PXC SERIES LED DRIVER

DL-75H-A/P-PXC SPEC V1.1

GUANGDONG DONE POWER TECHNOLOGY CO.,LTD

Features

- Class I type for insulation
- Input voltage range: 100-277 V ~ 50/60 Hz

  Rated voltage:180-277 V ~ 50/60 Hz 75W max.

  Input voltage:100~150V ~ 50/60 Hz 37.5W max.
- Efficiency :93%(Typ.)
- Constant current output ,with power limitation for control mode
- Metal case, protection grade against water and dust: IP67

  differential mode :4kV

  common mode :6kV
- Dimming signal input is 0V, standby power consumption ≤3W
- Available version :

  A version: Output current is dimmed by external potentiometer

  P version: Default dimming method of Isolated 3-in-1 dimmer
- Guaranteed Lifetime: 5 years

Applications

street lighting

Model list

Model NO.	Input voltage	Output power	Output voltage	The default current	Eff.	T.H.D	PF
DL-75H-260P-PXC DL-75H-260A-PXC	100-277V 50/60Hz	75W	180-260Vdc	0.3A	≥93%	≤10%	≥0.95

Note :

1. Test conditions: Ta=25℃, under 230Vac input,after running for 30 minutes with full load.
2. When the input is less than 165±15Vac,the output power gradually decreases to 37.5W±20%. And when the input is above 180VAC, the rated power of 75W is available.
   Please refer to "THE OUTPUT POWER VS INPUT VOLTAGE" curve chart for details.

Input characteristics

Parameter	Min	Typ.	Max	remark
Rated input voltage	200Vac	230Vac	277Vac	
Input voltage range	100Vac	-	305Vac	Output power decrease to a half when input below 165±15VAC.
Rated frequency range	47Hz	50/60Hz	63Hz	
Power factor	-	0.95	-	@230Vac input ,with full load
	0.9	-	-	@200-277Vac input ,with full load
T.H.D.	-	-	10%	@230Vac input ,with full load
	-	-	20%	@200-277Vac input ,with 75%-100%
Input current	-	-	0.46A	@200Vac input ,with full load
Inrush current	-	-	70A	230Vac, cold start (25℃)

Output characteristics

Parameter	Min	Typ.	Max	remark
Rated current DL-75H-260P/A-PXC	-	0.29A	-	With loading 260VDC
Output current range DL-75H-260P/A-PXC	0.19A	-	0.38A	
Output voltage range DL-75H-260P/A-PXC	180V	-	260V	Constant power output range:200-260VDC
Constant power output voltage range	200V	-	260V	Maximum output power 75W
Constant current output voltage range	180V	-	260V	Maximum output current 0.38A
No-load voltage DL-75H-260P/A-PXC	-	-	325V	-
Efficiency@180Vac DL-75H-260P/A-PXC	-	92%	-	100% load @260VDC Output current 0.29A, 75W
Efficiency@230Vac DL-75H-260P/A-PXC	-	93%	-	100% load @260VDC Output current 0.29A, 75W
output ripple current	-	-	5%	with100% load, 20MHZ band Width, and percent of ripple current = (Imax-Imin) /(Imax+Imin)*100%
Accuracy of output current	-5%	-	+5%	full load
Line regulation	-3%	-	+3%	Full load
Load regulation	-5%	-	+5%	Full load
Starting time	-	-	1000ms	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.
2. When input voltage is between 150~180VAC ,the output power is undefined due to the tolerance of threshold.

Dimming characteristics

Dimming function		Min	Typ.	Max	Instructions
1-10V Dimming (Optional)	Safe operation voltage range	0V	-	12V	-
	Rated operation voltage range	1V	-	10V	-
	Dimming output range	0%	-	100%	-
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)	Rated external resistance value	0KΩ	-	100KΩ	
	Dimming output range	0%	-	100%	
Multiple timing dimming (optional)	MCU control	Set dimming function Segment by segment through program			Three operation modes for selection.
	Timer control	The default is six segments, Can be customized. 24H a cycle.			With extra timer controller outside.

Note:

1. Output current of dimming port: 100uA (typical value)
2. The maximum voltage applied to the dimming port is suggested below 12V,but it also is protected against wrong voltage up to 230VAC or 300VDC.Please don’ t keep the wrong voltage apply to the port for a long time. Otherwise,it is possible to be damaged.
3. the dimming default setting is 3-in-1 positive logic dimming (can be set to timing dimming through programming software, 0-5V or other voltage dimming, etc.).

Protection

Protection	description
Input under-voltage protection	When the input voltage is less than 165Vac±15Vac, the output power decreases to 50%± 20%.
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 95±5°C, the output power decreases to 37.5W±20%.
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 parameters should be measured at the condition of 230Vac (50Hz) input ,with rated load ,and ambient temperature of 25℃.

Environmental characteristics

Environmental categories	Parameter
Working temperature	-40 ~ +55℃@200-277Vac (refer to "Life Curve ")
Max.Case Temp.	-40 ~ 90℃
Working humidity	20 ~ 95% RH, non condensing
Storage temperature、humidity	-40~+85℃, 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	50000 hours @Tcase≤75℃,230Vac, 100% Load, Please refer to "Tcase VS Lifetime" curve

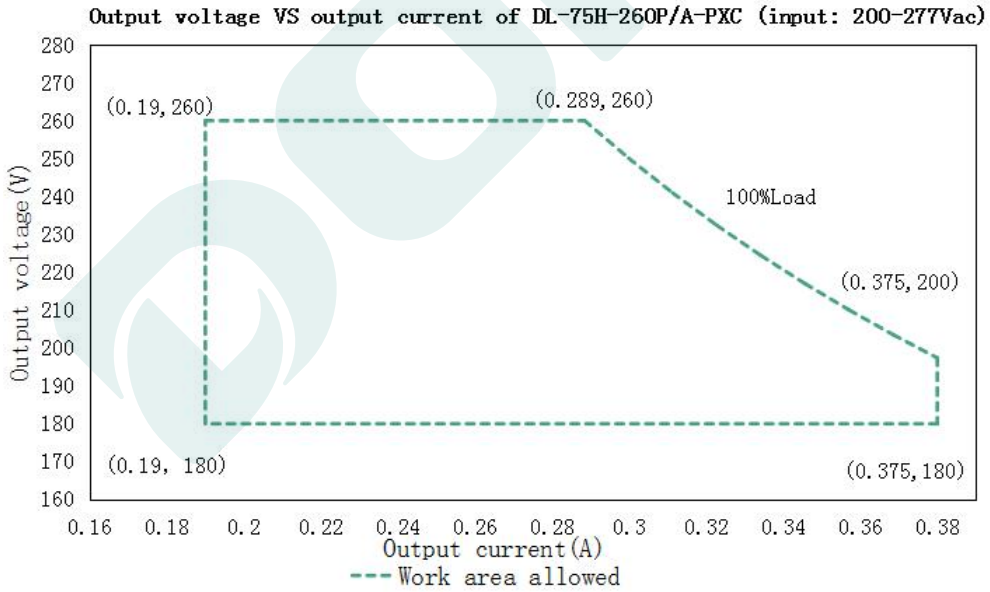
Safety and EMC

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 level	Differential mode L-N ±4KV (2 ohm) ,common mode L , N-PE± 6KV (12 ohm) ; Refer to IEC61000-4-5 2014 Criterion B
High-pot test	I/P-PE :1.554KVac I/P-DIM:1.554KVac O/P-PE: 1.65KVac O/P-DIM:1.65KVac
Insulation impedance	I/P-PE:100MΩ / 500VDC 25℃/ 70% RH
Leakage current	<0.7mA@277Vac

Note:

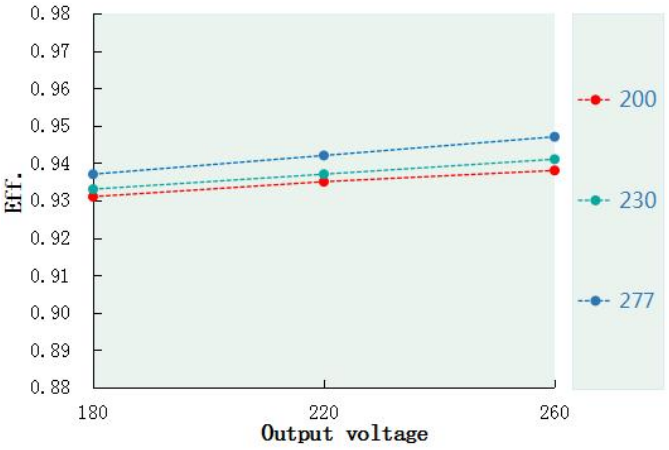
1. Attention! As a component of the whole, the EMC performance of the final product is not only decided by the driver, even if the driver is well-designed and fulfil all the required compliance. The final equipment manufacturers must re-qualify EMC Directive on the complete product.
2. No load is not recommended because the power supply is in OVP protected restart mode when unloaded.

I-V Working area

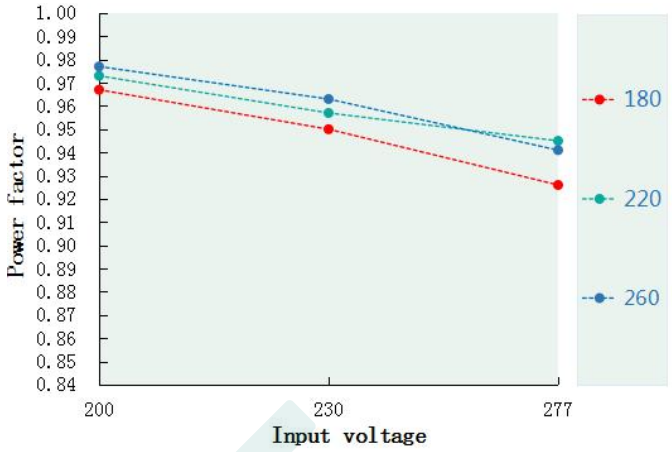


Load	Output								
Load working Voltage	180V	190V	200V	210V	220V	230V	240V	250V	260V
Io_MAX	0.38A	0.38A	0.375A	0.358A	0.342A	0.327A	0.313A	0.3A	0.29A
Po_MAX	68.4W	72.2W	75W	75W	75W	75W	75W	75W	75W

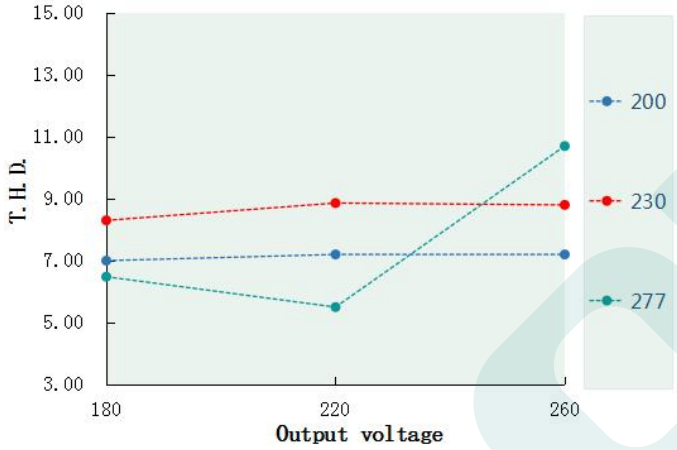
Eff. VS Output voltage(DL-75H-260P/A-PXC)



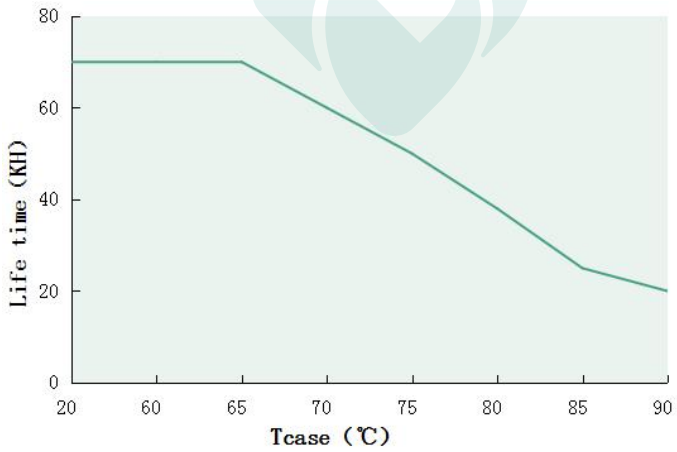
Power factor VS Input voltage(DL-75H-260P/A-PXC)



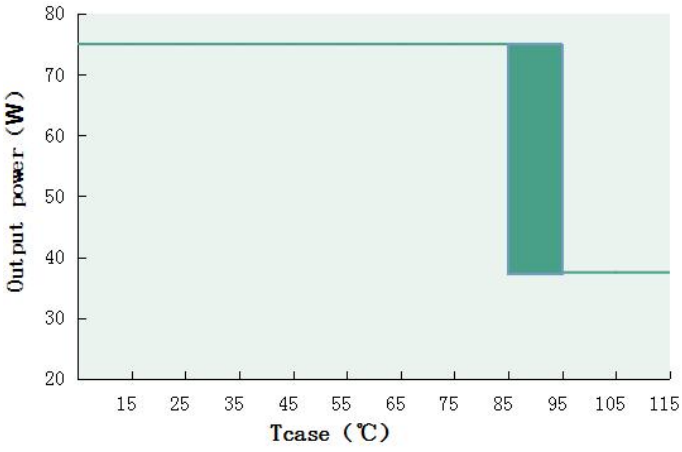
T.H.D. VS Output voltage(DL-75H-260P/A-PXC)



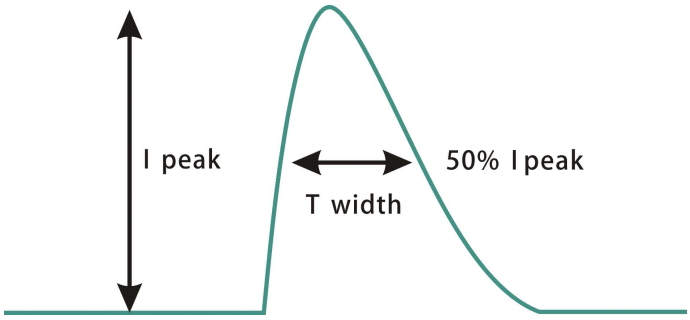
Tcase VS Lifetime(DL-75H-260P/A-PXC)



Output power VS Tcase (DL-75H-260P/A-PXC)

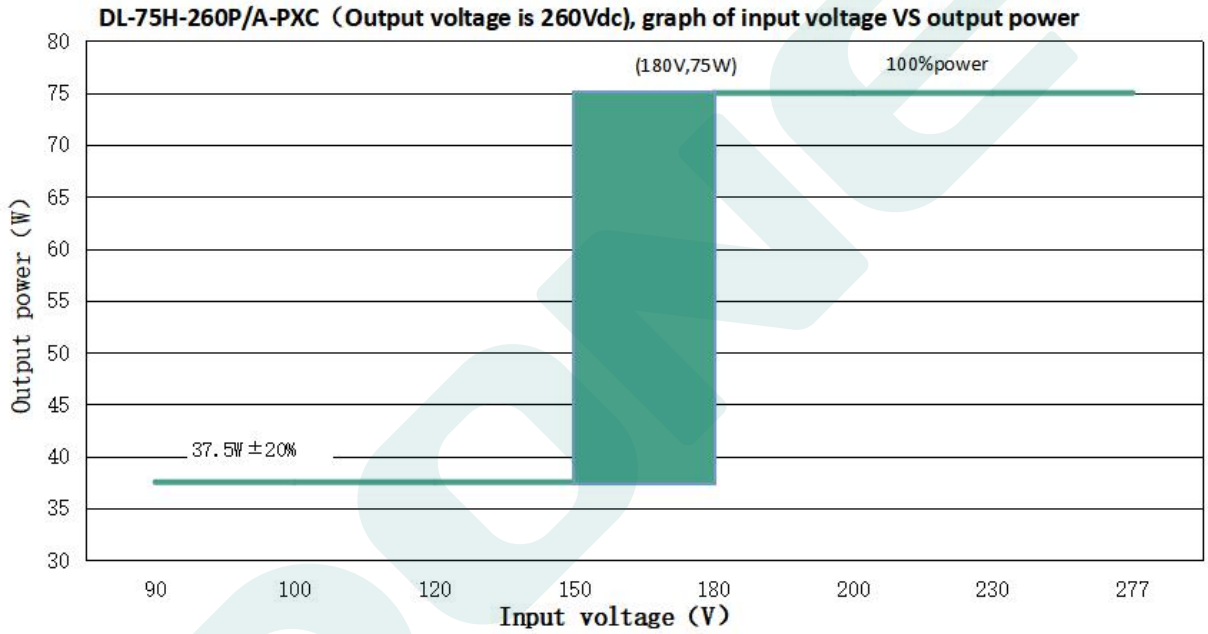


Inrush Current(DL-75H-260P/A-PXC)



Input voltage	Peak current	T(@50% Peak current)
180Vac	45.4A	1.92us
230Vac	65.7A	2.2us
277Vac	61.5A	2.24us

Output power VS Input voltage



DL-75H-260P/A-PXC (For output 260Vdc, the rated output current & power under different input voltage)								
Input Voltage	120Vac	130Vac	140Vac	150Vac	180Vac	200Vac	230Vac	277Vac
Iout	0.144A	0.144A	0.144A	0.144A	0.29A	0.29A	0.29A	0.29A
Pout	37.5W	37.5W	37.5W	37.5W	75W	75W	75W	75W

Note: When the input voltage is below 165±15Vac,the output power decreases to 37.5W±20%.

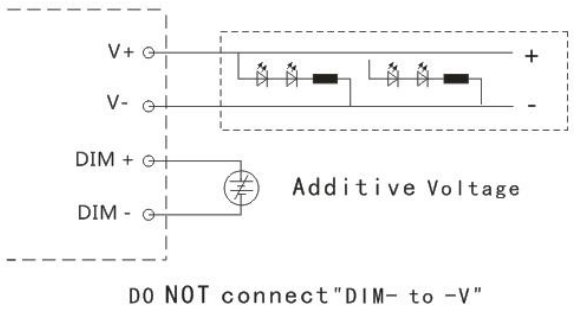
Dimming function

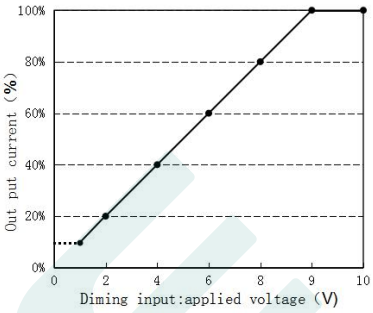
※ Three-in-one dimming function (P version only)

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).

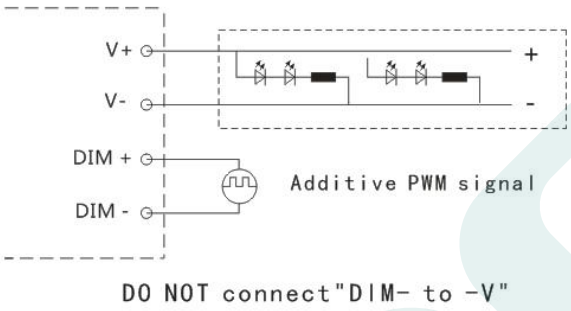
◎ With 0-10V dimming voltage(for both logic,negative and positive):

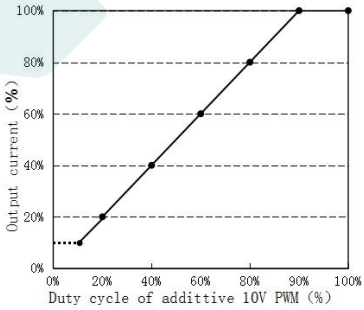




dimming curve

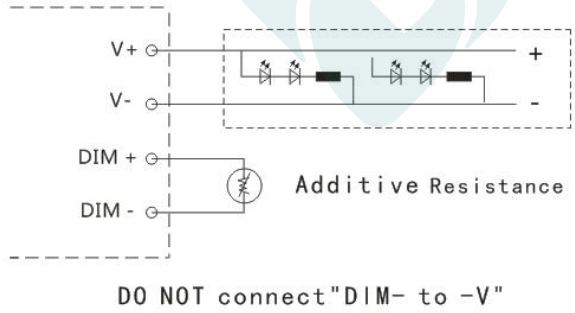
◎ With 10V PWM signal (Frequency range : 300Hz-2K Hz) :

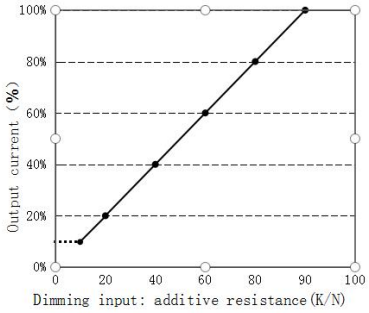




dimming curve

◎ With an additional 0-100K resistor:





dimming curve

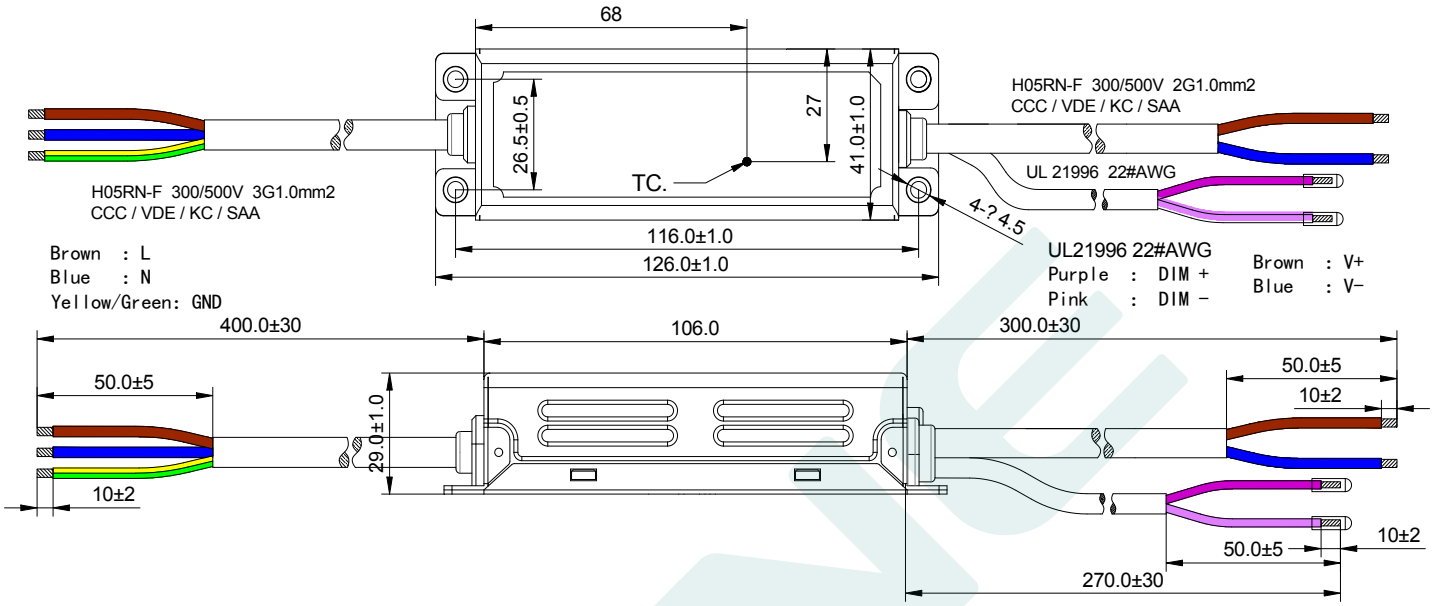
Remark:

1. Positive logic dimming can be set through the program.
2. It is recommended to use 1-10V and equivalent 3-in-1 dimmer when ERP requirements are necessary. Also it can be dim-off with a 0-10V dimmer or other equivalent 3-in-1 dimmer, by the sets through the software.

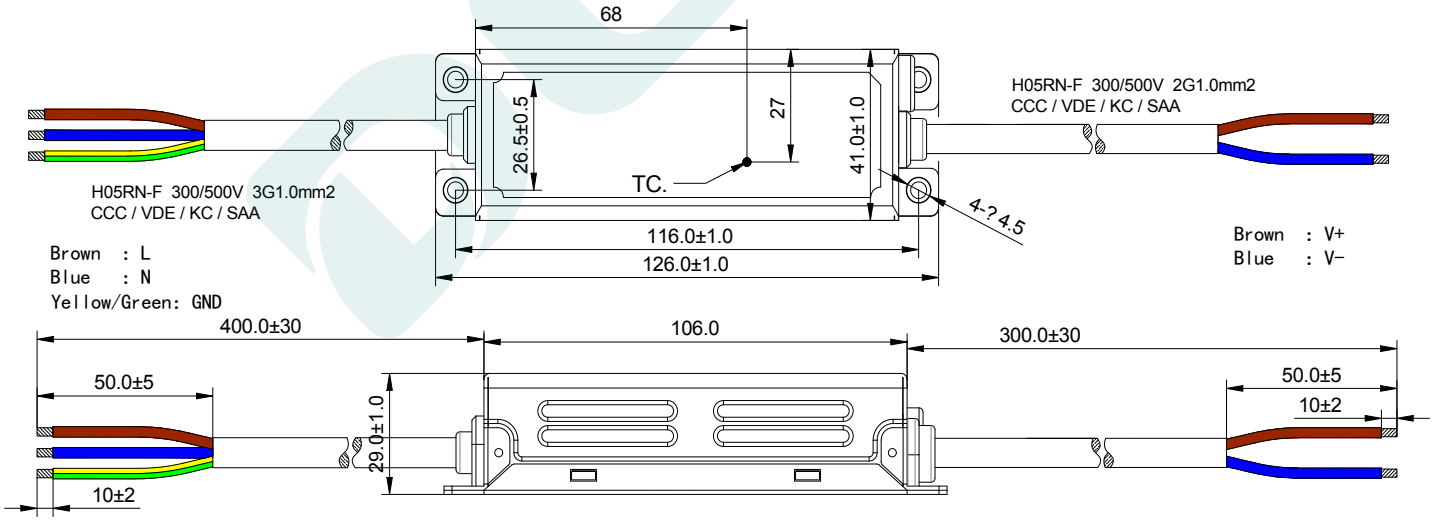
Mechanical specification

Size (mm)	L126*W41*H29

DL-75H-260P-PXC



DL-75H-260A-PXC

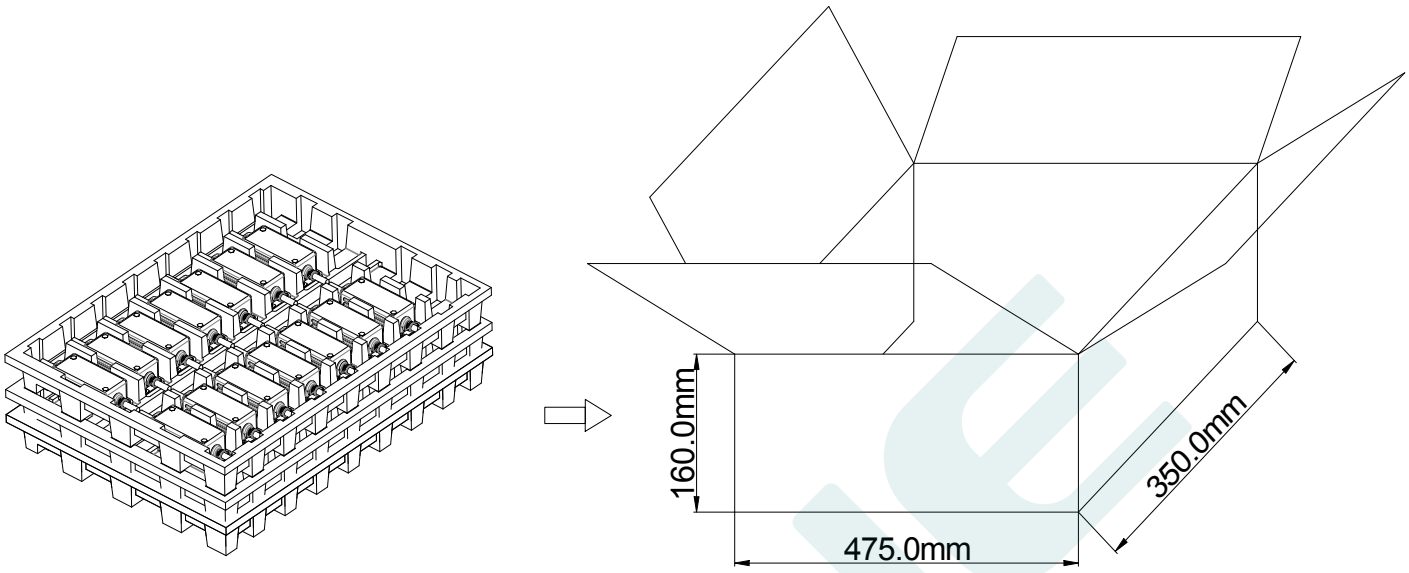


Weight

Weight	325g

Packaging

Packaging (mm)	L475*W350*H160



Note: One Carton 3 layers and 14 pcs each layer, total 42pcs/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
2024.11.14	Initial version.	V1.0	
2025.1.3	1. Input voltage change to 100-277V 2. Modify the High-pot test section on page 7	V1.1	JH 2025.01.04 10:28:52 +08'00' LQ 2025.01.06 11:24:04 +08'00'

MANUFACTRUER		
EDIT	CHECK	APPROVE
ZMH 2025.01.03 16:53:56 +08'00' LX 2025.01.03 17:11:27 +08'00'	TQC 2025.01.04 08:39:26 +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：2025.01.08 11:36:00 +08'00'