



PXS SERIES LED DRIVER

DL-680V-X/J-PXS SPEC V1.2



Features

- Class I structure
- Input voltage 200-480Vac ~ 50/60 Hz
- Efficiency :96%(Typ.) @380Vac
- Constant power drive and constant current output control mode
- Metal case, protection grade against water and dust: IP67
- Surge level: differential mode :6kV, common mode :15kV
- Only for X version: standby power≤1W
- Available version:

Isolated auxiliary power supply (X version) : 12V 300mA. Isolated dimming function: offline programming current regulation, programmable, compatible with analog three-in-one dimming circuit

Network Port Version (J version) : Dimmer knob and RJ12 interface

- Lifetime design: 5 years



Applications

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

cULus
 E479166

FC

Model list

Model NO.	Input voltage	Output power	Output voltage	The default current	Eff.	THD.	Power Factor
DL-680V-260X-PXS	200-480V	680W	180-260Vdc	2.7A	≥96%	≤10%	≥0.95
DL-680V-260J-PXS	50/60Hz						

Note :

1. Test conditions: Ta=25°C, under 380Vac input,after running for 30 minutes with full load.
2. The output power decreases slowly to a half when the Input is below 180±10%Vac.
 Please refer to the curve of Input voltage VS output power for detail.

Input characteristics

Parameter	Min	Typ.	Max	remark
Rated input voltage	200Vac	380Vac	480Vac	
Input voltage range	200Vac	380Vac	528Vac	Output power decrease to a half below 180±10%Vac.
Rated frequency range	47Hz	50/60Hz	63Hz	
Power factor	-	0.95	-	@380Vac input ,with full load
T.H.D	-	10%	-	@380Vac input ,with full load
T.H.D	-	-	20%	@220-480Vac input ,with 75% load
Input current	-	-	3.8A	Current at rated minimum input voltage (i.e. maximum input current)
Inrush current	-	-	175A	380Vac, cold start (25°C)

Note : Test conditions: Ta=25°C.

Output characteristics

Parameter	Min	Typ.	Max	remark
Rated current DL-680V-260X-PXS DL-680V-260J-PXS	-	2.61A	-	With loading 260VDC ,full load
Output current range DL-680V-260X-PXS DL-680V-260J-PXS	1.9A	-	3.4A	
Output voltage range DL-680V-260X-PXS DL-680V-260J-PXS	180V	-	260V	Constant power voltage range: 200-260V
Rated power(170-198Vac)	288W	320W	352W	output power decrease to a half when input voltage being less than 180VAC±10%
Rated power(200-528Vac)	-	680W	-	
No-load voltage DL-680V-260X-PXS DL-680V-260J-PXS	-	-	320V	
Efficiency@230Vac DL-680V-260X-PXS DL-680V-260J-PXS	-	95%	-	full load@230Vac Output current 2.61A , 680W
Efficiency@380Vac DL-680V-260X-PXS DL-680V-260J-PXS	-	96%	-	full load@380Vac Output current2.61A , 680W

Output characteristics

Parameter	Min	Typ.	Max	Note
Ripple current	-	5%	-	full load
Current Accuracy	-5%	-	+5%	full load
Line regulation	-3%	-	+3%	full load
Load regulation	-3%	-	+3%	full load
Starting time	-	1000ms	-	Full load @380Vac
12V output voltage	10.5 V	12V	13.5V	
12V output current	0 mA	-	300 mA	Reference ground is "Dim -"
12V output line transient peak current @6W	-	-	500 mA	In a 5.0ms cycle, the maximum duration of the maximum peak current of 500mA is 2ms, and the average value must not exceed 250mA

Note: 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	0V	-	27V	The dimming voltage beyond the range may lead to a critical damage.
	Rated operation voltage range	0V	-	10V	Be negative dimming mode by program setting
	Dimming output range	0%	-	100%	Positive logic dimming can be turned off by program setting
PWM Dimming (Optional)	PWM high level	9.5V	-	10.5V	-
	PWM low level	0V	-	0.3V	-
	Rated dimming frequency	300Hz	-	2000Hz	-
	PWM duty cycle	0%	-	99%	At 99% duty cycle, output full power
Resistor Dimming (Optional)	Rated external resistance value	0KΩ	-	100KΩ	-
	Dimming output range	0%	-	100%	-

Note:

1. Output current of dimming port: 100uA (typical value).
2. The maximum operation voltage for the dimming port is 27V. Wrong voltage beyond this, or a reverse connection, may lead to a critical damage.
3. The default dimming setting of this product is three-in-one, positive logic dimming. Other requirement, such as time-controlled dimming, 0-5V dimming, and so on, please consult the technician for details.
4. When the positive logic dimming function is set, applications in the constant power load voltage range can achieve 0V dimming off, but it is recommended that customers use 1-10V dimming.
5. When negative logical dimming is set, the default output is 100% when the dimming light is suspended. Negative logic dimming can be turned off by the program. When the voltage of the dimming port is greater than $10.2V \pm 0.2V$, the maximum power output of the power supply is obtained.

Protection

Protection	description
Under voltage protect	When the input voltage is less than $180 \pm 10\%VAC$, the output power decreases to a half.
Output overload protection	hiccup mode, and automatically recovers after abnormal load conditions being removed
Output short circuit protection	hiccup mode, and automatically recovers after abnormal load conditions being removed
Over temperature protection	When the housing temperature is greater than $95^{\circ}C \pm 5^{\circ}C$, the output power decreases with the increase of the housing temperature

Note :

1. Unless otherwise specified, all parameters should be measured at the condition of 380Vac (50Hz) input, with rated load, and ambient temperature of 25°C.
2. Includes setting error, linear adjustment rate and load adjustment rate.

Environmental

Environmental categories	Parameter
Working temperature	-40 ~ +40°C @170-198Vac、 -40 ~ +55°C@200-528Vac(refer to "service life curve ")
Safety shell temperature	-40 ~ 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	70000 h @ housing temperature ≤75 °C, 380Vac, 100% load, see section "housing temperature and life"

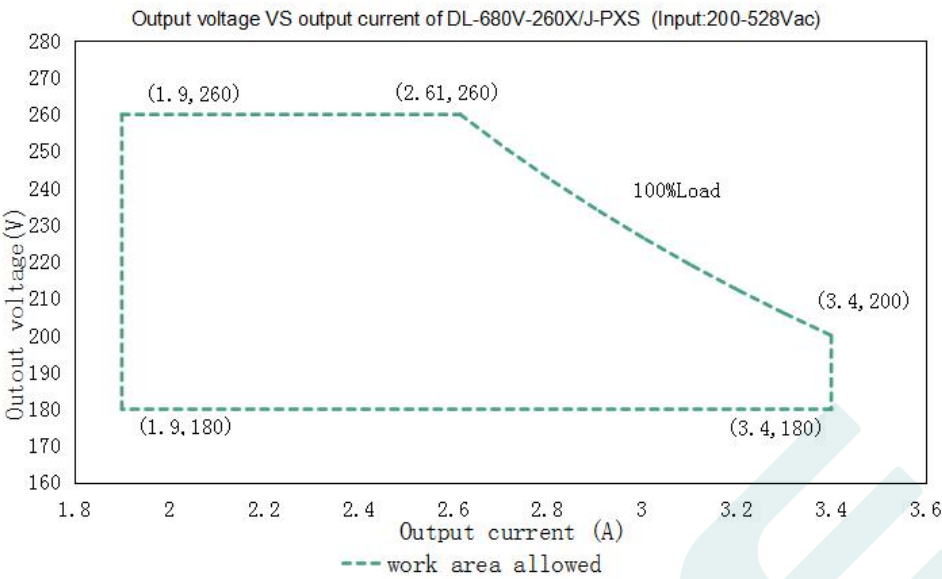
Safety and EMC

Safety categories	Standard
Safety	EN61347-1、 EN61347-2-13、 IEC61347-1、 IEC61347-2-13、 AS/NZS61347.1、 AS61347.2.13、 EN 62384、 UL8750 ;
EMC	EN 55015、 EN 61000-3-2 、 EN 61000-3-3
Surge leve	Differential mode L-N ± 6 KV (2Ω),common mode L , N-PE± 15 KV (12Ω) ;Refer IEC61000-4-5 2014
High-pot test	I/P-PE :1.96KVac O/P-PE : 1.5KVac I/P-DIM:1.5KVac O/P-DIM:1.5KVac
Insulation impedance	I/P-PE:100MΩ / 500VDC; O/P-PE:100MΩ / 500VDC / 25°C/ 70% RH
Leakage current	< 0.7mA @380Vac

Note :

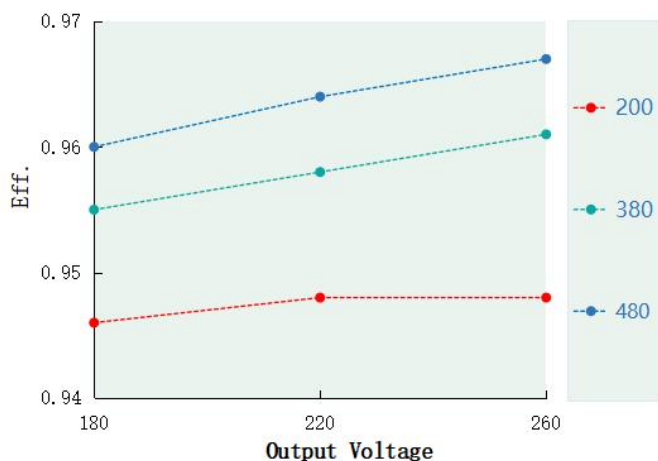
1. Attention! As a component of the whole, the EMC performance of the final product is not only decided by the driver, even if the driver is well-designed and fulfil all the required compliance. The final equipment manufacturers must re-qualify EMC Directive on the complete product.
2. For the driver will be in OVP restart model when it works in no-load, so the driver on-load is recommended.

I-V Working area

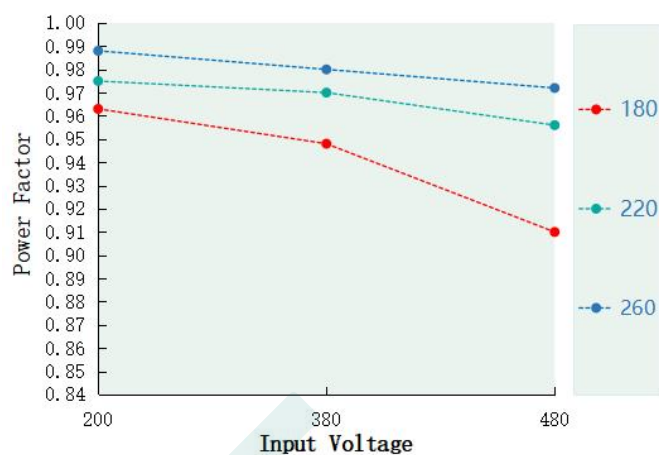


Load	Output								
Load working Voltage	180V	185V	190V	200V	210V	225V	230V	250V	260V
Io_MAX	3.4A	3.4A	3.4A	3.4A	3.24A	3.02A	2.96A	2.72A	2.61A
Po_MAX	612W	629W	646W	680W	680W	680W	680W	680W	680W

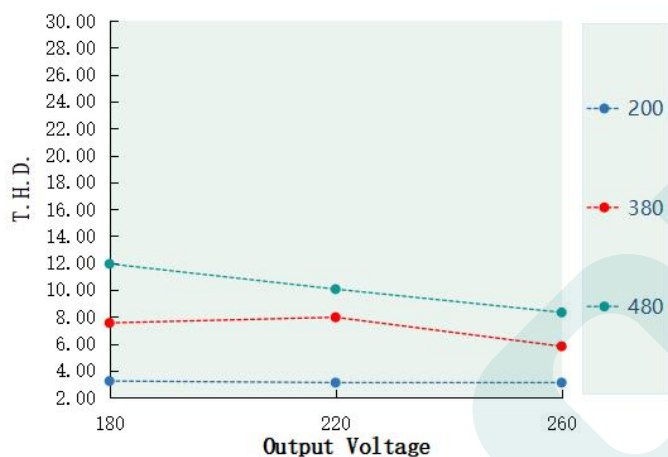
Eff. VS Output voltage DL-680V-260X/J-PXS



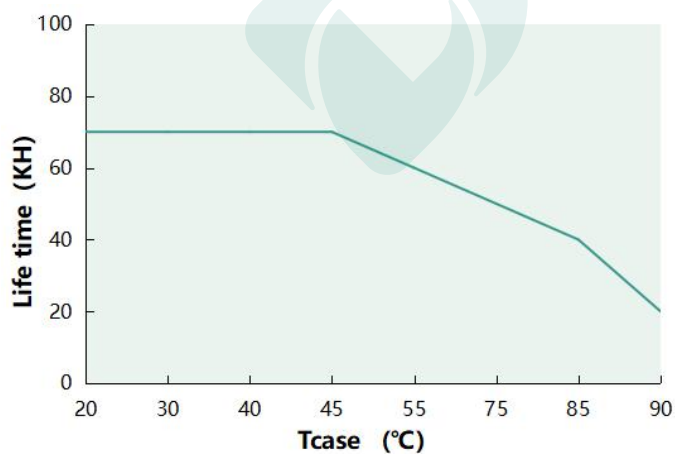
Power factor VS Input voltage DL-680V-260X/J-PXS



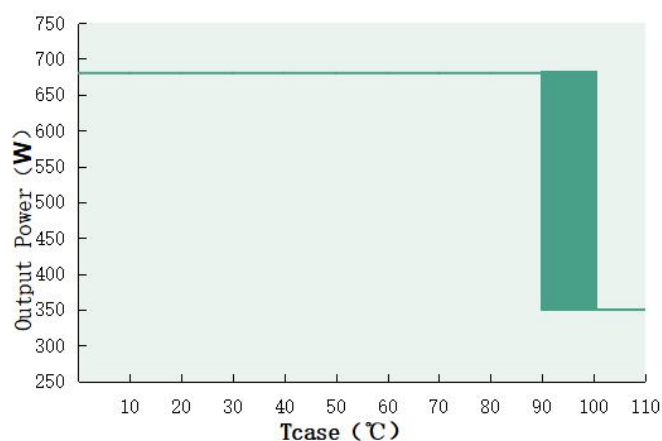
T.H.D VS Output voltage DL-680V-260X/J-PXS



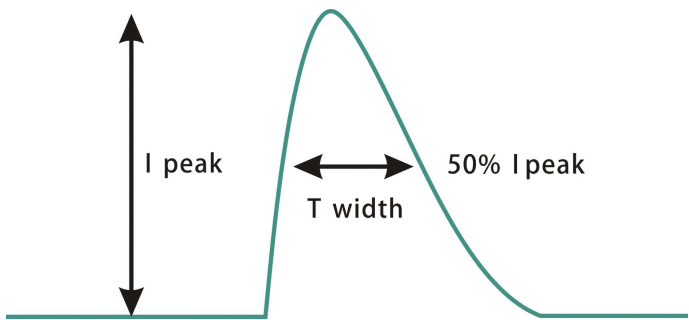
Tcase VS Lifetime DL-680V-260X/J-PXS



Output power VS Tcase DL-680V-260X/J-PXS

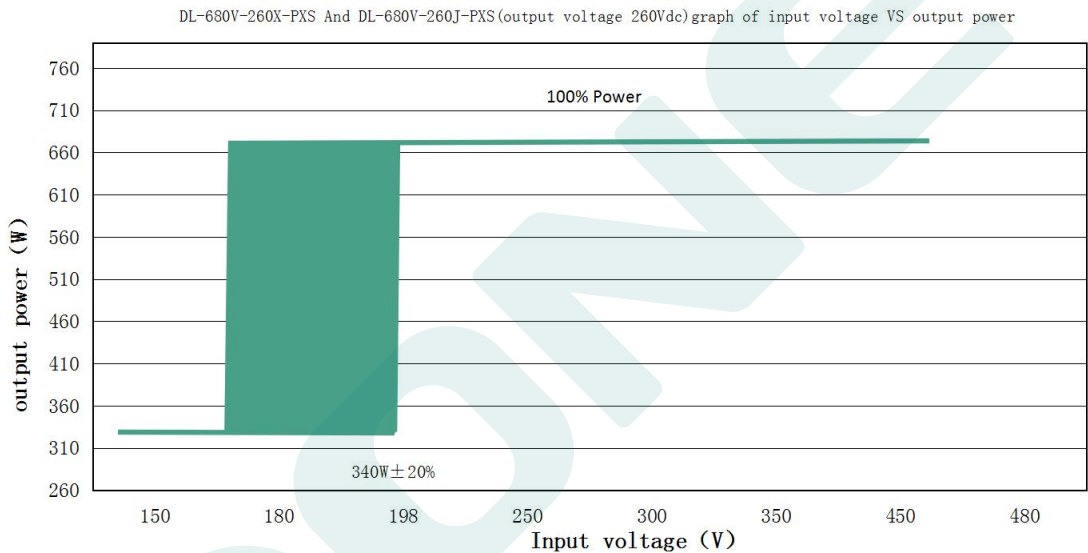


Input Inrush current DL-680V-260X/J -PXS



Input voltage	Peak current	T (@50% Peak current)
220Vac	95A	800us
380Vac	100A	630us
480Vac	120A	618us

Output power VS Input voltage



DL-680V-260X/J-PLS(For output 260Vdc, the rated output current & power under different input voltage)									
Input Voltage	140V	150V	180Vac	198Vac	250Vac	300Vac	350Vac	450Vac	480Vac
Iout	1.31A	1.31A	1.3A	1.3A	2.61A	2.61A	2.61A	2.61A	2.61A
Pout	340W	340W	340W	340W	680W	680W	680W	680W	680W

Note : When the input voltage is below 180±10Vac,the output power decreases to 340W±20%.

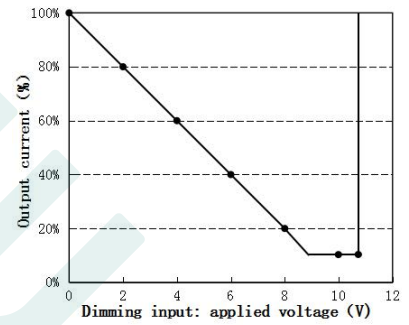
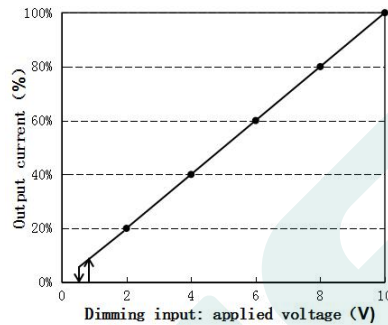
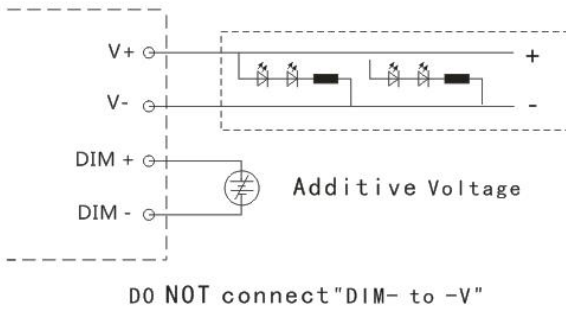
Dimming function

Three-in-one dimming function (X version only)

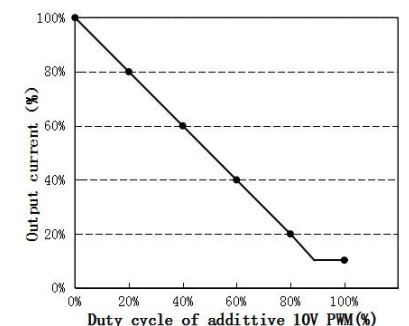
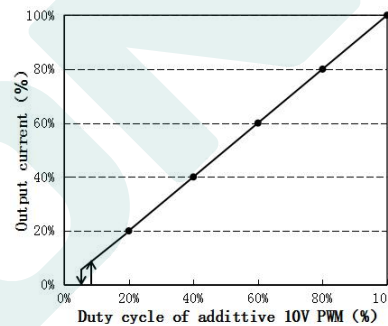
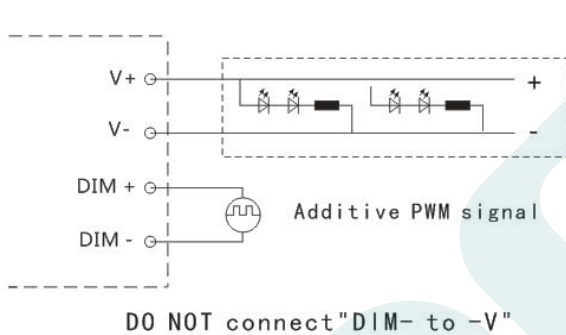
A. To adjust the output current, applying one of the three methods between DIM+ and DIM- : a resistor of 0-100K, or any voltage of 0-10V , or a PWM signal with amplitude of 10V. .

B. output current of dimming port: 100uA (typical value).

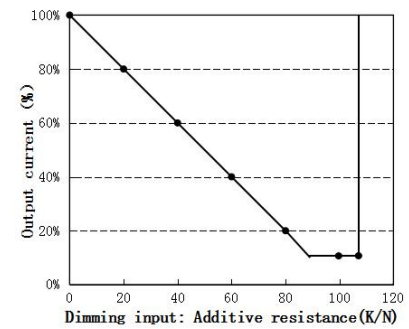
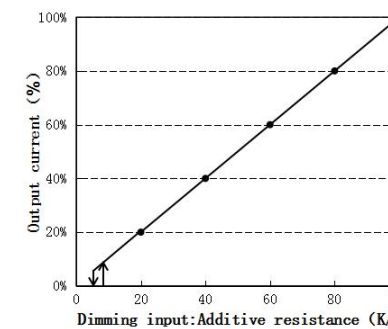
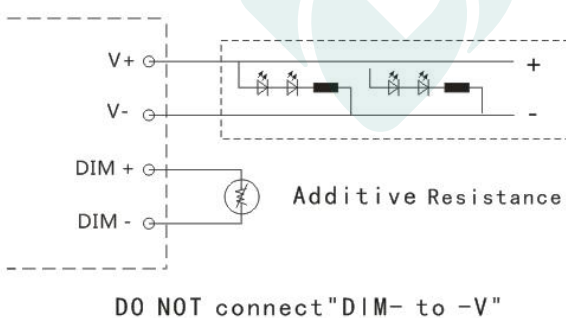
• With 0-10V dimming voltage :



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



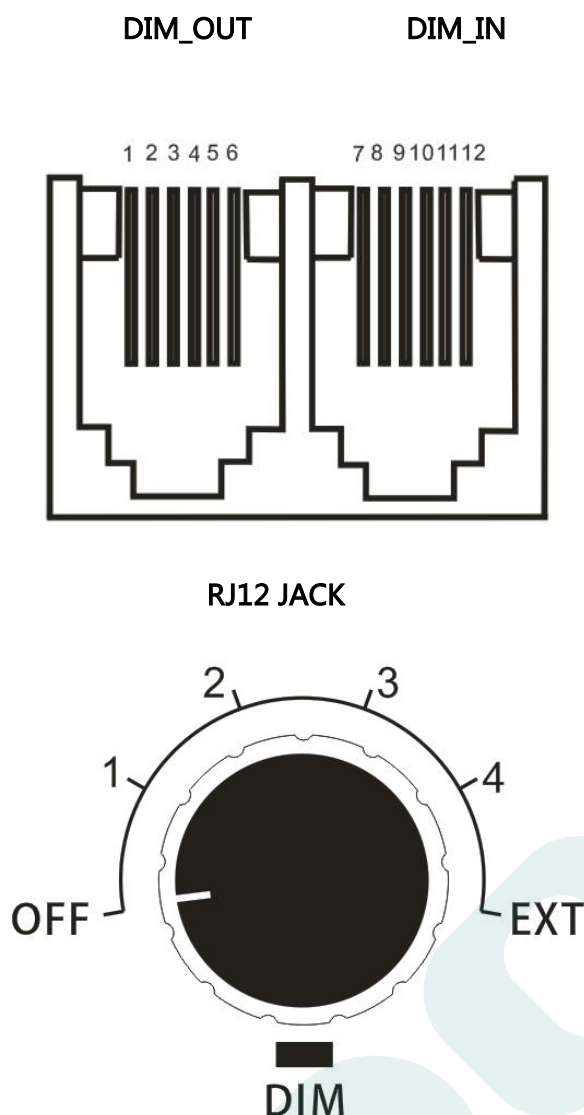
• With an additional 0-100K resistor :



Note :

- Both operation way, of positive logic or negative logic, can be selected by program.
- The dimming-off suits for positive logic only. The other requests could contact the technician.

J-type dimming mode



RJ12 PIN	definition
3	TXD
9	RXD
5/11	DIM+
2/8	Communication COM
6/12	Vaux+
1/4/7/10	Vaux-/DIM-

Switch	definition
Off	Turn off
1	25%Iset
2	50%Iset
3	75%Iset
4	100%Iset
EXT	External dimming

The J-type power supply does not have light dimming, but only has dimming knob and RJ12 interface. When the dimming knob is not set to EXT in master-slave cascading mode, the RJ12 interface can receive 3-in-1 dimming signal. The function of the RJ12 interface is the same as that of the X/T type light dimming.

Connect multiple power supplies that have an RJ12 port to each other in the following mode: Connect the DIM_OUT port to the DIM_IN port of the next power supply. The power supply that is not connected to the DIM_OUT port is the host. The power supply that is connected to the DIM_OUT port is the slave power supply. Adjust the dimming knob of the host, and other slave power sources will also be dimmed along with the host power supply. Regardless of the slave knob switch in any state, all states of the slave as the master.

NOTICE:

1. RJ12 port is not waterproof. Pay attention to the operating environment to avoid the influence of water on the power supply.
2. The J-type power supply can only be cascaded with the same defined parameters as RJ12. When the number of cascades exceeds 6, do not short-circuit the output of the auxiliary power supply (Vaux+, Vaux-); otherwise, the expansion ports and cables may be damaged.



Caution:

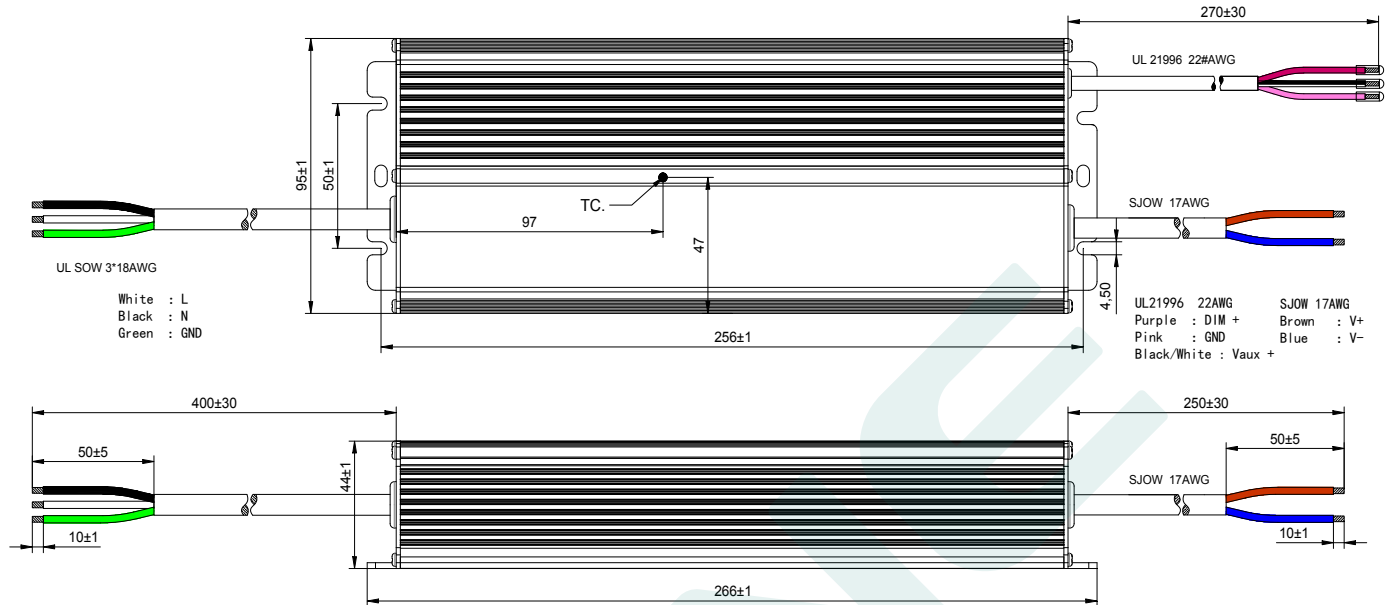
1. It is recommended to design LED beads in series first and then in parallel.
2. There is no excessive heat-dissipating copper foil left on the aluminum substrate.
3. The creepage distance of the aluminum substrate wiring > 5.6mm.
4. The creepage distance between LED+ and LED- on the aluminum substrate > 2.5mm.
5. The insulation level of the LED lamp board should meet the requirements of reliability design. The recommended withstand voltage between the LED lamp beads and the aluminum substrate is 100% full inspection > 3.5KVAC.
6. The final right of interpretation of the parameters above belongs to Guangdong Done Power Technology Co., Ltd.

Mechanical specification

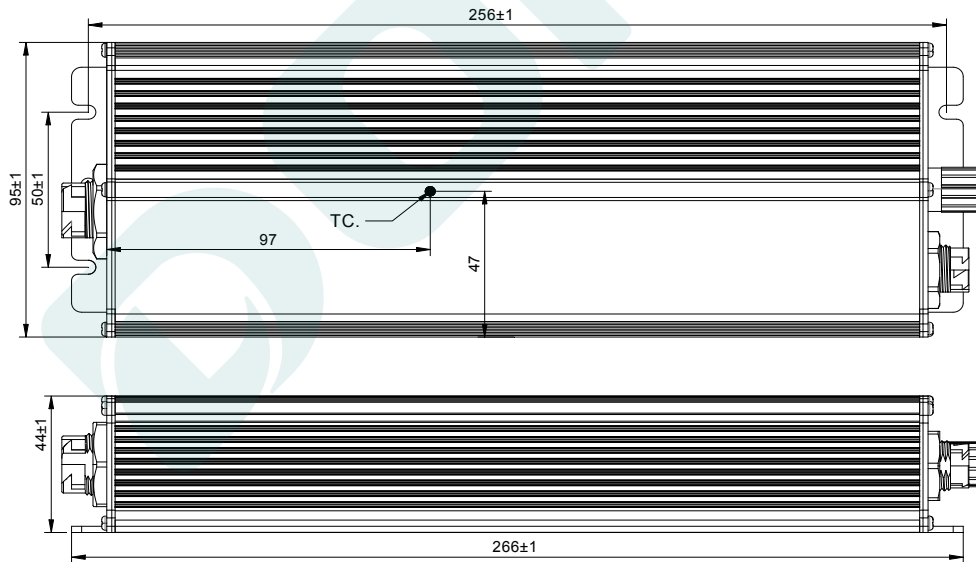
Size (mm)

L266*W95*H44

DL-680V-260X-PXS



DL-680V-260J-PXS



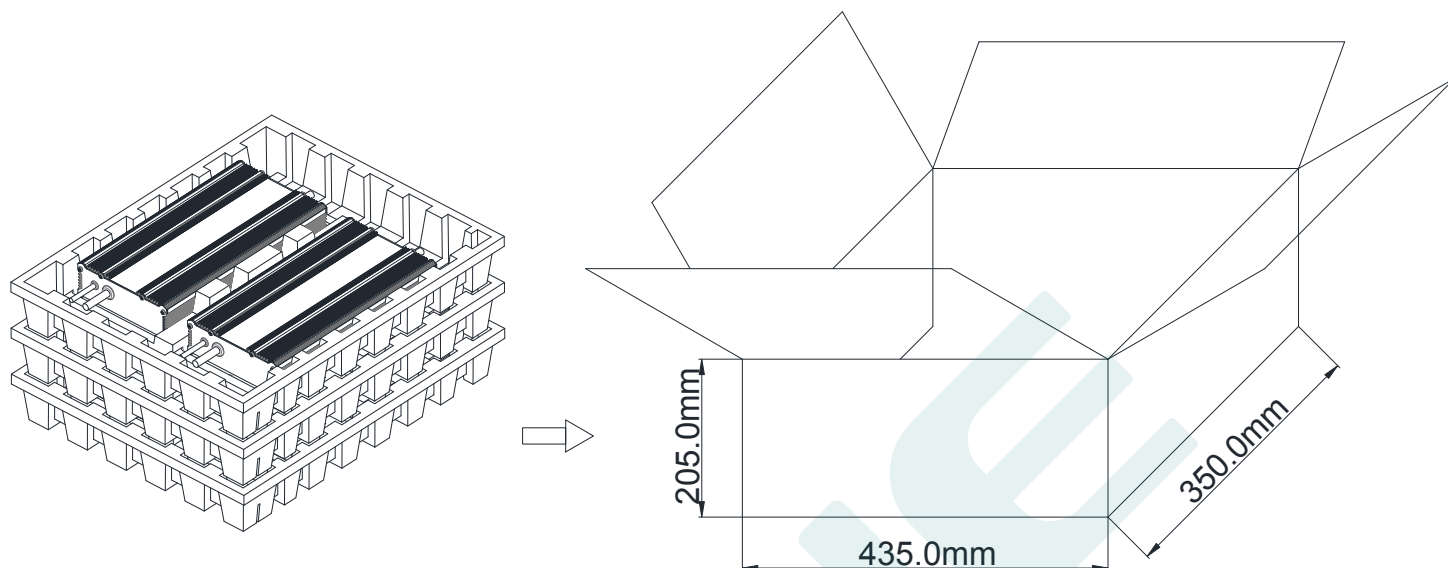
Weight

Weight

2550 g

Packaging

Packaging (mm) L435*W350*H205



Note : One Carton 3 layers and 2 pcs each layer, total 6 pcs/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
2024.8.30	Initial version	V1.0	
2025.7.3	High-pot test I/P-PE change to 1.96KVac	V1.1	
2025.7.28	Add caution on page 12	V1.2	

MANUFACTRUER		
EDIT	CHECK	APPROVE