# PXG SERIES LED DRIVERS

## DL-320V-A/S/X-PXG SPEC V1.5

GUANGDONG DONE POWER TECHNOLOGY CO.,LTD

## Features


- Class I structure
- Input voltage: 200-480V ~ 50/60Hz
- Efficiency :95% ( Typ. )
- Constant current output control mode,with constant power limitation.
- Metal shell structure, protection grade: : IP42
- Lightning level: differential mode 6kV, Common mode 10kV
- Dim-off function available.(X version only)
- Function selection:

  Output current is adjusted by external potentiometer (whole series)

  Isolation dimming function: 3-in-1 dimming (0-10V, PWM, resistance) (X,S version)

  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. | THD. | PF |
|---|---|---|---|---|---|---|---|
| DL-320V-260A-PXG<br>DL-320V-260S-PXG<br>DL-320V-260X-PXG | 200-480V<br>50/60Hz | 320W | 180-260Vdc | 1.3A | ≥95% | ≤10% | ≥0.95 |

**Note :**

1. Test conditions of the above parameters: Ta=25℃, 380Vac input, full load operation for 30 minutes;
2. When the input is in the range of 200-480VAC, output the rated power of 320W, please ensure that the input voltage is within the allowable range.

Please refer to “Input voltage VS Output power diagram” curve chart for details.

## Input characteristics

| Parameter | Min | Typ. | Max | Note |
|---|---|---|---|---|
| Rated input voltage | 200Vac | 380Vac | 480Vac | - |
| Input voltage range | 180Vac | - | 528Vac | - |
| Rated frequency | 47Hz | 50/60Hz | 63Hz | - |
| Power factor | - | 0.97 | - | @200~380Vac full load |
| | - | 0.92 | - | @480 full load |
| T.H.D. | - | - | 10% | @200Vac/50Hz,380Vac/50Hz full load |
| | - | - | 20% | @480Vac/50Hz 80%~100% load |
| Input current | - | - | 2A | @200Vac full load |
| Inrush current | - | - | 150A | @380Vac, cold start (25℃) |

## Output characteristic

| Parameter | Min | Typ. | Max | Note |
|---|---|---|---|---|
| Rated current DL-320V-260A/S/X -PXG | - | 1.23A | - | - |
| Output current range DL-320V-260A/S/X -PXG | 0.92A | - | 1.6A | - |
| Output voltage range DL-320V-260A/S/X -PXG | 180V | - | 260V | - |
| Constant power output voltage range | 200V | - | 260V | Maximum output power 320W |
| Constant current output voltage range | 180V | - | 260V | Maximum output current 1.6A |
| No-load voltage DL-320V-260A/S/X -PXG | - | - | 350V | - |
| Efficiency@200Vac DL-320V-260A/S/X -PXG | - | 92% | - | full load |
| Efficiency@380Vac DL-320V-260A/S/X -PXG | - | 95% | - | full load |
| Ripple of output current | - | 5% | - | full load |
| Accuracy of output current | -5% | - | +5% | full load |
| Line regulation | -3% | - | +3% | full load |
| Load regulation | -3% | - | +3% | full load |
| Starting time | 100ms | - | 1000ms | @200-480Vac full load |

**Note:** The output current range is limited by the input and output Voltage, Please refers 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 | Refer to note 2 |
| | Rated dimming voltage range | 0V | - | 10V | - |
| | Dimming output range | 0% | - | 100% | - |
| | Turn-on voltage<br>S version<br>X version | <br>0.6V<br>0.65V | <br><br>0.8V | <br>1.5V<br>0.95V | |
| | Turn-off voltage<br>S version<br>X version | <br>0.3V<br>0.25V | <br><br>0.4V | <br>1V<br>0.55V | |
| 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% | - | 100% | - |
| | Turn-on Duty Cycle | | 8% | | |
| | Turn-Off Duty Cycle | | 4% | | |
| Resistor Dimming ( Optional ) | External resistance value | 0KΩ | - | 100KΩ | - |
| | Dimming output range | 0% | - | 100% | - |

**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 that below 380VAC or 300VDC.Please don’ t keep the wrong voltage apply to the port for a long time. Otherwise,it is possible to be damaged.

## Protection

| Function | Function instructions |
|---|---|
| Under voltage protect | When the input voltage is less than 188±10VAC, the output power decreases to a half. |
| 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℃, 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. |
| Surge protection | Differential L/N ± 6 KV (2Ω), Common L/N-PE±10 KV (12Ω); residual voltage≤3100V |

**Note:** Unless otherwise specified, all specifications and parameters shall be measured at the conditions of 380Vac (50Hz), rated load and 25℃ of ambient temperature;

## Environmental

| Environmental categories | Parameter |
|---|---|
| Working temperature | -40 ~ +40℃ @200-300Vac, -40 ~ +55℃ @300-480Vac(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 | 100Khrs min. MIL-HDBK-217F (Ta=25℃) |
| Lifetime | 70000H@Tcase≤75℃,(Please refer to **Lifetime VS Tcase** curve for details) |

## Safety

| Safety Categories | Area | Standards | Approved |
|---|---|---|---|
| CCC | China | GB 19510.1, GB 19510.14 | |
| CE | Europe | EN 61347-1, EN 61347-2-13 | √ |
| ENEC | | EN 62384 | |
| CB | CB member state | IEC 61347-1, IEC 61347-2-13 | √ |
| SAA | Australia | AS/NZS 61347.1, AS/NZS 61347.2.13 | |
| UL | USA | UL 8750 | √ |
| CUL | Canada | CSA C22.2 No.250.13 | √ |
| EAC | Russia | ГОСТ IEC 61347-1-2019<br>ГОСТ IEC 61347-2-13-2013 | |
| BIS | India | IS 15885(PART 2/SEC 13) | |

## EMC

| EMI/EMS Categories | Area | Standards | Approved |
|---|---|---|---|
| CCC | China | GB/T 17743, GB 17625.1 | |
| CE | Europe | EN IEC 55015<br>EN 61547<br>EN IEC 61000-3-2;3-3;4-5 | √ |
| EAC | Russia | ГОСТ IEC 61547-2013<br>ГОСТ CISPR 15-2014<br>ГОСТ IEC 6100-3-2-2017<br>ГОСТ IEC 6100-3-3-2015 | |
| FCC | USA | FCC Part 15 Subpart B | √ |

## RoHS

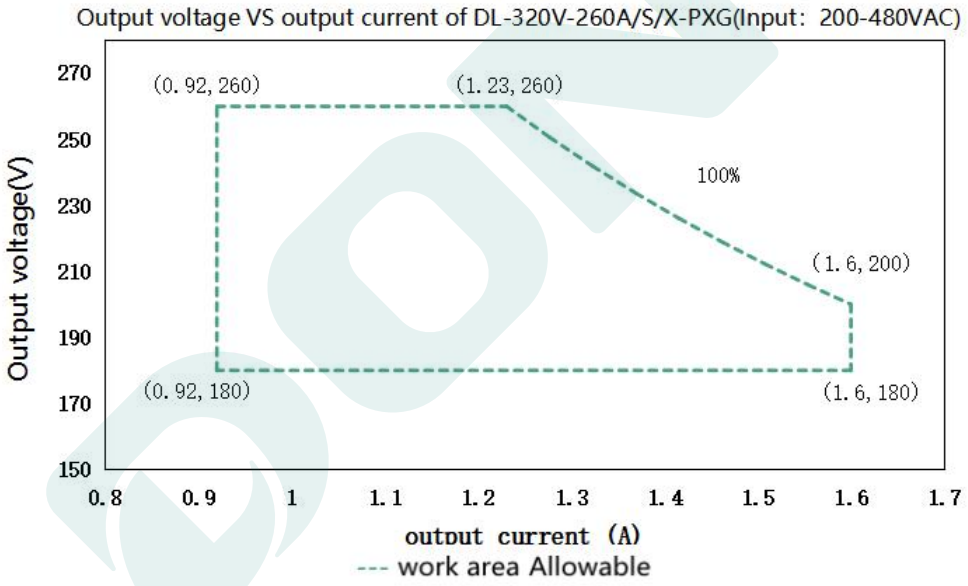
Our products comply with reference to RoHS Directive (EU) 2015/863 amending 2011/65/EU.

## Safety Test Items:

| Safety Test Item | UL | CE/CB/ENEC | CCC | Insulation Requirements |
|---|---|---|---|---|
| Input-Case/Ground | 1960Vac | 1960Vac | - | Basic insulation, 1min< 5mA |
| Input-Dim | 1960Vac | 1960Vac | - | Reinforced insulation, 1min< 5mA |
| Output-Case/Ground | 1960Vac | 1960Vac | - | Basic insulation, 1min< 5mA |
| Dim-Case | 500Vac | 500Vac | - | |
| Insulation Resistance | ≥10MΩ | | | Input-Dim,Test voltage:500Vdc |
| Ground Resistance | ≤0.1Ω | | | 25A/1min;Ta=25℃±10℃ |

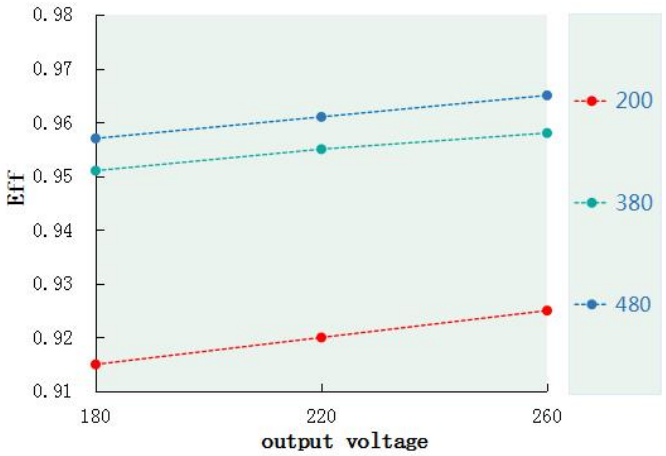
**Note:** The driver is considered as a component that will be operated in combination with the final equipment. Since EMC performance will be affected by the complete installation, the final equipment manufacturers must re-qualify EMC Directive on the complete installation again.

## I-V Working area

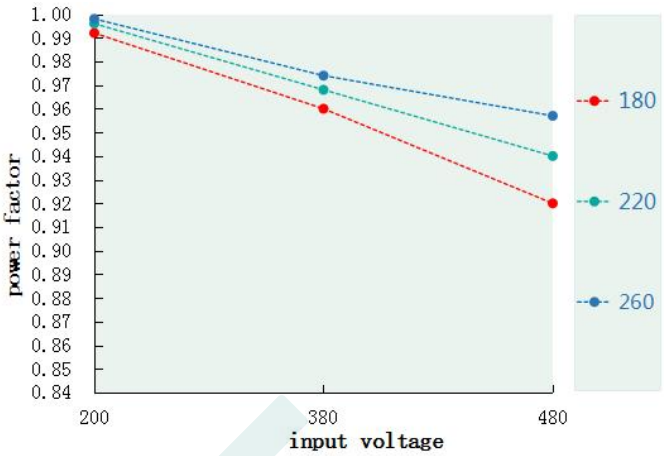



| Load | Output | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Load working Voltage | 180V | 190V | 200V | 210V | 220V | 230V | 240V | 250V | 260V |
| Io_ MAX | 1.6A | 1.6A | 1.6A | 1.52A | 1.45A | 1.39A | 1.33A | 1.28A | 1.23A |
| Po_ MAX | 288W | 304W | 320W | 320W | 320W | 320W | 320W | 320W | 320W |

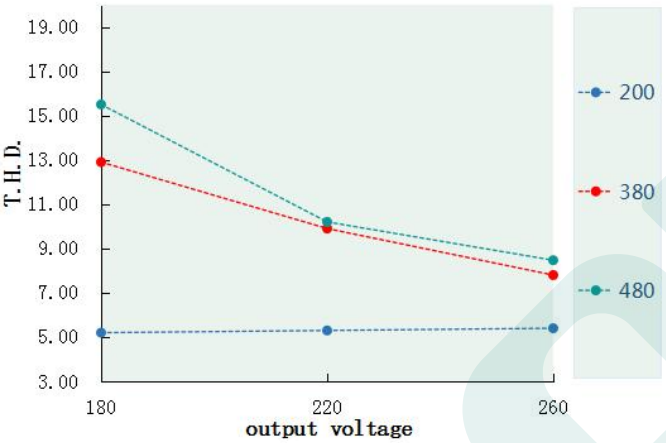
### Eff. VS Output voltage ( DL-320V-260A/S/X -PXG )



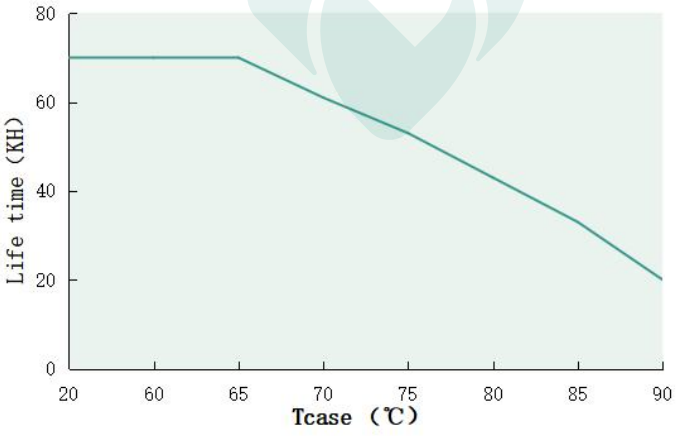

### Power Factor VS Input Voltage ( DL-320V-260A/S/X -PXG )



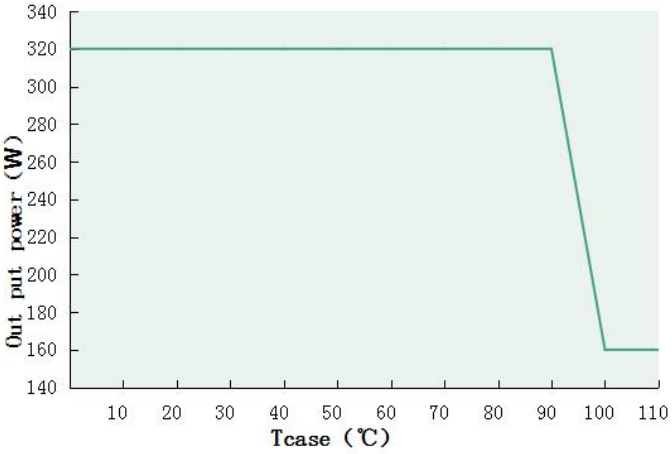

### T.H.D. VS Output voltage ( DL-320V-260A/S/X -PXG )



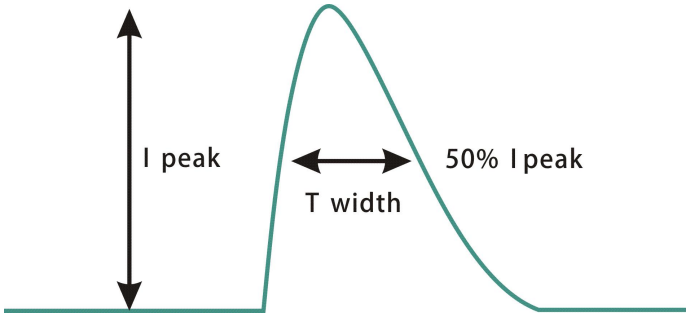

### Lifetime VS Tcase ( DL-320V-260A/S/X -PXG )




### Output power VS Tcase ( DL-320V-260A/S/X -PXG )

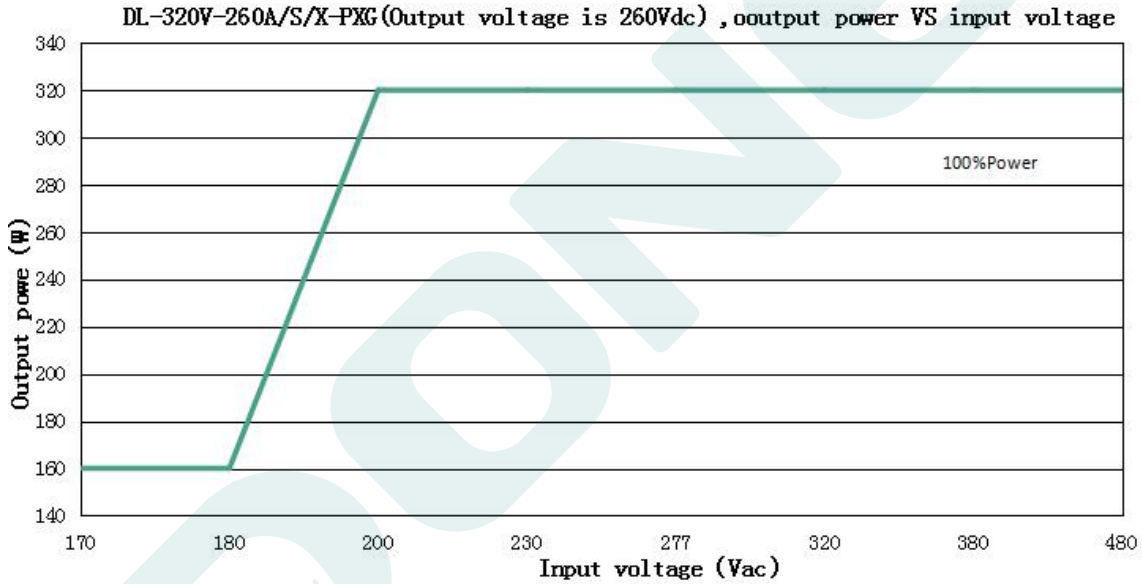


**Inrush Current ( DL-320V-260A/S/X -PXG )**




| Input voltage | Peak current | T(@50% Peak current) |
|---|---|---|
| 200Vac | 83.5A | 2.4us |
| 380Vac | 111.8A | 2.3us |
| 480Vac | 130A | 2.5us |

## Output power VS Input voltage




| DL-320V-260A/S/X-PXG(When the output voltage is 260Vdc, the rated output current value and output power corresponding to different input voltage) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Input Voltage | 170Vac | 180Vac | 200Vac | 230Vac | 277Vac | 320Vac | 380Vac | 480Vac |
| Iout | 0.615A | 0.615A | 1.23A | 1.23A | 1.23A | 1.23A | 1.23A | 1.23A |
| Pout | 160W | 160W | 320W | 320W | 320W | 320W | 320W | 320W |

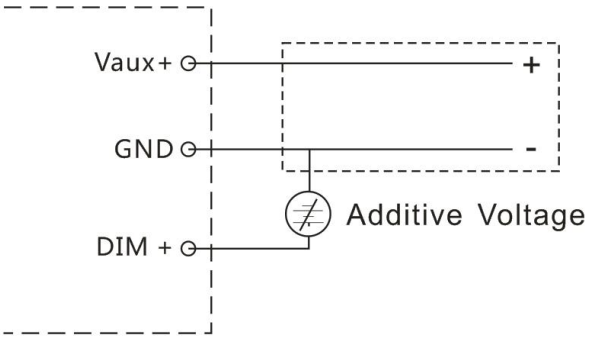
# Dimming operation

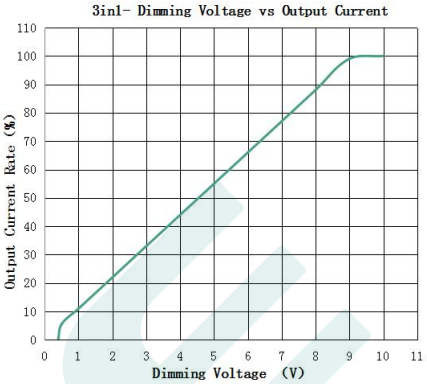
**※ Three-in-one dimming function (S/X version)**

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

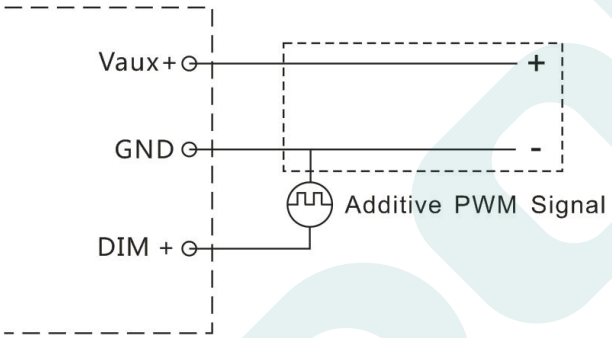
B. Output current of dimming port: 100uA (typical value).

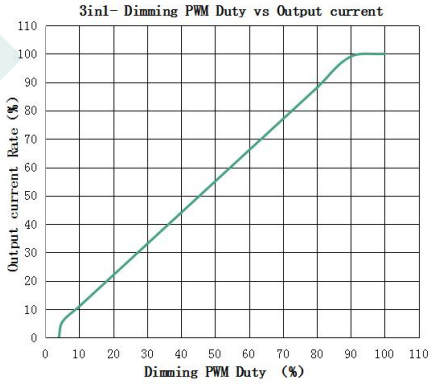
**◎Applied voltage of 0-10V:**



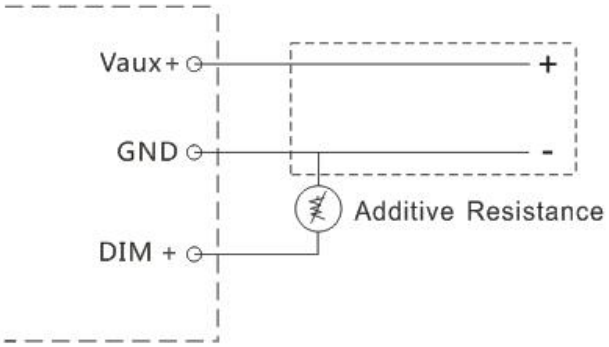



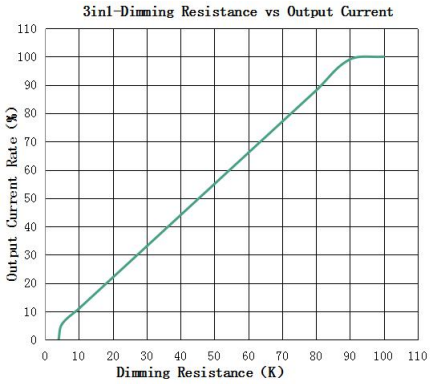

**◎ Applying additive 10V PWM signal ( Frequency range : 300Hz-2K Hz ) :**




**◎Applied an additional 0-100K resistor:**



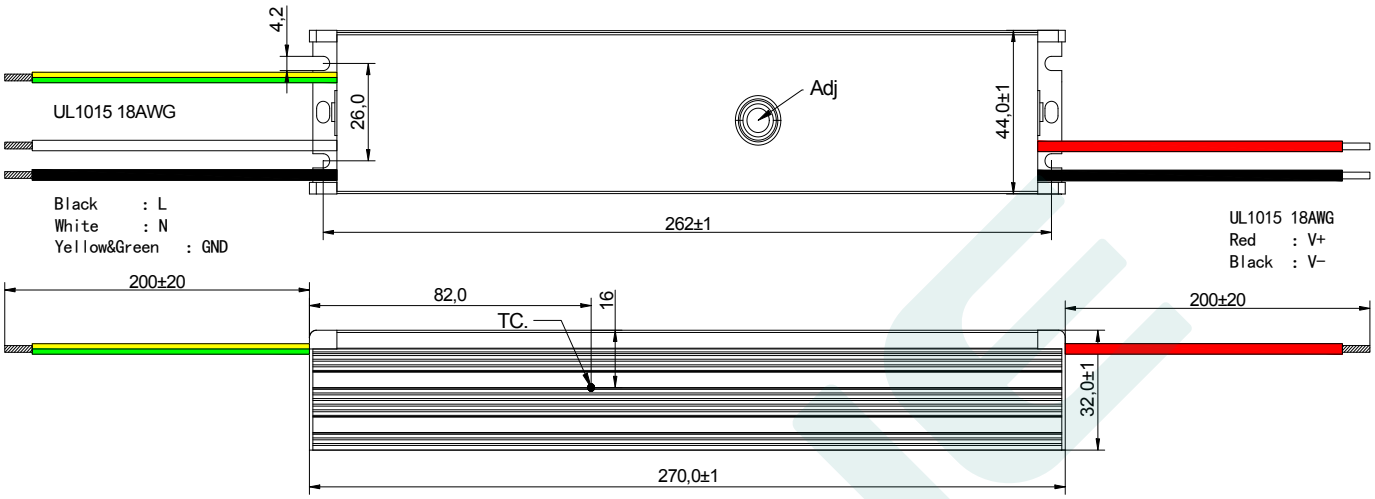
## Caution:

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 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.

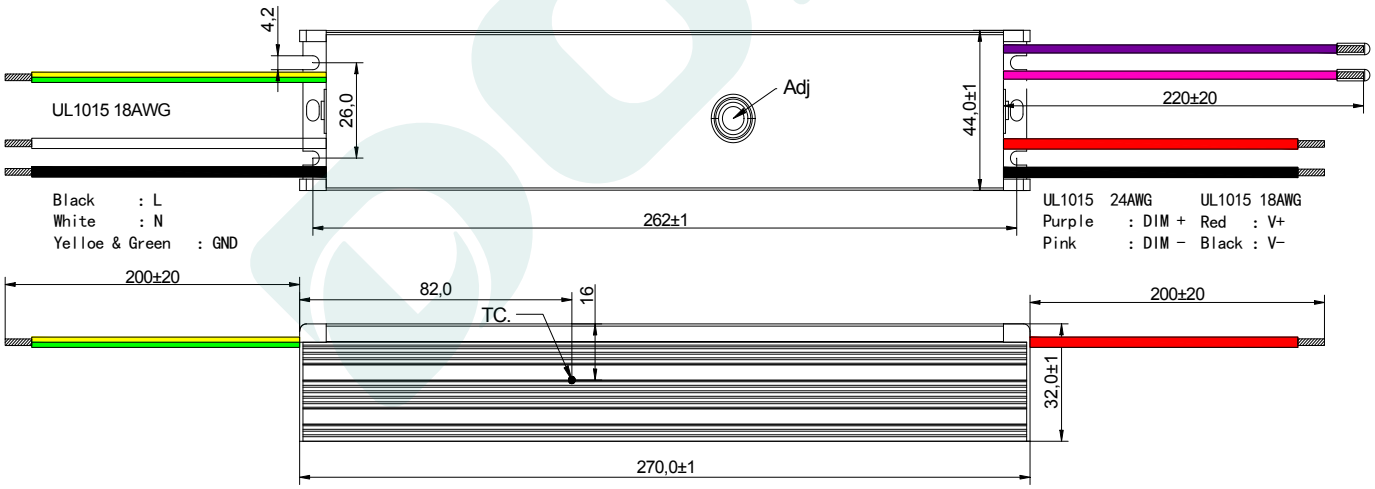
# Mechanical Specification

| Dimension ( mm ) | L270*W44*H32 |
|---|---|

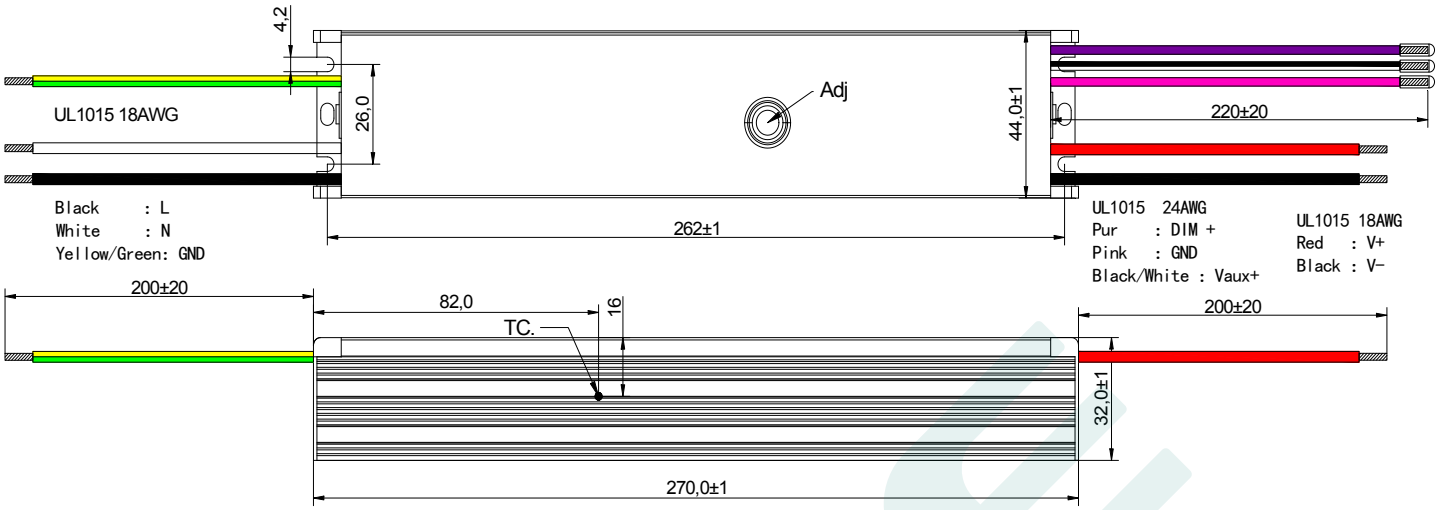
## DL-320V-260A-PXG



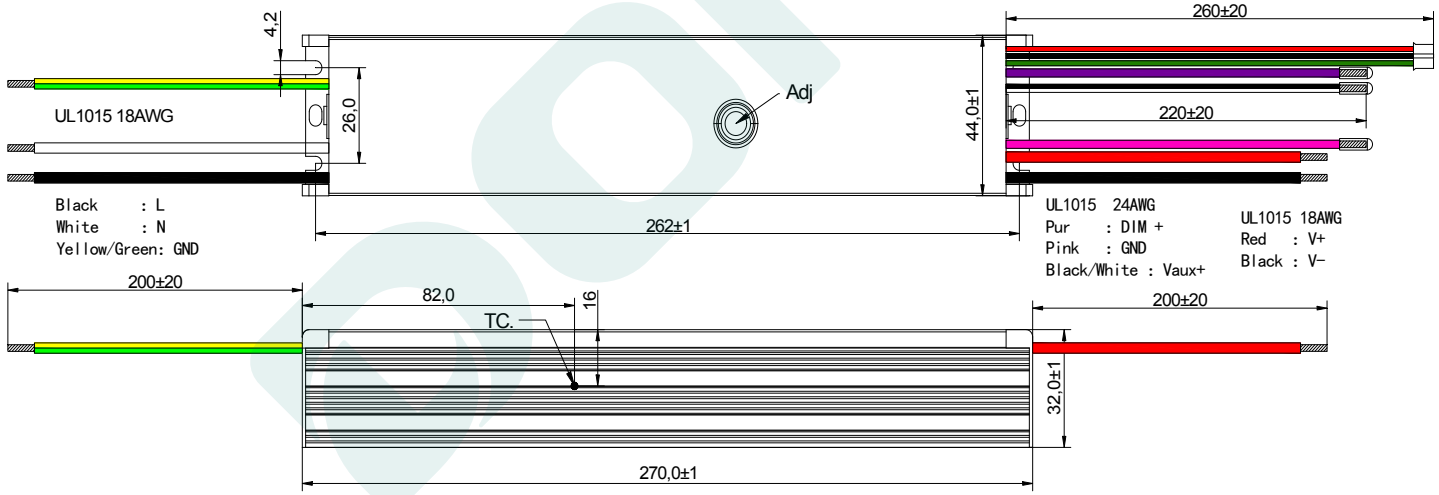

## DL-320V-260S-PXG



### DL-320V-260X-PXG




### DL-320V-260P-PXG(Light-Operated)

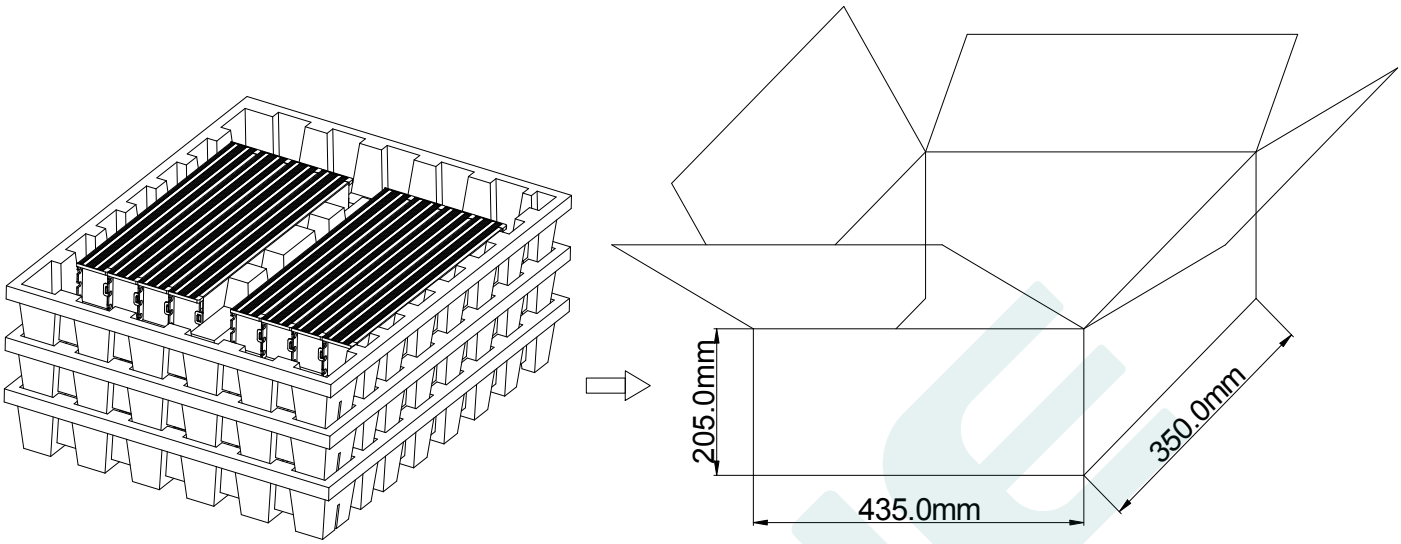



## Weight

| | |
|---|---|
| Weight | 720 g |

# Packaging

| BOX ( mm ) | L435*W350*H205 |
|---|---|




Note: One Carton 3 layers and 8 pcs each layer, total 24pcs/carton.

**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.

# Revise & Version

| DATE | DESCRIPTION | REV. | CHECK |
|---|---|---|---|
| 2024.4.28 | Initial version. | V1.0 | |
| 2024.6.21 | Modify the case temperature VS life curve | V1.1 | |
| 2025.4.18 | Update Package | V1.2 | |
| 2025.7.28 | Add Turn-on/off voltage on page 4, add residual voltage on page 5, modify Safety Test Item on page 7, add Caution on page 11 | V1.3 | |
| 2025.9.1 | Update Safety Test Item on page 7 | V1.4 | |
| 2025.9.23 | Add CE and CB certifications | V1.5 | JH 2025.09.28 13:57:36 +08'00'<br>DYX 2025.09.28 14:26:10 +08'00' |

| MANUFACTRUER | | |
|---|---|---|
| EDIT | CHECK | APPROVE |
| ZMH 2025.09.23 17:17:51 +08'00'<br>MPY 2025.09.25 08:40:50 +08'00' | CRQ 2025.09.27 16:08:14 +08'00' | 数字签名者：张鸿生<br>DN：cn=张鸿生, o, ou, email=978425630@qq.com, c=<无<br>日期：2025.09.28 16:38:26 +08'00' |