



PLS SERIES LED DRIVER

DL-800W-X/T-PLS SPEC V1.5



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 :
 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.	THD.	PF	NTC
DL-800W-V260X-PLS	120-277V	800W	180-260Vdc	3.2A	≥97%	≤10%	≥0.97	
DL-800W-V260T-PLS	50/60Hz							√

- Note :**
1. Test conditions: Ta=25°C, under 230Vac input,after running for 30 minutes with full load.
 2. Input below 108±10%Vac, output power derating; Input 120-277VAC, rated power 800W, special attention should be paid to the application; For details, see the input voltage VS output power curve.
 3. DL-800W-V260T-PLS supports the external NTC function. When the lamp board temperature rises to the set threshold, the power supply decreases. External NTC is recommended to use 10K, BK3350-3399, Murate(Murata) NCP18XH103J03RB (through off-line programming to set the required temperature parameters).

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 60% load
Input current	-	-	7.5A	@120Vac input ,with full load
Inrush current	-	-	75A	230Vac, cold start (25°C)

Output characteristics

Parameter	Min	Typ.	Max	remark
Rated current DL-800W-V260X/T-PLS	-	3.07A	-	
Output current range DL-800W-V260X/T-PLS	2.6A	-	4A	
Output voltage range DL-800W-V260X/T-PLS	180V	-	260V	Constant power voltage range : 200-260V
Available power(120-277Vac)	-	800W	810W	output power derating once input voltage being less than 108±10Vac
Rated power(120-277Vac)	-	800W	-	
No-load voltage DL-800W-V260X/T-PLS	-	-	350V	
Efficiency@120Vac DL-800W-V260X/T-PLS	-	95%	-	full load @ 120 vac Output current 3.07A, 800W
Efficiency@230Vac DL-800W-V260X/T-PLS	-	97%	-	full load @ 230 vac Output current 3.07A, 800W

Output characteristics

Parameter	Min	Typ.	Max	Note
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	-	500ms	-	Full load @230Vac

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	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).
4. When set to positive logic dimming function, 0V dimming can be turned off for applications within the constant power load voltage range, but it is recommended that customers use 1-10V dimming.
5. When setting the dimming, the default output is 100% when the dimming is suspended. Negative logic dimming can be turned off.
6. Negative logic dimming for PWM dimming, including 1-10V dimming and resistance dimming modes.

Protection

Protection	description
Under voltage protect	When the input voltage is less than $108 \pm 10\%VAC$, the output power is progressively derated as shown in the derating curve
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 $90^{\circ}C$, 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 $25^{\circ}C$.
2. Includes setting error, linear adjustment rate and load adjustment rate.

Environmental

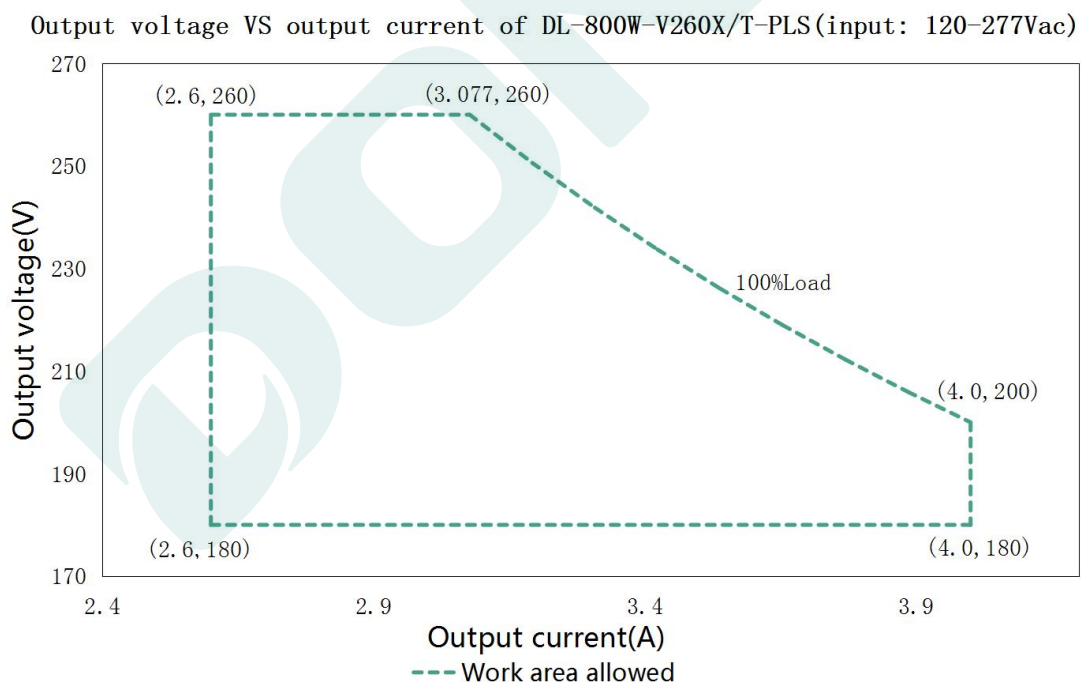
Environmental categories	Parameter
Working temperature	$-40 \sim +55^{\circ}C@201-277Vac$, $-40 \sim +40^{\circ}C @120-200Vac$ (refer to "Life Curve ")
Safety shell temperature	$-40 \sim 90^{\circ}C$
Working humidity	$20 \sim 95\% RH$
Storage temperature、humidity	$-40 \sim +80^{\circ}C$, $10 \sim 95\% RH$
Resistant to vibration	$10 \sim 500Hz$, 5G 12 min/cycle, X, Y, Z axis 72 min each
MTBF	50Khrs min. MIL-HDBK-217F ($T_a=25^{\circ}C$)
Lifetime	50000 h @ housing temperature $\leq 75^{\circ}C$, 230Vac, 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 IEC 55015、EN IEC 61000-3-2、EN 61000-3-3
Surge leve	Differential mode L-N $\pm 6\text{KV}$ (2 ohm) ,common mode L , N-PE $\pm 10\text{KV}$ (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 Ω / 500VDC; O/P-P/E:100M Ω / 500VDC / 25 $^{\circ}\text{C}$ / 70% RH
Leakage current	<0.7mA@277Vac

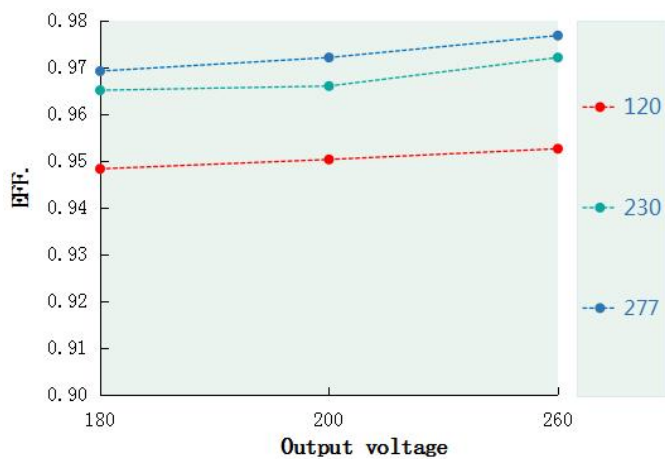
Note: Attention! As a component of the whole, the EMC performance of the final product is not only decided by the driver, even if the driver is well-designed and fulfil all the required compliance. The final equipment manufacturers must re-qualify EMC Directive on the complete product.

I-V Working area

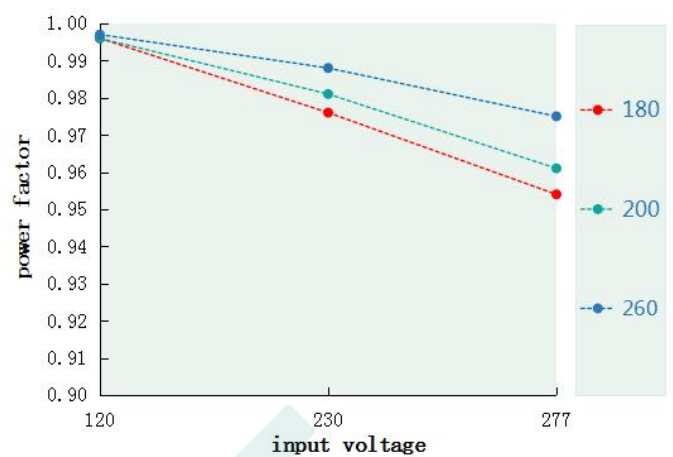


Load	Output								
Load working Voltage	180V	185V	190V	200V	210V	225V	230V	250V	260V
Io_MAX	4A	4A	4A	4A	3.809A	3.56A	3.478A	3.2A	3.077A
Po_MAX	720W	740W	760W	800W	800W	800W	800W	800W	800W

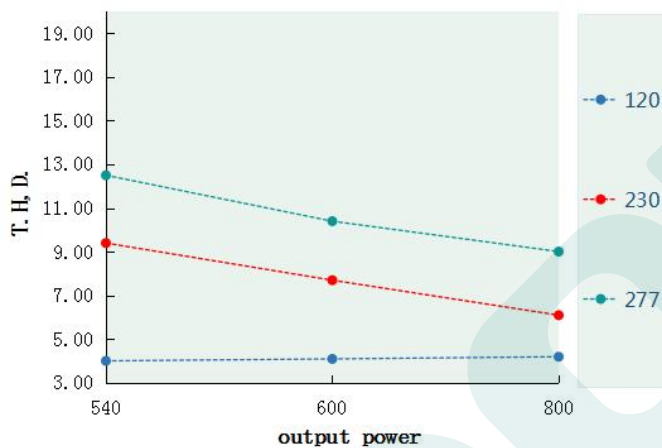
Eff. VS Output voltage(DL-800W-V260X/T-PLS)



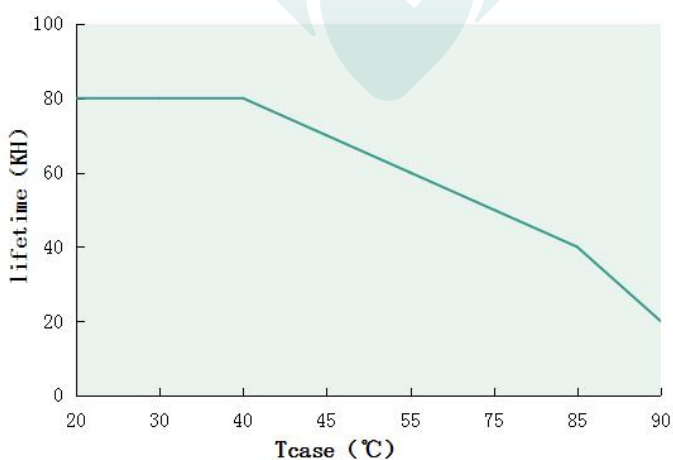
Power factor VS Input voltage(DL-800W-V260X/T-PLS)



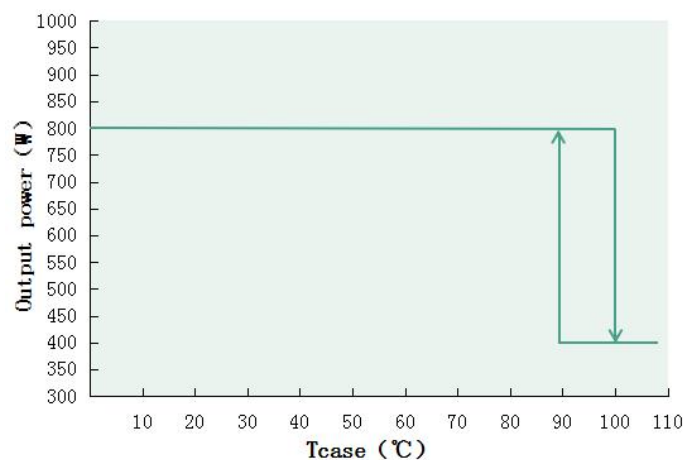
T.H.D. VS Output power(DL-800W-V260X/T-PLS)



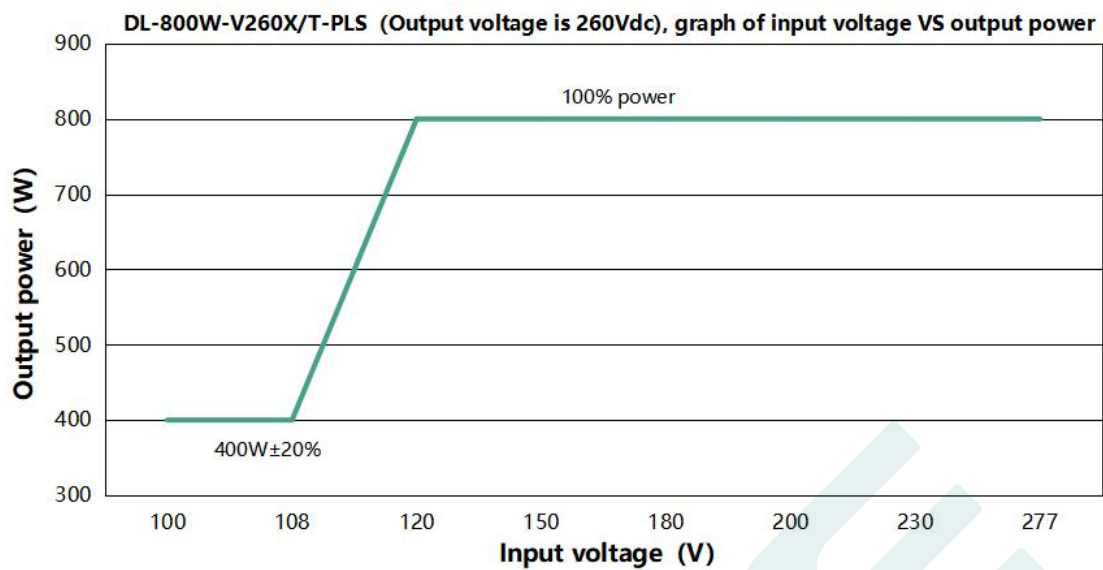
Tcase VS Lifetime(DL-800W-V260X/T-PLS)



Output power VS Tcase (DL-800W-V260X/T-PLS)



Output power VS Input voltage



DL-800W-V260X/T-PLS (For output 260Vdc, the rated output current & power under different input voltage)								
Input Voltage	100Vac	108Vac	120Vac	150Vac	180Vac	200Vac	230Vac	277Vac
Iout	1.51A	1.51A	3.07A	3.07A	3.07A	3.07A	3.07A	3.07A
Pout	400W	400W	800W	800W	800W	800W	800W	800W

Note: When the input voltage is below 108±10Vac,the output power decreases to a half.

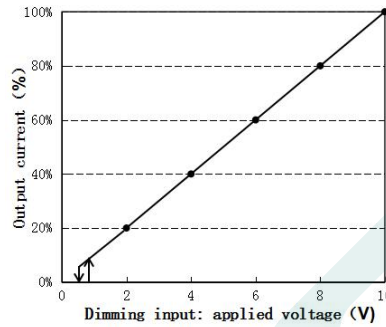
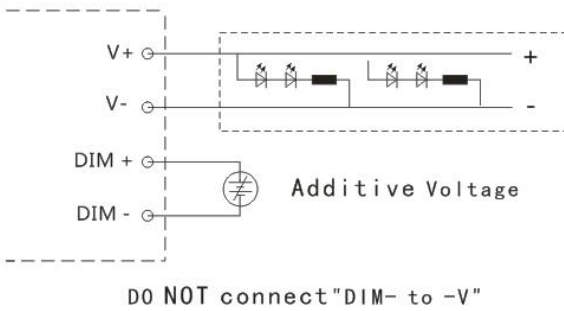
Dimming function

※ Three-in-one dimming function

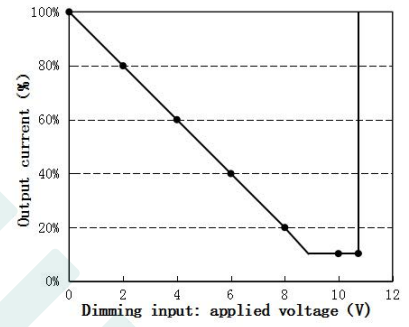
A. To adjust the output current, applying one of the three methods between DIM+ and DIM- : a resistor of 0-100K, or any voltage of 0-10V , or a PWM signal with amplitude of 10V.

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

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

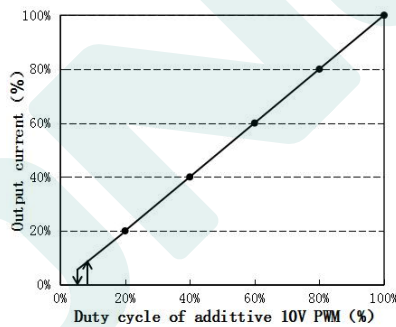
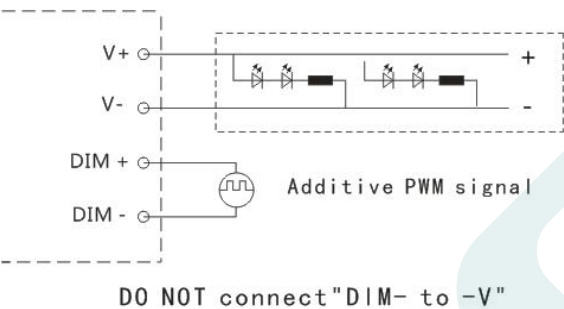


Positive logic dimming curve

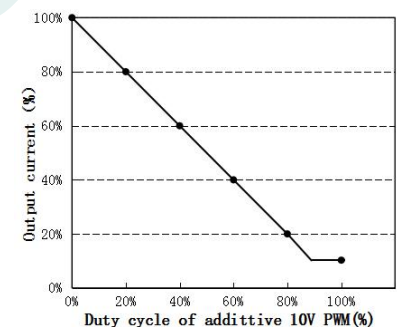


Negative logic dimming curve

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

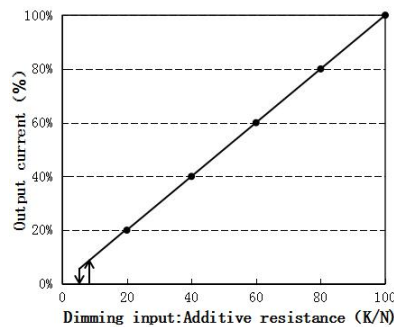
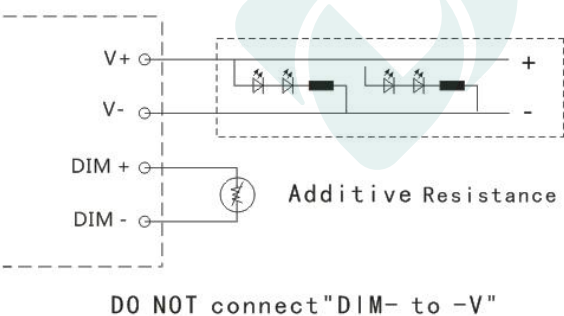


Positive logic dimming curve

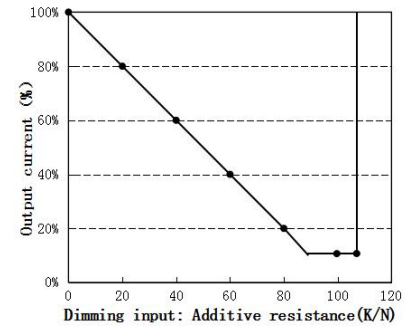


Negative logic dimming curve

• With an additional 0-100K resistor:



Positive logic dimming curve



Negative logic dimming curve

Remark:

1. Both operation way, of positive logic or negative logic, can be selected by program.
2. 0-10V dimming does not contain positive and negative logic, Positive and negative logic also includes PWM dimming.
3. Dim -off is only available for positive and negative logic dimming .Other requirements need to contact with the technician for help.



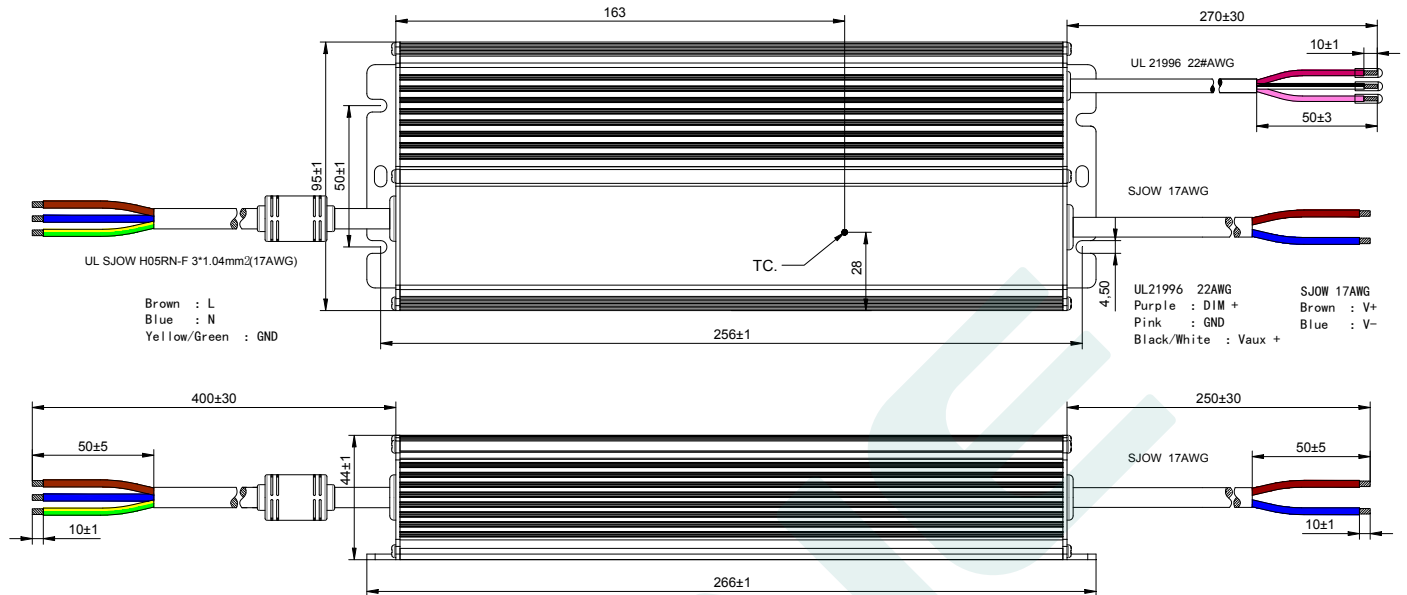
Caution:

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 > 5mm.
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.

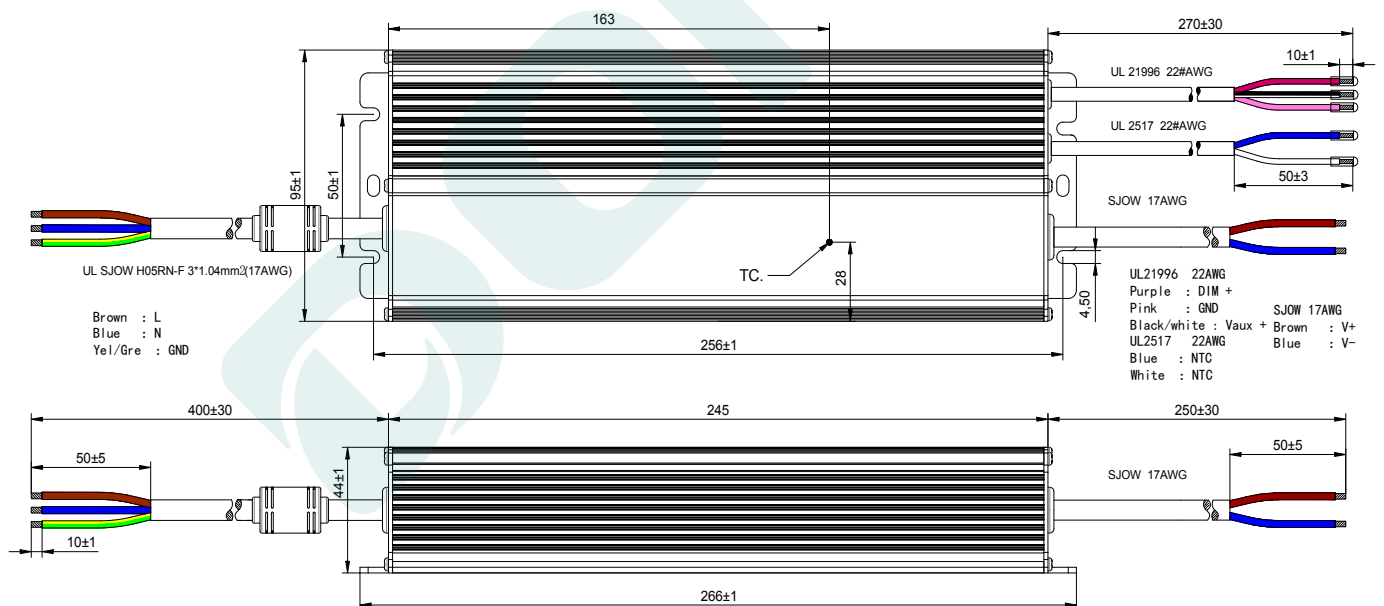
Mechanical specification

Size (mm) L266*W95*H44

DL-800W-V260X-PLS



DL-800W-V260T-PLS

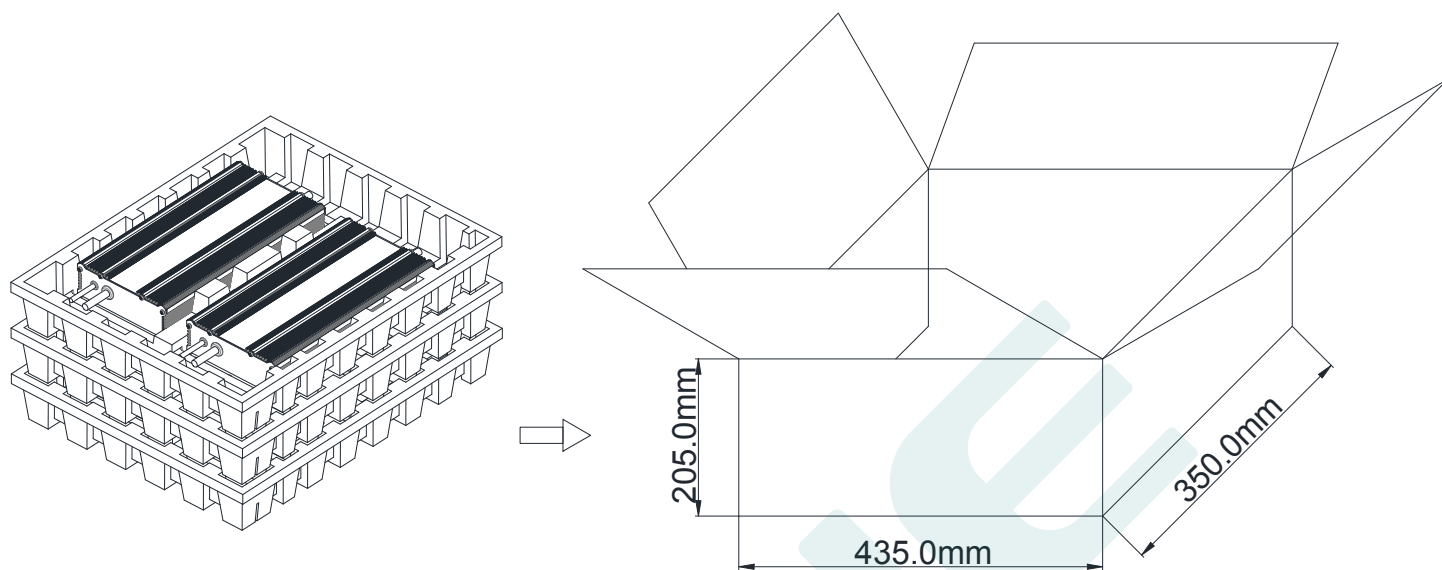


Weight

Weight 2166g

Packaging

Packaging (mm) L435*W350*H205



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
2021.12.18	Initial version.	V1.0	
2023.8.22	Add safety rules and regulations on the home page	V1.1	
2023.10.31	Add Tc point	V1.2	
2024.9.5	Modify input current.	V1.3	
2025.7.22	Add caution on page Ten	V1.4	
2025.9.1	Update product images	V1.5	

MANUFACTRUER		
EDIT	CHECK	APPROVE