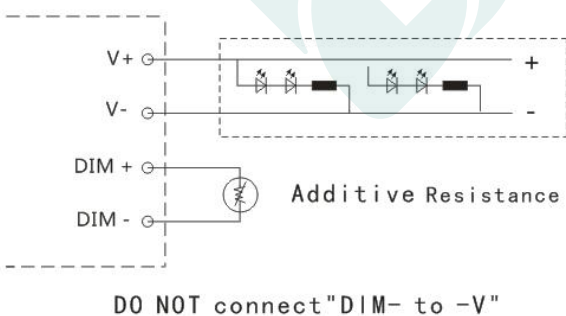


Positive logic dimming curve

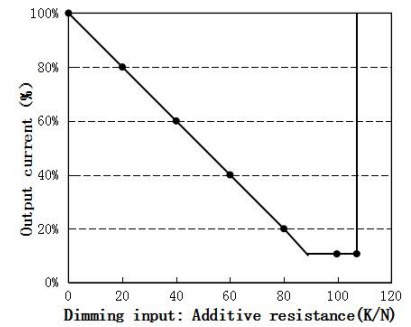


Negative logic dimming curve

#### ◎ With an additional 0-100K resistor:



Positive logic dimming curve



Negative logic dimming curve

#### Remark:

- Both operation way, of positive logic or negative logic, can be selected by program.

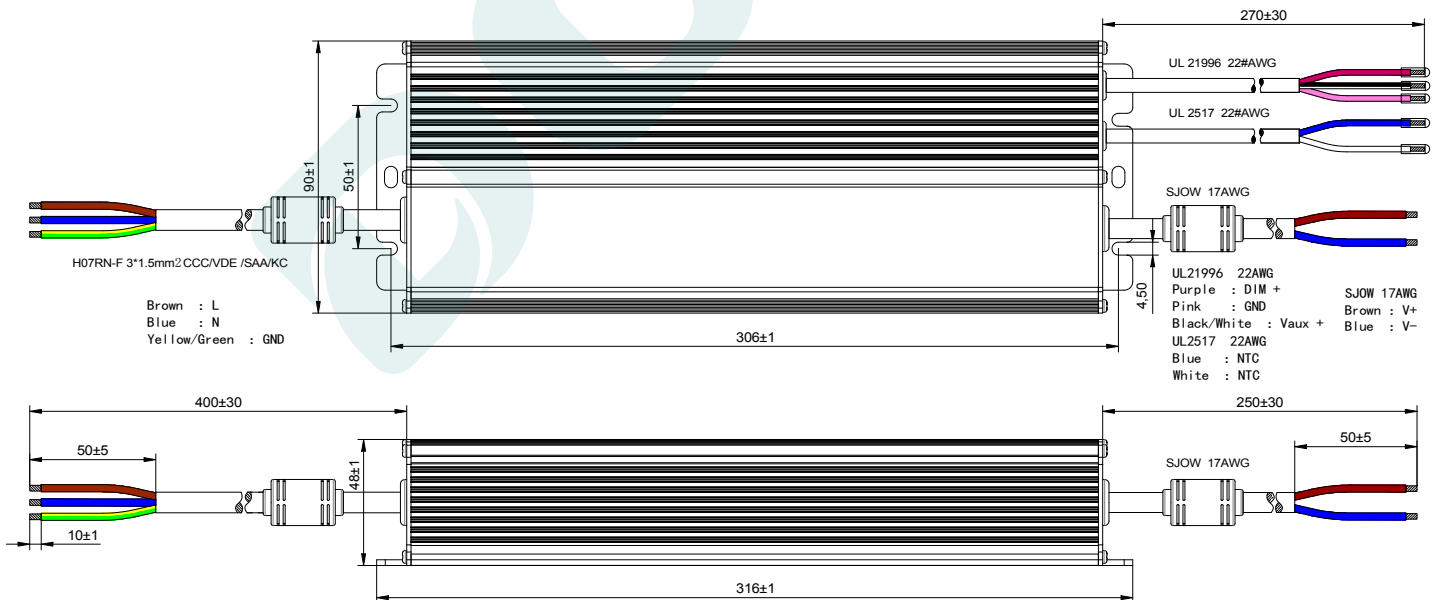
## Mechanical specification

Size (mm) L316mm\*W90mm\*H48mm

Dimension drawing  
DL-1200W-V300X-PLS



DL-1200W-V300T-PLS

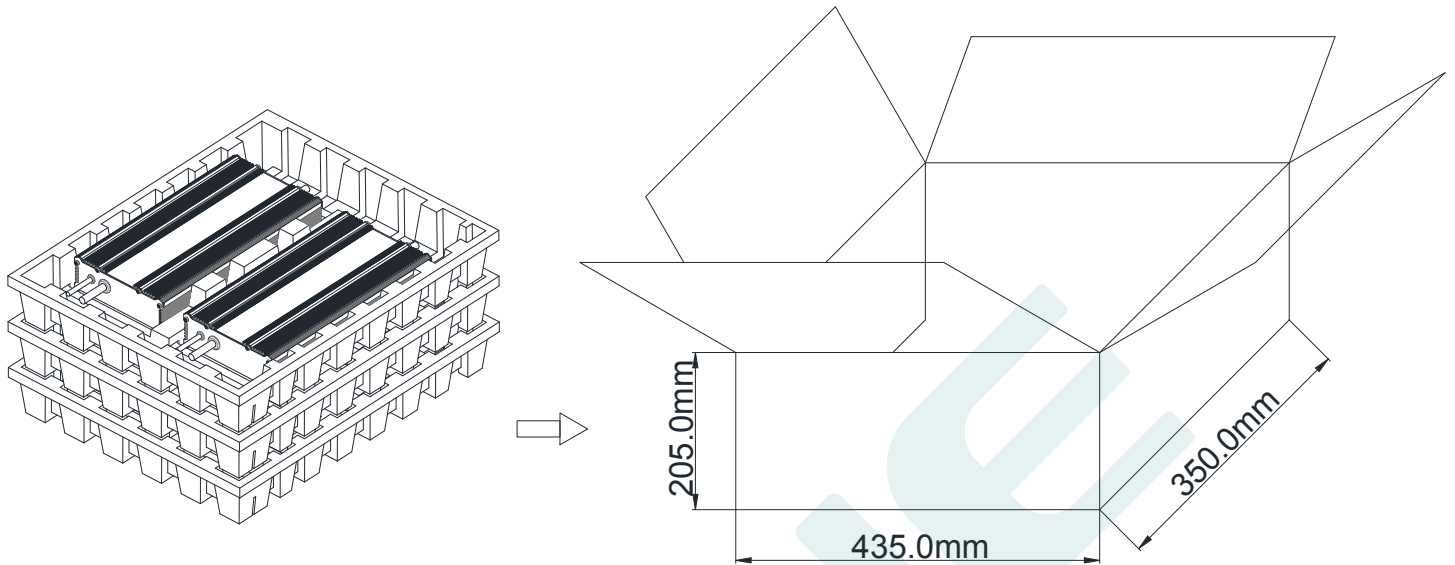


## Weight

Weight 2166g

## Packaging

Packaging (mm) 435\*350\*205



Note: One Carton 3 layers and 2 pcs each layer, total 6pcs/carton.

**Note:**

1. According to the qualified certificate of the LED DRIVER, that with English label is for sale in Europe, America and India.
2. That with Chinese label are used for Chinese market.

**Version**

DATE	DESCRIPTION	REV.	CHECK
2023.11.27	Initial version.	V1.0	

**MANUFACTURER**

EDIT	CHECK	APPROVE