PXS SERIES LED DRIVERS

DL-150Z-X-PXS SPEC V1.6

GUANGDONG DONE POWER TECHNOLOGY CO.,LTD

Features

- Class I structure
- Input voltage: 100-277 V ~ 50/60 Hz
- Efficiency :94%(Typ.)
- Constant power drive and constant current output control mode
- Metal shell structure, protection grade: IP67
- Lightning protection level: differential mode 6kV, common mode 15kV
- Dimming signal input is 0V, standby power consumption ≤0.5W
- Isolation Auxiliary Power Supply (X version) : 12V 300mA
- Function selection:

  Isolated dimming function: off-line programming current regulation, programmable, compatible with analog three-in-one dimming circuit
- Life design, 5 years

Applications

Road lighting、Industrial lighting、Venue lighting
Floodlight lighting、Landscape lighting 、Plant lighting

E479166

Model list

Model NO.	Input voltage	Output power	Output voltage	The default current	Eff.	T.H.D	PF
DL-150Z-260X-PXS	100-277V 50/60Hz	150W	180-260Vdc	0.7A	≥94%	≤7%	≥0.95

Note :

1. Test conditions of the above parameters: Ta=25℃, 230Vac input, full load operation for 30 minutes;
2. When the input is 100-277Vac, the rated power is 150W, and special attention should be paid to the application;

   Please refer to "THE OUTPUT POWER VS INPUT VOLTAGE" curve chart for details.

Input characteristics

Parameter	Min	Typ.	Max	Note
Rated input voltage	100Vac	230Vac	277Vac	
Input voltage range	90Vac	230Vac	305Vac	
Rated frequency	47Hz	50/60Hz	63Hz	
Power factor	-	0.95	-	@230Vac full load
T.H.D.	-	7%	-	@230Vac full load
	-	-	20%	@277Vac 70% load
Input current	-	-	1.7A	@100Vac full load
Inrush current	-	-	150A	230Vac, cold start (25℃)

Output characteristic

Parameter	Min	Typ.	Max	Note
Rated current DL-150Z-260X -PXS	-	0.57A	-	The load is 260VDC
Output current range DL-150Z-260X -PXS	0.38A	-	0.75A	-
Output voltage range DL-150Z-260X -PXS	180V	-	260V	Constant power voltage range: 200-260V
Rated power(100-277Vac)	-	150W	-	-
No-load voltage DL-150Z-260X -PXS	-	-	350V	-
Efficiency @100Vac DL-150Z-260X -PXS	-	89%	-	full load
Efficiency@230Vac DL-150Z-260X -PXS	-	94%	-	@230Vac full load
Current ripple	-	5%	-	full load
Accuracy of output current	-7%	-	+7%	full load
Line regulation	-3%	-	+3%	full load
Load regulation	-5%	-	+5%	full load
Starting time	100ms	-	1000ms	Full load@100-277Vac

Note: The output current range is limited by the input and output voltage, please refer to "I-V WORKING AREA" for details.

Dimming characteristic

Dimming function		Min	Typ.	Max	Instructions
0-10V Dimming (Optional)	Safe applied voltage range	0V	-	12V	When the external voltage is ≥ 12V, the dimming will fail
	Rated dimming voltage range	0V	-	10V	-
	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	0VV	-	0.3V	-
	PWM frequency band	300Hz	-	2000Hz	-
	PWM duty cycle	0%	-	99%	Output full power at 99% duty cycle
Resistor Dimming (Optional)	External resistance value	0KΩ	-	100KΩ	-
	Dimming output range	0%	-	100%	-
Multiple timing dimming (optional)	Single-chip computer control		Step dimming function is set by program		Three working modes are available
	Timer control		The default value is 6 segments, which can be customized		24H to achieve a cycle

Note:

1. Output current of dimming port: 100uA (typical value).
2. The maximum withstand voltage of the dimming port is 12V. If the external power supply voltage exceeds 12V or the signal line is reversely connected, the power supply will be damaged.
3. The dimming is set to 3-in-1 positive logic dimming (it can be set to timing dimming, 0-10V or other voltage dimming, etc.) by programming software.
4. When the positive logic dimming function is set, the 0V dimming can be turned off in the range of constant power load voltage.

Protection

Function	Function instructions
Output overload protection	Protection mode:hiccup mode,recovers automatically after fault condition is removed.
Output short circuit protection	Hiccup mode:recovers automatically after fault condition is removed
Over temperature protection	Self-recovery type：when the housing temperature is greater than 90℃, the output power decreases gradually.
Output over-voltage protection	Protection mode: Hiccup mode or clamped in output highest voltage , the product is not damaged，LED driver works normally after fault condition is removed.

Note: Unless otherwise specified, all specifications and parameters shall be measured at the conditions of 230Vac (50Hz), rated load and 25℃ of ambient temperature;

Environmental

Environmental categories	Parameter
Working temperature	-40 ~ +55℃@100-277Vac (refer to "Life Curve ")
Safe shell temperature	-40 ~ 90℃
Working humidity	20 ~ 90% RH, non condensing
Storage temperature、humidity	-40~+90℃, 10 ~ 90% 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℃)
Life span	70000 hours @ Tc s75℃, 230Vac, 100% load, see section "Casing Temperature and Life"

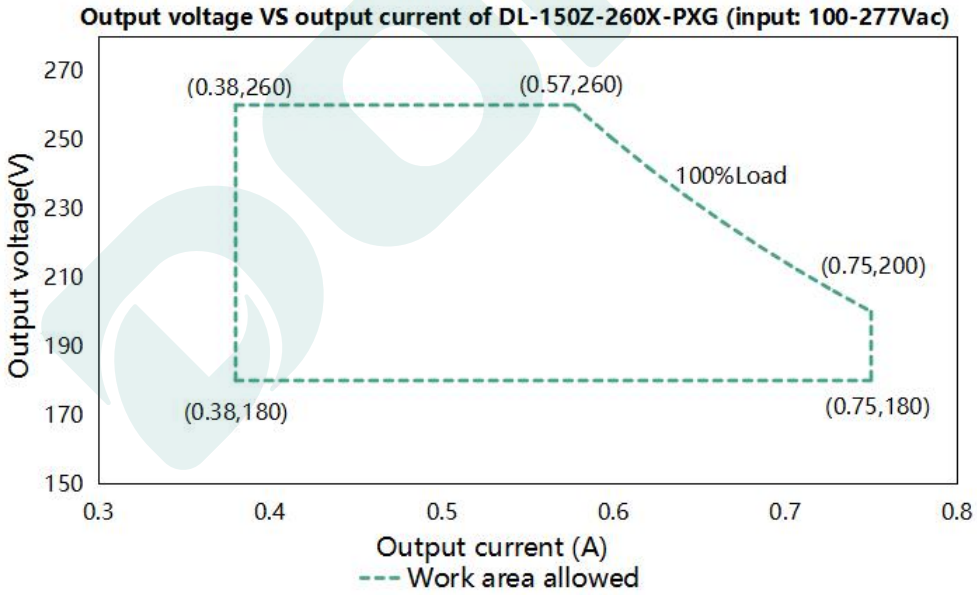
Safety and EMC

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
Lightning protection class	Differential mode L-N ±6KV (2 ohm),common mode L , N-PE± 15 KV (12 ohm) ; Refer to IEC61000-4-5 2014
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:100MΩ / 500VDC; O/P-PE:100MΩ / 500VDC / 25℃/ 70% RH
Leakage current	<0.7mA@277Vac

Note:

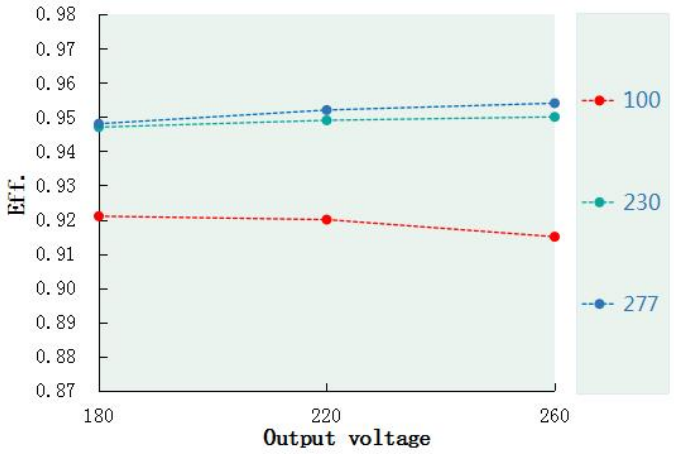
1. The driver is considered as a component that will be operated in combination with the final equipment. Since EMC performance will be affected by the complete installation,the final equipment manufacturers must re-qualify EMC Directive on the complete installation again.
2. No load is recommended because the power supply is in OVP protected restart mode when unloaded.

I-V Working area

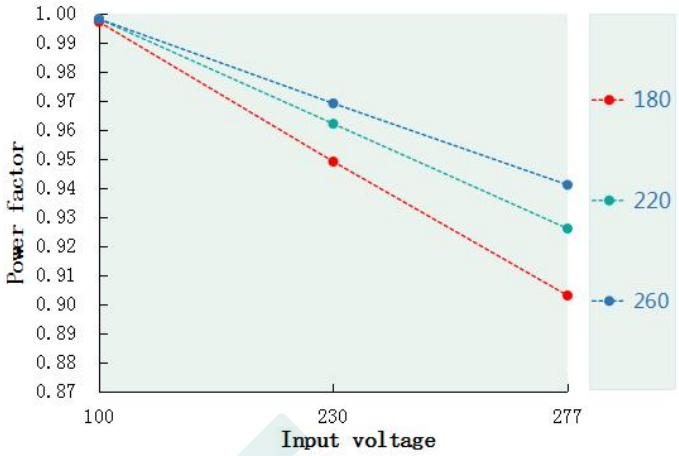


Load	Output								
Load working Voltage	180V	190V	200V	210V	220V	230V	240V	250V	260V
Io_MAX	0.75A	0.75A	0.75A	0.714A	0.681A	0.652A	0.625A	0.6A	0.57A
Po_MAX	135W	142W	150W	150W	150W	150W	150W	150W	150W

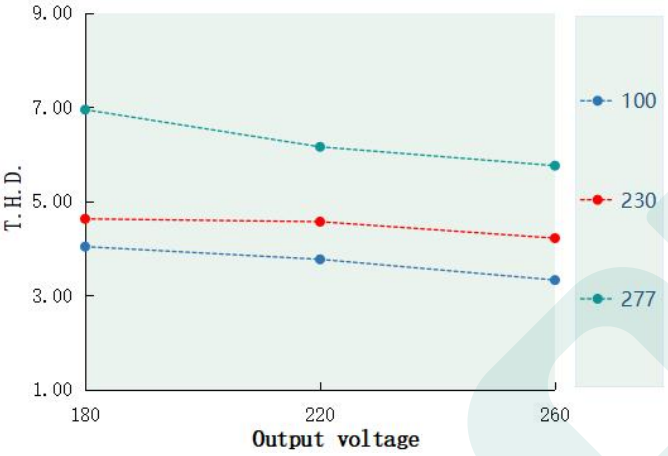
Eff. VS Output voltage(DL-150Z-260X-PXS)



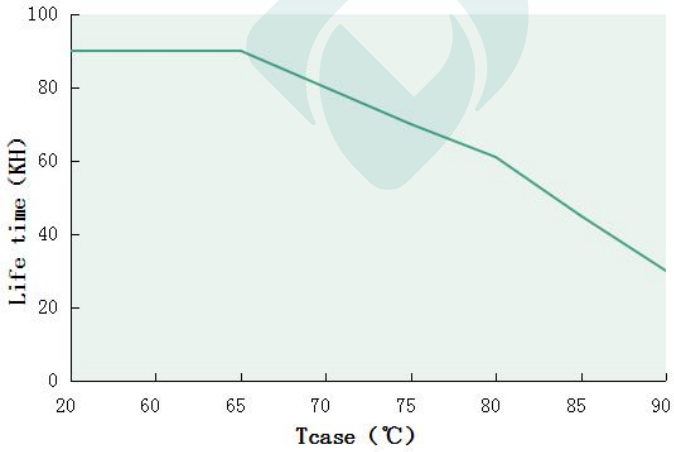
Power factor VS Input voltage(DL-150Z-260X-PXS)



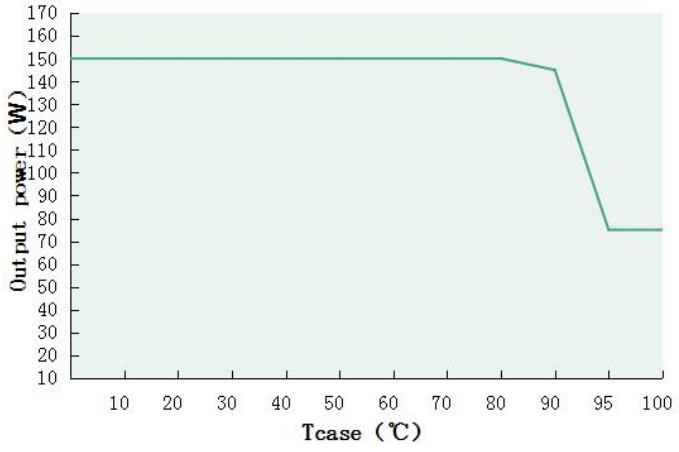
T.H.D. VS Output voltage(DL-150Z-260X-PXS)



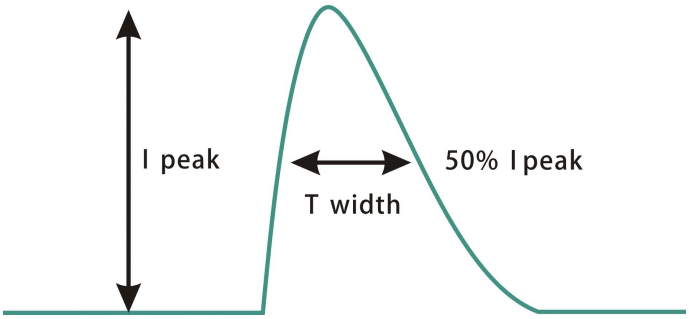
Tc VS Lifetime(DL-150Z-260X-PXS)



Output power VS Tc(DL-150Z-260X-PXS)

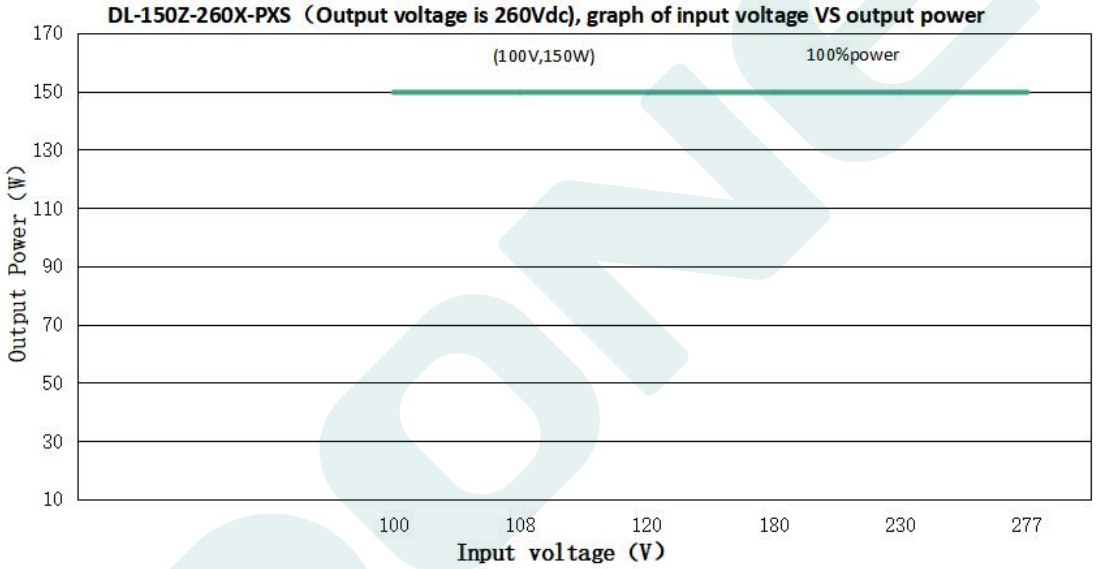


Input Surge Current (DL-150Z-260X-PXS)



Input voltage	peak current	T (@ 50% peak current)
100Vac	48A	2.68us
230Vac	93.33A	2.68us
277Vac	97.33A	2.75us

Output power VS Input voltage



DL-150Z-260X-PXS (When the output voltage is 260Vdc, the rated output current value and output power corresponding to different input voltage)					
Input Voltage	100Vac	120Vac	180Vac	230Vac	277Vac
Iout	0.57A	0.57A	0.57A	0.57A	0.57A
Pout	150W	150W	150W	150W	150W

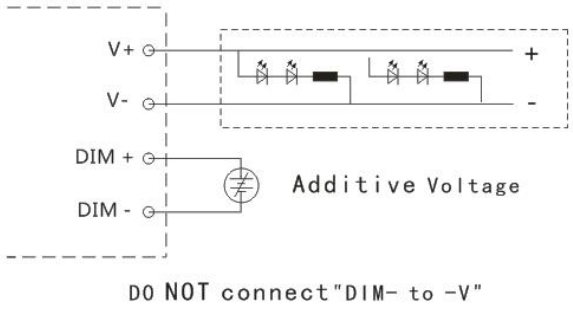
Dimming operation

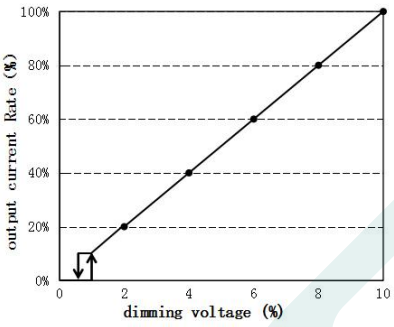
※ Three-in-one dimming function

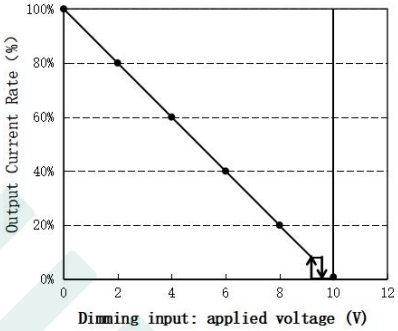
A. connect a resistor 0-100K or 0-10V DC voltage or 10V PWM signal between DIM+ and DIM- to adjust the output current.

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

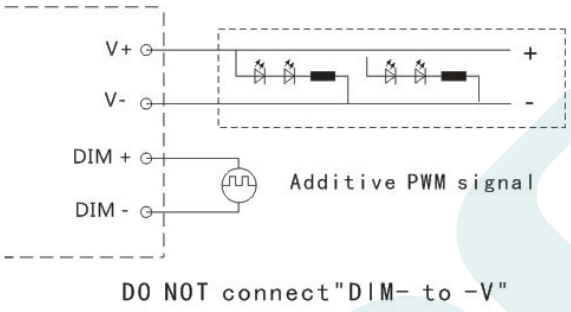
◎ With an applied voltage of 0-10V:

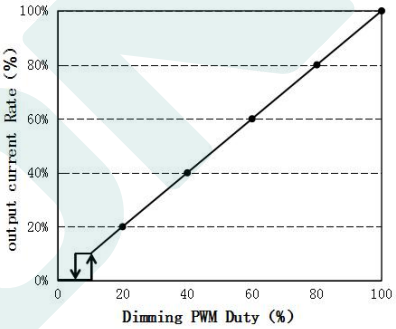


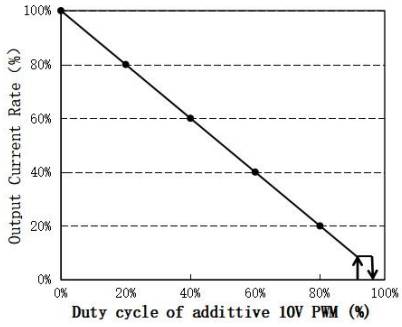




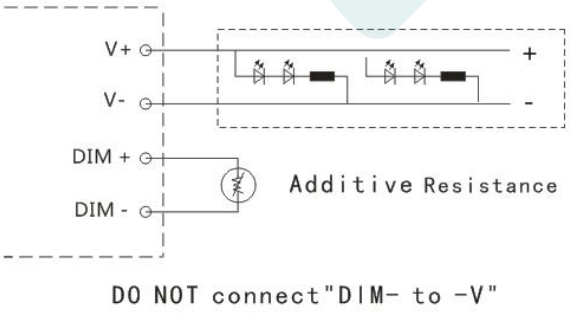
◎ Applying additive 10V PWM signal (Frequency range : 300Hz-2K Hz) :

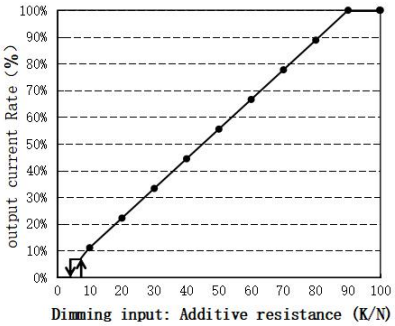


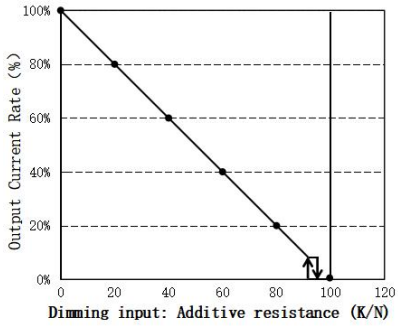




◎ With an additional 0-100K resistor:







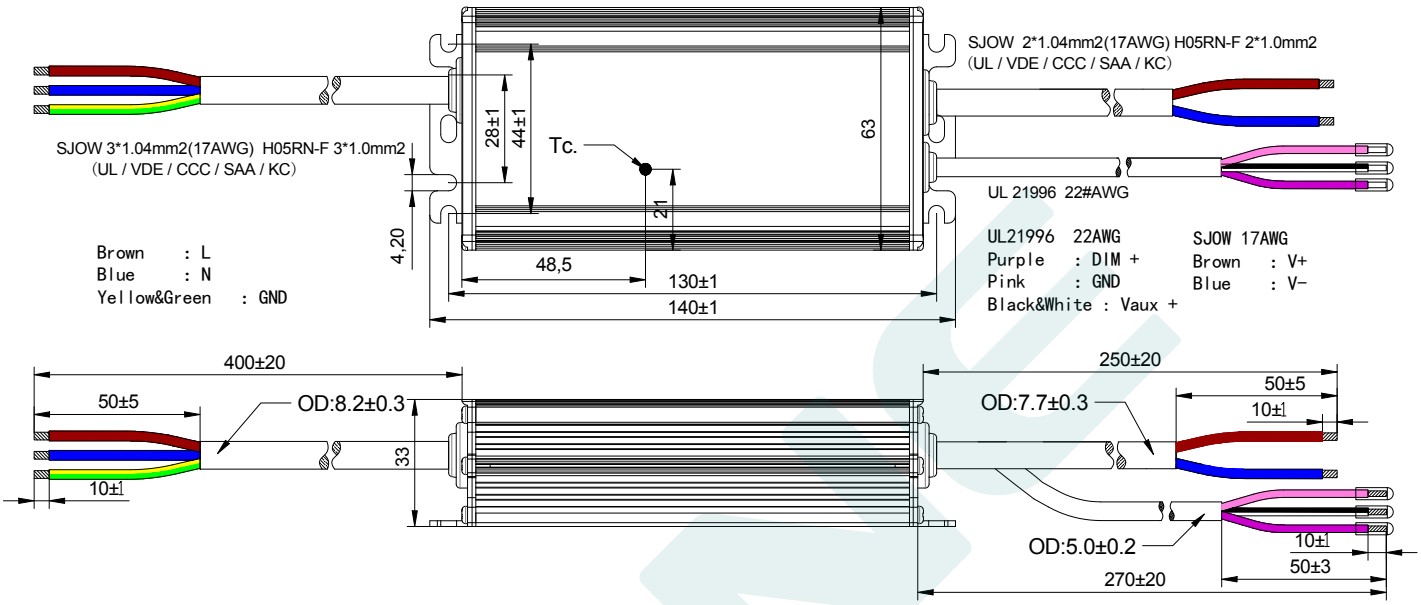
Caution:

1. It is recommended to design LED beads in series first and then in parllel.
2. There is no excessive heat-dissipating copper foil left on the aluminum substrate.
3. The creepage distanec 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 specifiation

Size (mm)	L140*W63*H33

DL-150Z-260X-PXS

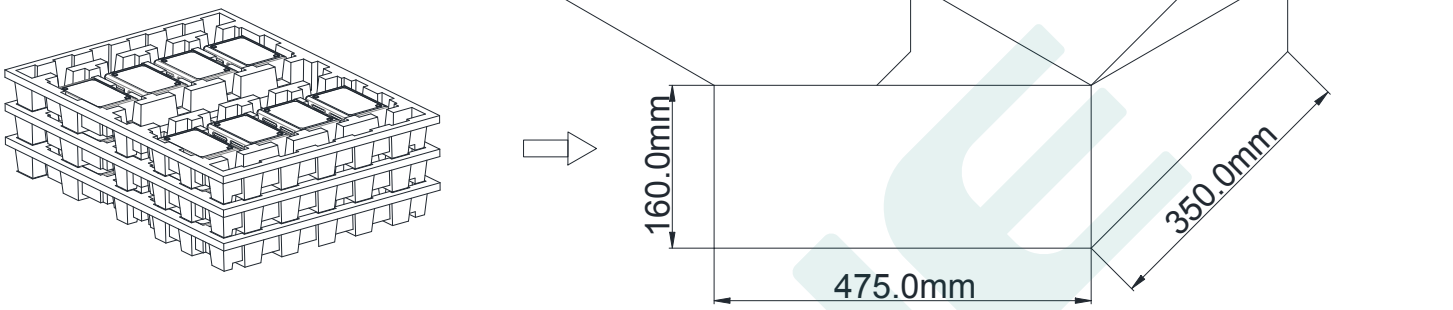


Weight

Weight	540 g

Packaging

Packaging (mm)	L475*W350*H160



Note: A box has 3 layers, 8 pieces per layer, a total of 24 pieces/box.

Note:

1. According to the certificate obtained by the LED DRIVER, the LED DRIVER with the English label is sold in Europe, America and India.
2. The LED DRIVER with Chinese label is only used for China market.

Version

DATE	DESCRIPTION	REV.	CHECK
2024.5.29	Initial version.	V1.0	
2024.6.14	Modify maximum output no-load voltage.	V1.1	
2024.7.11	Modify dimming curve	V1.2	
2024.11.7	Modify negative logic dimming curve and add Tc.	V1.3	
2025.1.2	Modify no-load voltage	V1.4	
2025.4.11	Update cable description	V1.5	
2025.7.28	Add caution on page 10	V1.6	JH 2025.08.02 08:09:12 +08'00' DYX 2025.08.02 09:49:11 +08'00'

MANUFACTRUER		
EDIT	CHECK	APPROVE
LYS 2025.07.28 14:43:43 +08'00' WDS 2025.07.28 15:56:33 +08'00'	CRQ 2025.08.01 11:45:40 +08'00'	数字签名者：张鸿生 DN：cn=张鸿生, o, ou, email=978425630@qq.com, c=<无 日期：2025.08.05 11:09:19 +08'00'