PXS SERIES LED DRIVERS

DL-80Z-X-PXS SPEC V1.0

广东东菱电源科技有限公司
Guangdong Done Power Technology Co.,Ltd

Features

- Class I structure
- Input voltage: 100-277 V ~ 50/60 Hz
- Efficiency : 93.5%(Typ.)
- Constant power drive and constant current output control mode
- Metal shell structure, protection grade: IP67
- Lightning protection level: differential mode 6kV, common mode 10kV
- Function selection:

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

  Isolation Auxiliary Power supply (X version) :12VDC 300mA
- Lifetime 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-80Z-260X-PXS	100-277V 50/60Hz	80W	180-260Vdc	0.3A	≥93.5%	≤10%	≥0.95

Note :

1. Test conditions of the above parameters: Ta=25℃, 230Vac input, full load operation for 30 minutes;
2. When the input 100-277VAC,rated power 80W.

   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.	-	-	10%	@230Vac full load
	-	-	20%	@277Vac/50Hz 80% load
Input current	-	-	0.9A	@100Vac full load
Inrush current	-	-	80A	230Vac, cold start (25℃)

Output characteristic

Parameter	Min	Typ.	Max	Note
Rated current DL-80Z-260X-PXS	-	0.307A	-	load is 260Vdc
Output current range DL-80Z-260X-PXS	0.23A	-	0.4A	
Output voltage range DL-80Z-260X-PXS	180V	-	260V	Constant power range: 200-260Vdc
Rated power(100-277Vac)	-	80W	-	
No-load voltage DL-80Z-260X-PXS	-	-	350V	
Efficiency@100Vac DL-80Z-260X-PXS	-	89%	-	100% load @100Vac Output current 0.307A, 80W
Efficiency@230Vac DL-80Z-260X-PXS	-	93.5%	-	100% load @230Vac Output current 0.307A, 80W
Output Current Ripple	-	5%	-	
Accuracy of output current	-8%	-	+8%	100% load
Line regulation	-3%	-	+3%	100% load
Load regulation	-5%	-	+5%	100% load
Starting time	-	-	1000ms	Full load@230Vac

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
	Dimming output range	0%	-	100%	Positive logic dimming can be turned off by program setting
	Rated dimming voltage range	0V	-	10V	-
PWM Dimming (Optional)	PWM high level	9.5V	-	10.5V	-
	PWM low level	0V	-	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 time-controlled dimming (optional)	MCU control	Set segment dimming function through program			Working mode
	Timer control	It is divided into six segments by default and can be customized			24H to achieve a cycle

Note:

1. Output current of dimming port: 100uA (typical value).
2. The maximum voltage of the dimming port is 12V. If the external power supply voltage exceeds 12V or the signal cable is inverted, the power supply will be damaged.
3. Dimming default setting is three in one positive logic dimming (programmable software can be set to timing dimming, 0-5V or other voltage dimming).
4. When set to positive logic dimming function, applications in the constant power load voltage range can achieve 0V dimming off.
5. When setting negative logic dimming, the default output is 100% when the dimming is suspended. Negative logic dimming cannot be turned off. When the port voltage of the dimming is greater than 10.5V, the maximum power output of the power supply will be achieved.

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.

Note:

1. Unless otherwise specified, all specifications and parameters shall be measured at the conditions of 230Vac (50Hz), rated load and 25℃ of ambient temperature;
2. Including setting error, line regualtion and load regualtion.

Environmental

Environmental categories	Parameter
Working temperature	-40 ~ +40℃@100-200Vac, -40 ~ +45℃ @200-277Vac (refer to "Life Curve ")
Max.Case Temp.	-40 ~ 90℃
Working humidity	20 ~ 95% RH, non condensing
Storage temperature、humidity	-40 ~ +80℃, 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℃)
Lifetime	70,000 hours @Tcase≤75℃,230Vac, 100% Load, Please refer to "Tcase VS Lifetime" section

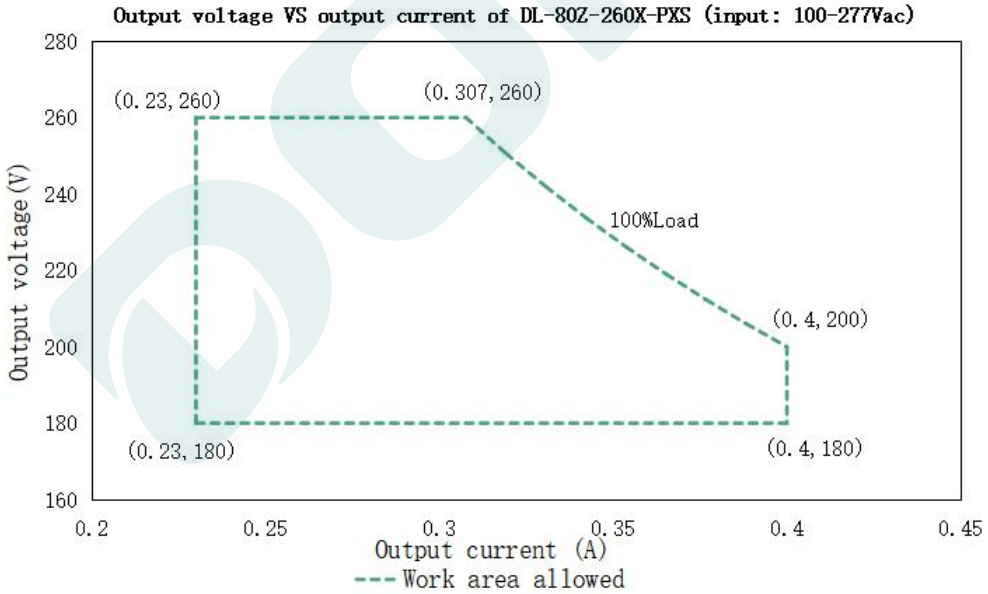
Safety and EMC

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 protection	Differential mode L-N ±6KV (2 ohm) ,common mode L , N-PE± 10 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:

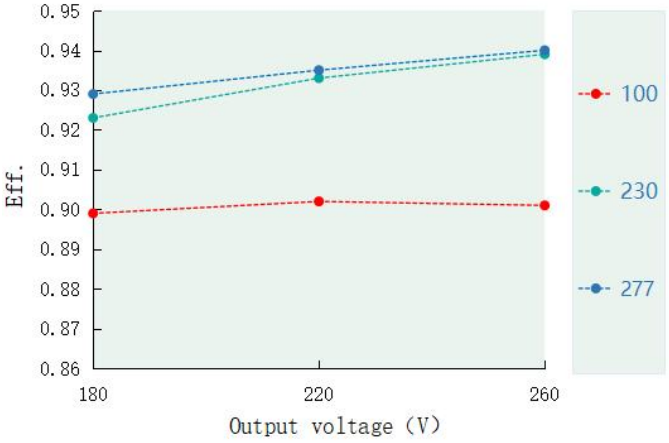
1. The driver is considered as a component that will be operated in combination with the final equipment. Since EMC performance will be affected by the complete installation,the final equipment manufacturers must re-qualify EMC Directive on the complete installation again.
2. Because of the restart of OVP, to keep well connection of the load is recommended.

I-V Working area

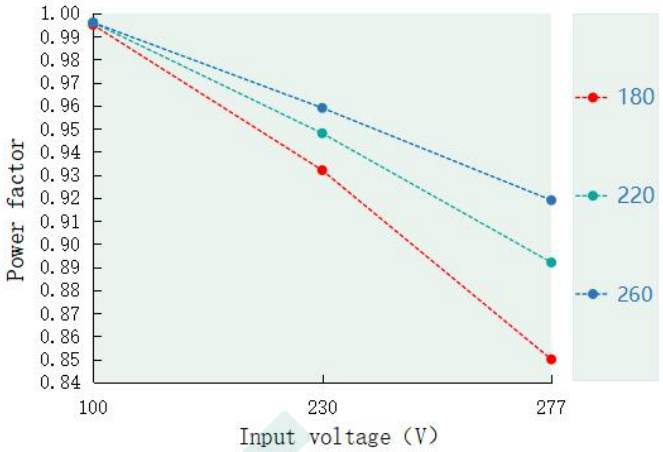


Load	Output								
Load working Voltage	180V	190V	200V	210V	220V	230V	240V	250V	260V
Io_MAX	0.4A	0.4A	0.4A	0.38A	0.363A	0.347A	0.333A	0.32A	0.307A
Po_MAX	72W	76W	80W	80W	80W	80W	80W	80W	80W

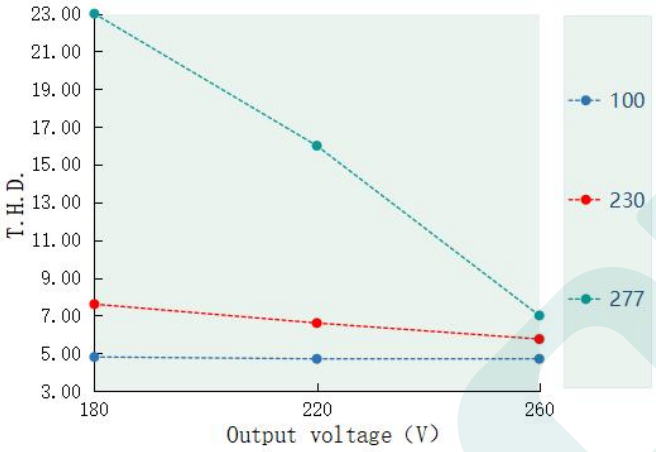
Eff. VS Output voltage(DL-80Z-260X-PXS)



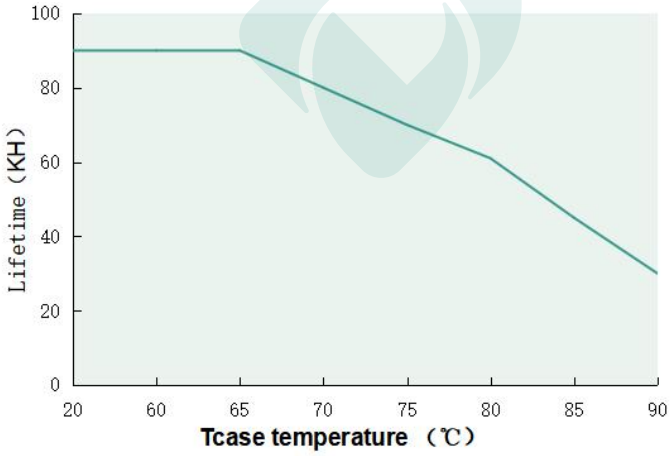
Power factor VS Input voltage(DL-80Z-260X-PXS)



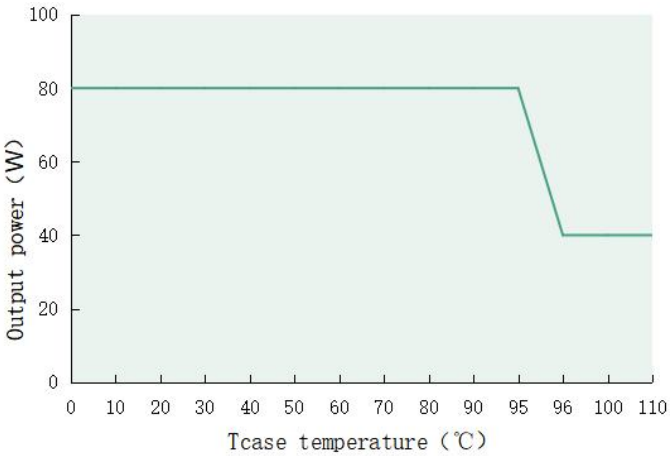
T.H.D. VS Output voltage(DL-80Z-260X-PXS)



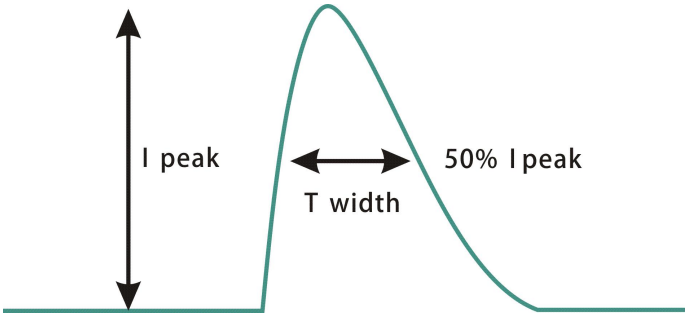
Tcase temperature VS Lifetime(DL-80Z-260X-PXS)



Output power VS Tcase temperature(DL-80Z-260X-PXS)

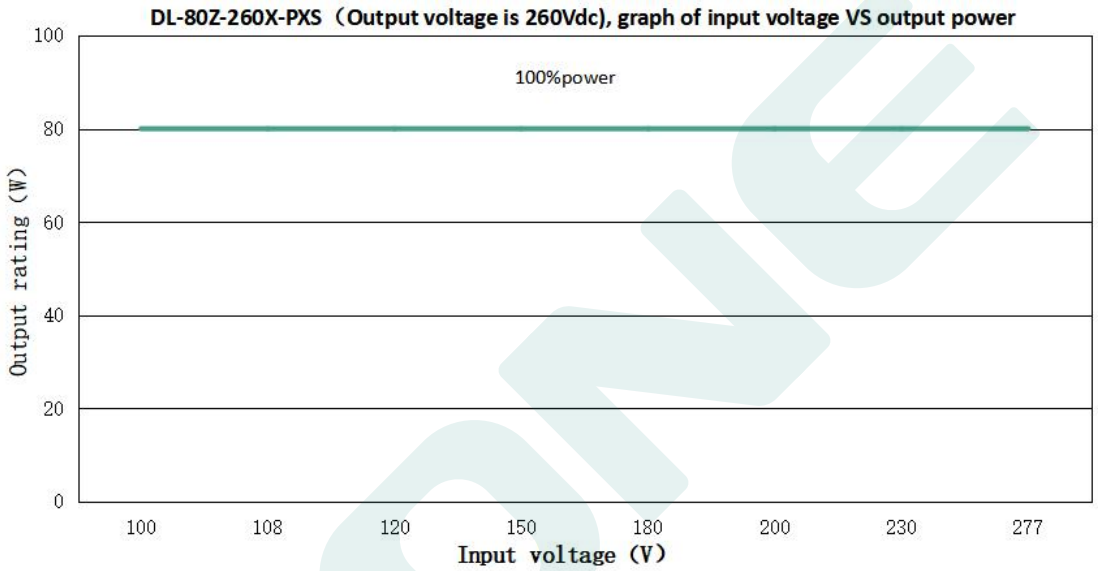


Inrush current(DL-80Z-260X -PXS)



Input voltage	Peak current	T(@50% Peak current)
100Vac	78.4A	25us
230Vac	78.4A	305us
277Vac	79A	359us

Output power VS Input voltage



DL-100Z-260X-PXS (When the output voltage is 260Vdc, the rated output current value and output power corresponding to different input voltage)							
Input Voltage	100Vac	108Vac	120Vac	180Vac	200Vac	230Vac	277Vac
Iout	0.307A	0.307A	0.307A	0.307A	0.307A	0.307A	0.307A
Pout	80W	80W	80W	80W	80W	80W	80W

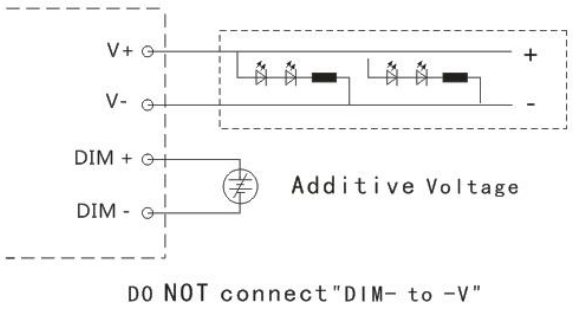
Dimming operation

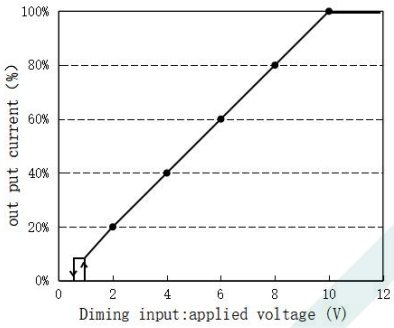
※ Three-in-one dimming function (X version only)

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

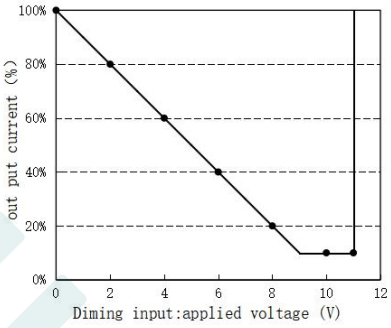
B. Output current of dimming port: 100uA (typical value).

◎ With an applied voltage of 0-10V:



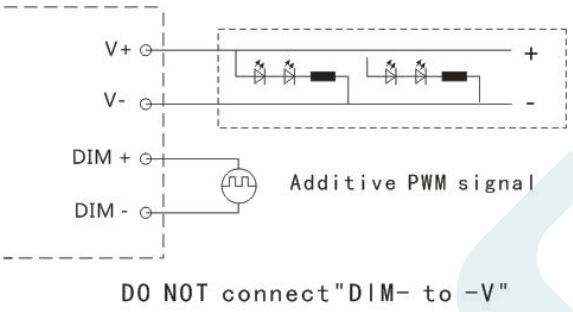


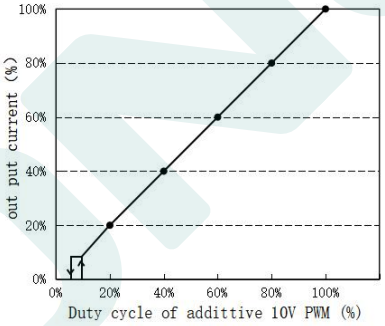
positive logic dimming curve



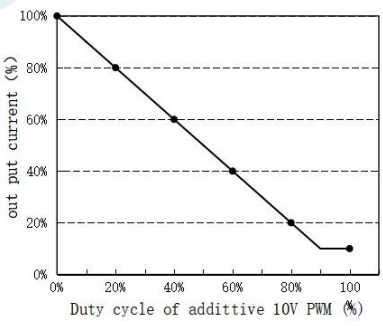
negative logic dimming curve

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



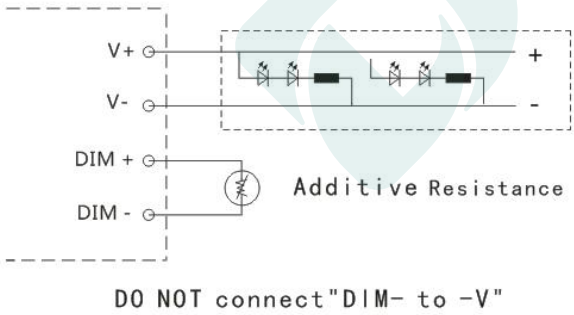


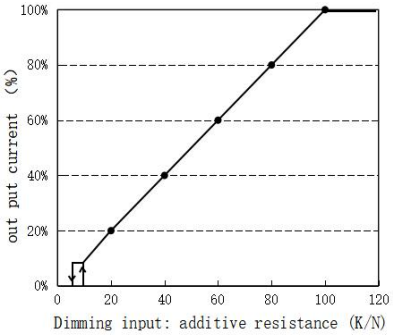
positive logic dimming curve



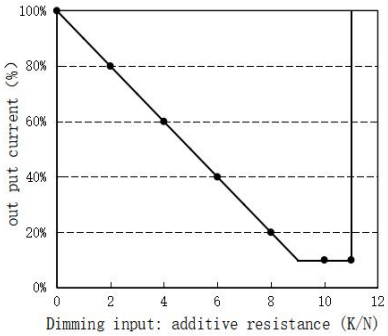
negative logic dimming curve

◎ With an additional 0-100K resistor:





positive logic dimming curve



negative logic dimming curve

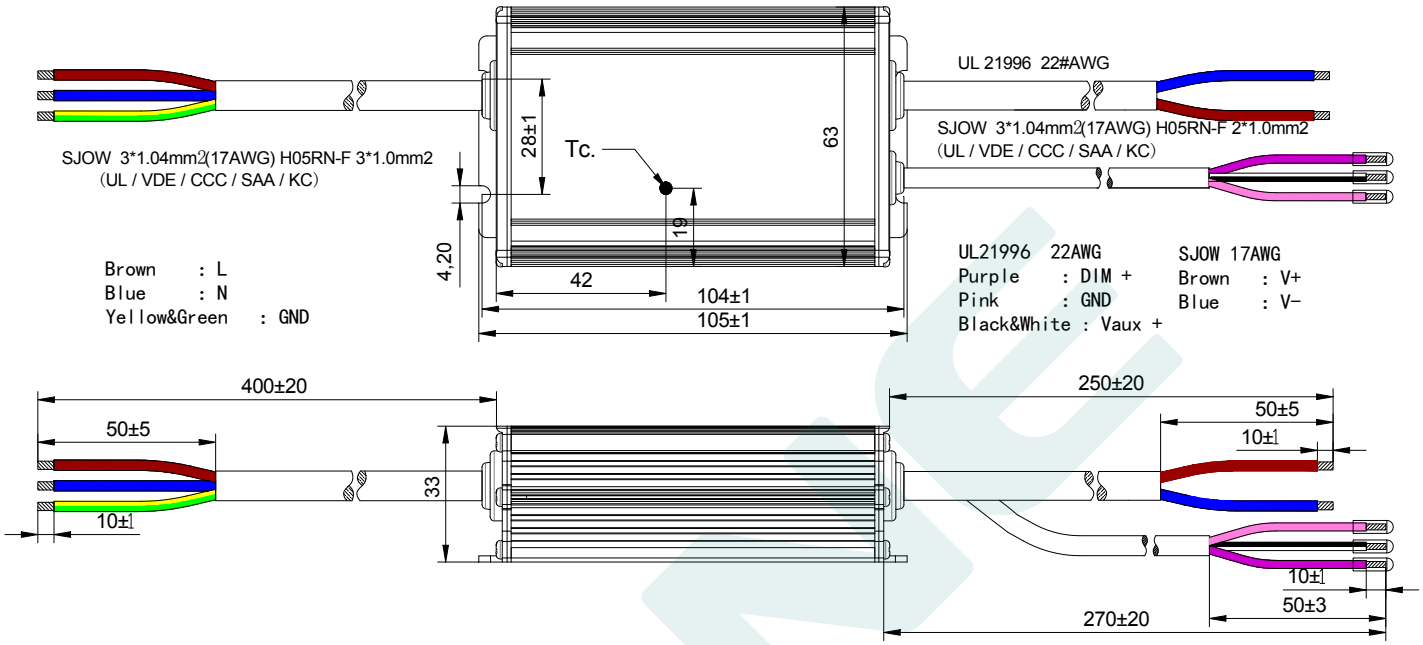
Note:

1. Positive and negative logic dimming can be programmed.
2. Dimming off only applies to positive logic. For other requirements, please contact technical personnel.

Mechanical specifiation

Size (mm)	L105*W63*H33

DL-80Z-260X-PXS

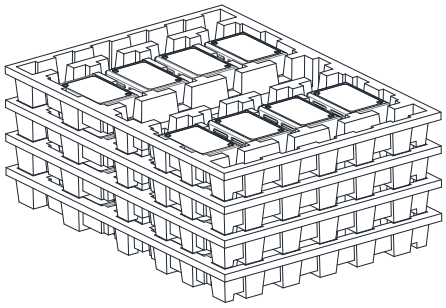


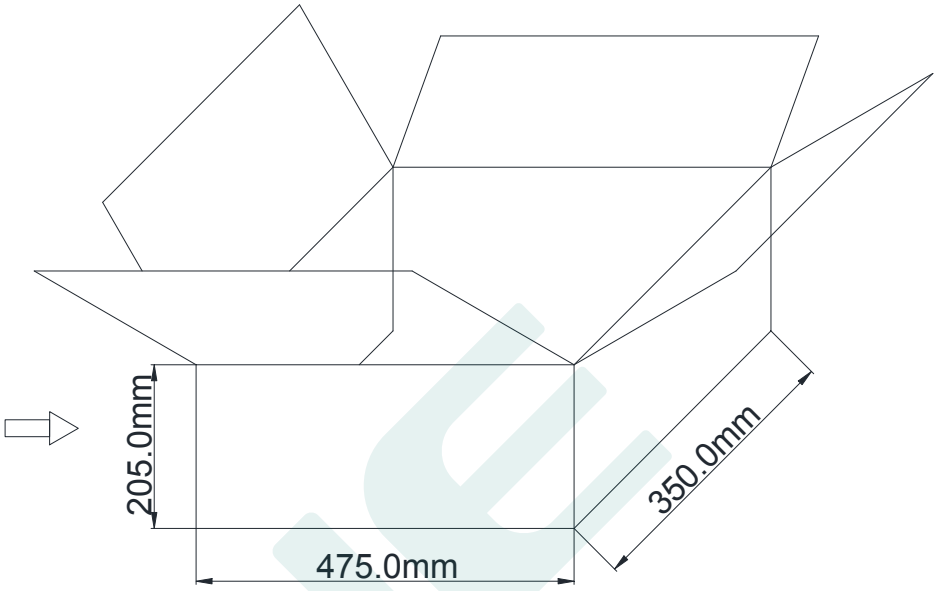
Weight

Weight	440 g

Packaging

Packaging (mm)	L475*W350*H205





Note: One Carton 4 layers and 8pcs each layer, total 32pcs/carton.

Note:

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

Version

DATE	DESCRIPTION	REV.	CHECK
2024.11.7	Initial version.	V1.0	JH 2024.11.07 20:01:34 +08'00' LQ 2024.11.08 15:33:09 +08'00'

MANUFACTRUER		
EDIT	CHECK	APPROVE
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