

# MXG Series LED Drivers

---

## DL-30W-V56DX-MXG Specification V1.0

## Features

- Suitable for luminaire with protection Class I
- Input voltage:120-277V ~ 50/60Hz
- Efficiency :85.5%(Typ.)
- Function selection:  
DX : Adjustable with DALI-2 programmer + 12 V/300 mA auxiliary supply
- Input surge protection: DM 6kV, CM 10kV
- All-Around protection: SCP/OVP/OTP
- Ingress protection rating: IP67
- Warranty: 5 years



## Applications

Road lighting

Industrial lighting

Stadium lighting

Landscape lighting



## Model list

| Model NO.        | Input voltage | Output power | Output voltage | Output current | Default current | Eff. (Typ.) | THD | PF   |
|------------------|---------------|--------------|----------------|----------------|-----------------|-------------|-----|------|
| DL-30W-V56DX-MXG | 120-277Vac    | 30W          | 25-56Vdc       | 0.3-1.0A       | 0.60A           | 85.5%       | 10% | 0.95 |

### Note :

1. Test conditions for the above parameters: 230 Vac,100%Load ,30 minutes
2. The maximum output power is 30W ; please refer to the " output power Vs. input voltage" curve.

## Input characteristics

| Parameter              | Min    | Typ.    | Max      | Note                                          |
|------------------------|--------|---------|----------|-----------------------------------------------|
| Input AC voltage range | 108Vac | -       | 305Vac   | Refer to output power Vs. input voltage curve |
| Input DC voltage range | 127Vac | -       | 300Vac   |                                               |
| Input frequency        | 47Hz   | 50/60Hz | 63Hz     | -                                             |
| Leakage current        | -      | -       | 0.75 MIU | UL 8750; 277Vac/60Hz                          |
|                        | -      | -       | 0.70 mA  | IEC 60598-1; 240Vac/60Hz                      |
| Power factor(PF)       | 0.95   | -       | -        | 230Vac , 100% load                            |
|                        | 0.90   | -       | -        | 120-240Vac , 80%-100% load                    |
| THD                    | -      | 8%      | 10%      | 230Vac , 100% load                            |
|                        | -      | -       | 20%      | 120-277Vac , 70%-100% load                    |
| Input current          | -      | -       | 0.35A    | 120Vac , 100% load                            |
| Inrush current         | -      | -       | 70A      | At 230Vac and 25°C cold start                 |

## Output characteristic

| Parameter                    | Min   | Typ.     | Max       | Note                                                                 |
|------------------------------|-------|----------|-----------|----------------------------------------------------------------------|
| Efficiency@120Vac            | 82.0% | 84.0%    | -         | 100% load , Io=0.54A                                                 |
| Efficiency@230Vac            | 83.5% | 85.5%    | -         | 100% load , Io=0.54A                                                 |
| Efficiency@277Vac            | 84.0% | 86.0%    | -         | 100% load , Io=0.54A                                                 |
| Output voltage range         | 25Vdc | -        | 56Vdc     | 100% load output voltage range:<br>30-56Vdc                          |
| Open circuit voltage         | -     | -        | 75Vdc     | -                                                                    |
| Output current range         | 0.3A  | -        | 1.0A      | Default current:0.60A                                                |
| Output current tolerance     | -5%   | -        | +5%       | 100% load                                                            |
| Output Current Ripple(PK-AV) | -     | 5% Iomax | 10% Iomax | 100% load , 20 MHz BW<br>Ripple current = (Peak - Average) / Average |
| Start-up overshoot current   | -     | -        | 10%       | 100% load                                                            |
| Line regulation              | -3%   | -        | +3%       | 100% load                                                            |
| Load regulation              | -3%   | -        | +3%       | 60%-100% load                                                        |

## Output characteristic

| Parameter                                       | Min   | Typ.  | Max    | Note                                                                                                                  |
|-------------------------------------------------|-------|-------|--------|-----------------------------------------------------------------------------------------------------------------------|
| Turn-on delay time                              | -     | -     | 1.0s   | 100% load@230Vac                                                                                                      |
| 12V Auxiliary Output Voltage                    | 10.8V | 12.0V | 13.2V  | -                                                                                                                     |
| 12V Auxiliary Output Current                    | -     | -     | 300mA  | Return terminal is "DIM-"                                                                                             |
| 12V Auxiliary Output Transient Peak Current @6W | -     | -     | 500 mA | 500mA peak for a maximum duration of 2ms in a 5.0ms period during which 2ms time the average should not exceed 250mA. |

## Dimming characteristic

| Dimming              | Parameter           | Min       | Typ. | Max       | Note                     |
|----------------------|---------------------|-----------|------|-----------|--------------------------|
| DALI-2               | High Voltage Level  | 9.5V      | 16V  | 22.5V     | Return terminal is "DA-" |
|                      | Lower Voltage Level | -6.5V     | 0V   | 6.5V      |                          |
|                      | Sink Current        | -         | -    | 2.0mA     |                          |
| Dimming Output Range |                     | 10% Ioset | -    | 100%Ioset | 10% Ioset≥30mA           |

**Note:** DALI-2 protocol : IEC62386-101/102/207.

## Protection

| Parameter                       | Description                                                                                                                                        |
|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| Output overload protection      | 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 casing temperature is 90-105°C, the output power decreases , recovers automatically after fault condition is removed |
| Output over-voltage protection  | Self-recovery type , recovers automatically after fault condition is removed                                                                       |

**Note:** All parameters should be measured at a 230Vac/50Hz input voltage, with a rated load unless otherwise specified.

## Environmental

| Categories                                       | Parameter                                                |
|--------------------------------------------------|----------------------------------------------------------|
| Operating temperature Ta                         | -40°C - +45°C@120-199Vac<br>-40°C - +55°C@200-277Vac     |
| Operating case temperature                       | -40°C - +90°C                                            |
| Operating case temperature for a 5 year warranty | -40°C - +75°C , 10% - 95%RH                              |
| Storage temperature, humidity                    | -40°C - +80°C , 10%~ 95%RH                               |
| Resistant to vibration                           | 10Hz ~ 500Hz, 5G 12 min/cycle, X, Y, Z axis 72 min each  |
| MTBF                                             | 200,000 hours (MIL-HDBK-217F), Ta=25°C, 230Vac, 80% load |
| Lifetime                                         | 75,000 hours @Tc≤75°C, 230Vac, 80% Load                  |

## Safety

| Safety Categories | Area            | Standards                                         | Approved |
|-------------------|-----------------|---------------------------------------------------|----------|
| CCC               | China           | GB/T 19510.1, GB/T 19510.213                      | √        |
| 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

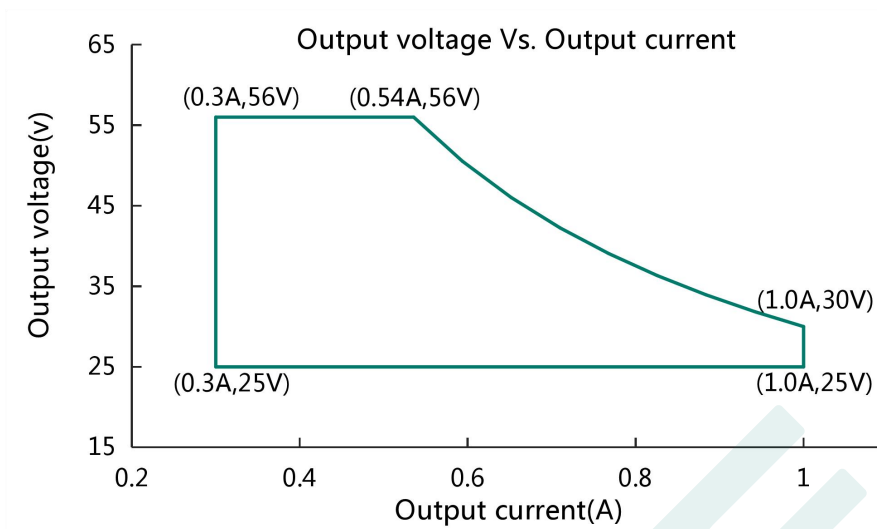
Our products comply with reference to RoHS Directive (EU) 2015/863 amending 2011/65/EU.

## Safety Test Items:

| Safety Test Item      | UL | CE/CB/ENEC       | CCC     | Note                            |
|-----------------------|----|------------------|---------|---------------------------------|
| Input-output          | -  | 3200Vac          | 3200Vac |                                 |
| Input-Ground          | -  | 1600Vac          | 1600Vac |                                 |
| Input-Dim             | -  | 3200Vac          | 3200Vac |                                 |
| Output-Ground         | -  | 500Vac           | 500Vac  |                                 |
| Output-Dim            | -  | 500Vac           | 500Vac  |                                 |
| Dim-Case              | -  | 500Vac           | 500Vac  |                                 |
| Insulation Resistance |    | $\geq 10M\Omega$ |         | Input-Dim, Test voltage: 500Vac |
| Ground Resistance     |    | $\leq 0.1\Omega$ |         | 25A/1min; Ta=25°C±10°C          |

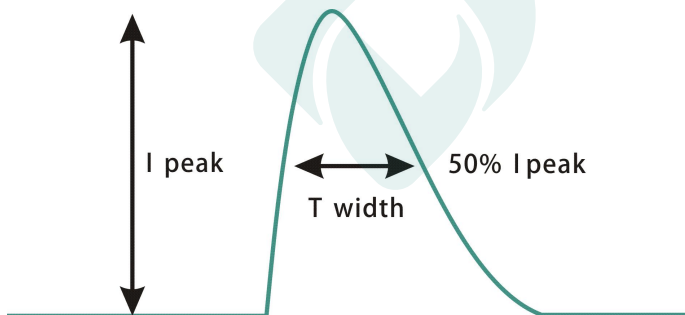
**Note:** The driver is considered as a component that will be operated in combination with the final equipment. Since EMC performance will be affected by the complete installation, the final equipment manufacturers must re-qualify EMC Directive on the complete installation again.

## I-V Working area



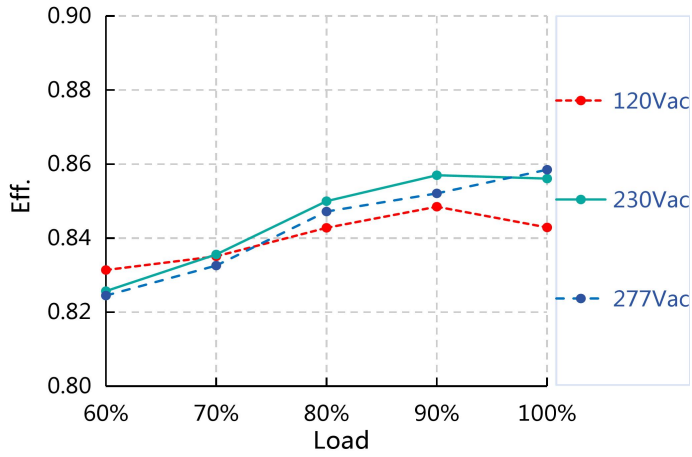
| Load                     | Output |      |       |       |       |       |       |       |       |
|--------------------------|--------|------|-------|-------|-------|-------|-------|-------|-------|
| Output Voltage           | 25V    | 29V  | 33V   | 38V   | 42V   | 45V   | 48V   | 52V   | 56V   |
| Output Current<br>Io_MAX | 1.0A   | 1.0A | 0.91A | 0.83A | 0.75A | 0.68A | 0.63A | 0.58A | 0.54A |
| Output Power<br>Po_MAX   | 25W    | 30W  | 30W   | 30W   | 30W   | 30W   | 30W   | 30W   | 30W   |

## Inrush current

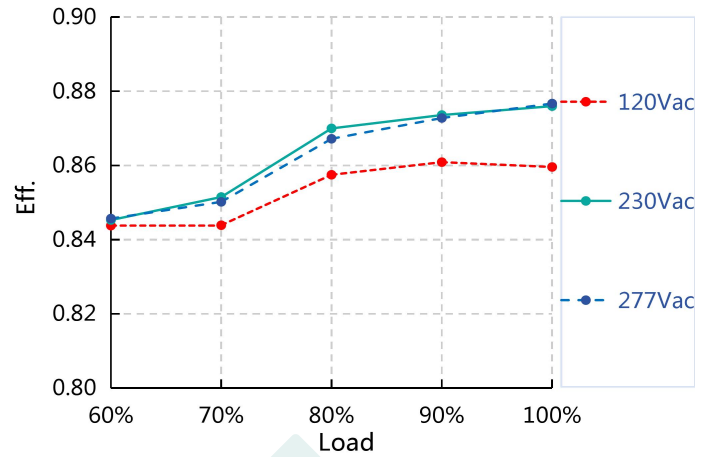


| Input voltage | Peak current | T(@50% Peak current) |
|---------------|--------------|----------------------|
| 120Vac        | 13.7A        | 132us                |
| 230Vac        | 27.2A        | 138us                |
| 277Vac        | 33.6A        | 126us                |

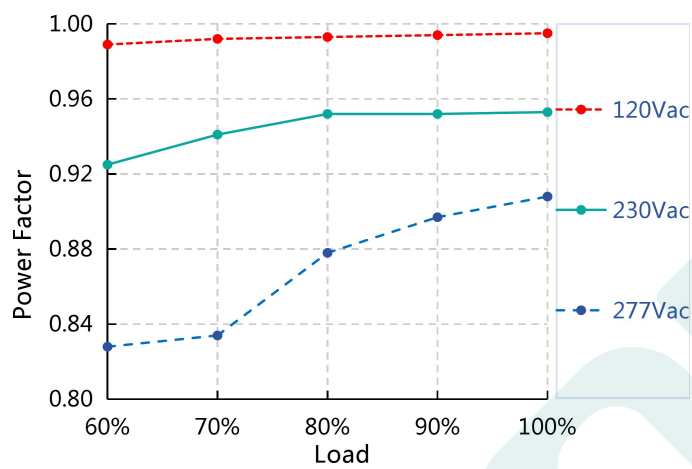
Eff. Vs. Load (  $I_o=0.54A$  )



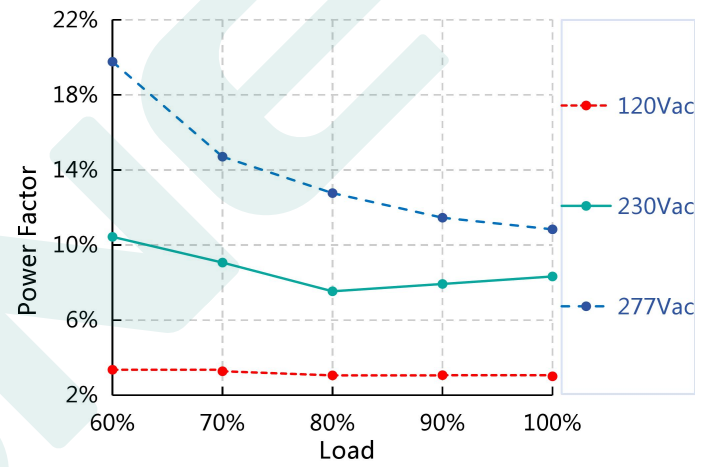
Eff. Vs. Load (  $I_o=1.0A$  )



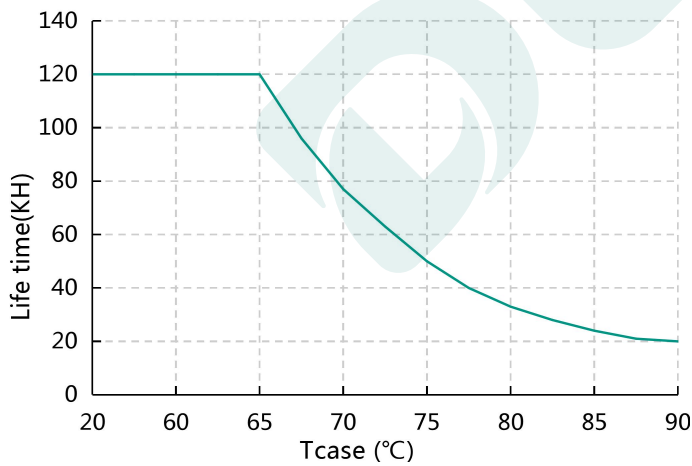
PF Vs. Load



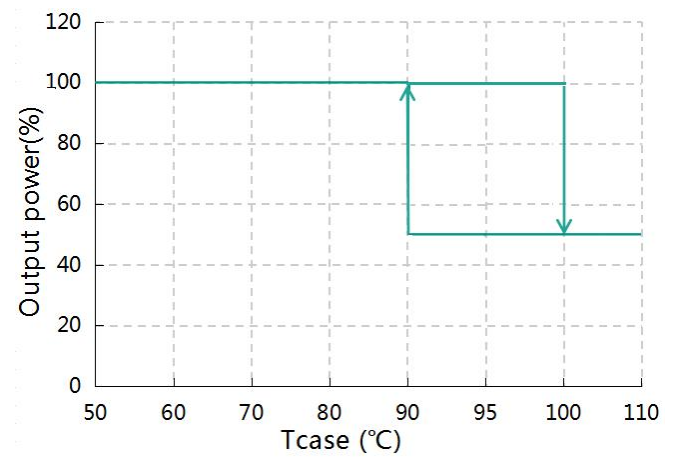
HTD Vs. Load



Lifetime Vs. Tcase

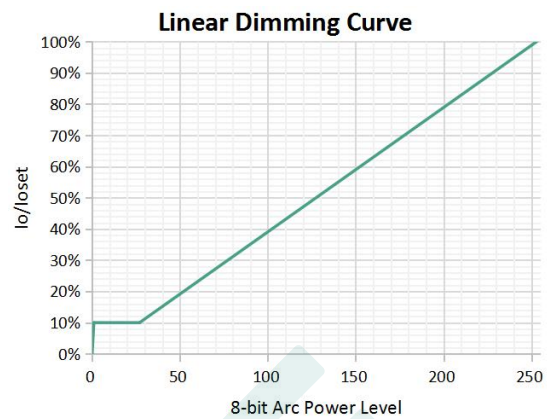
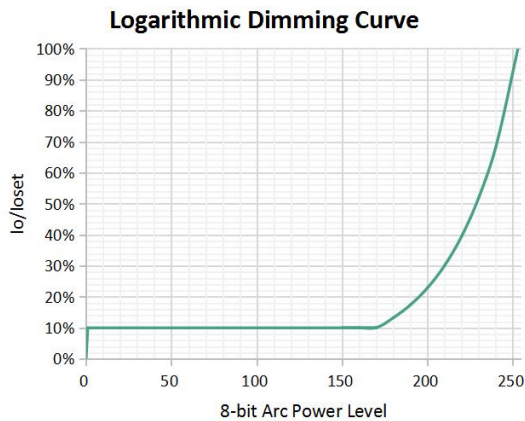


Output power Vs. Tcase



## Dimming

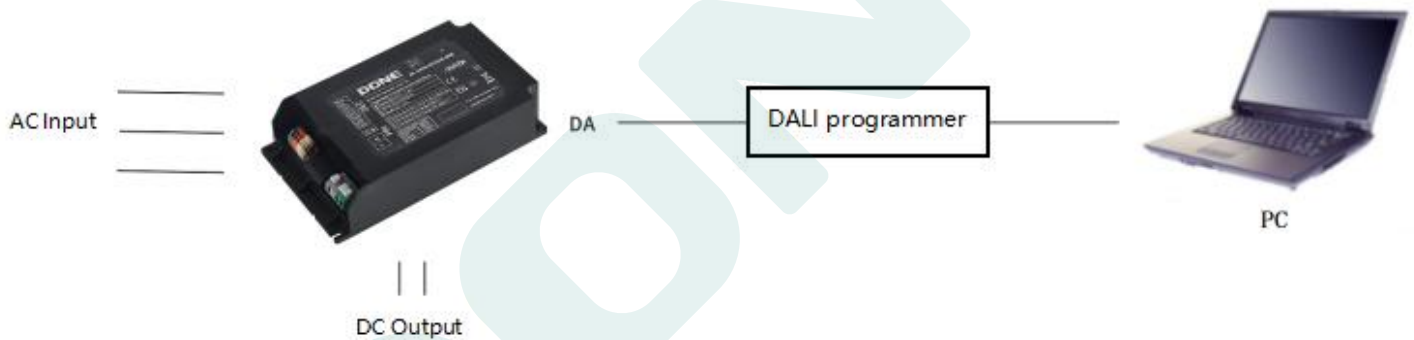
- DALI-2 dimming



**Note:** Factory Default Output Logarithmic Curve.

## Programmable Connections

### 1. DALI-2 programmer:

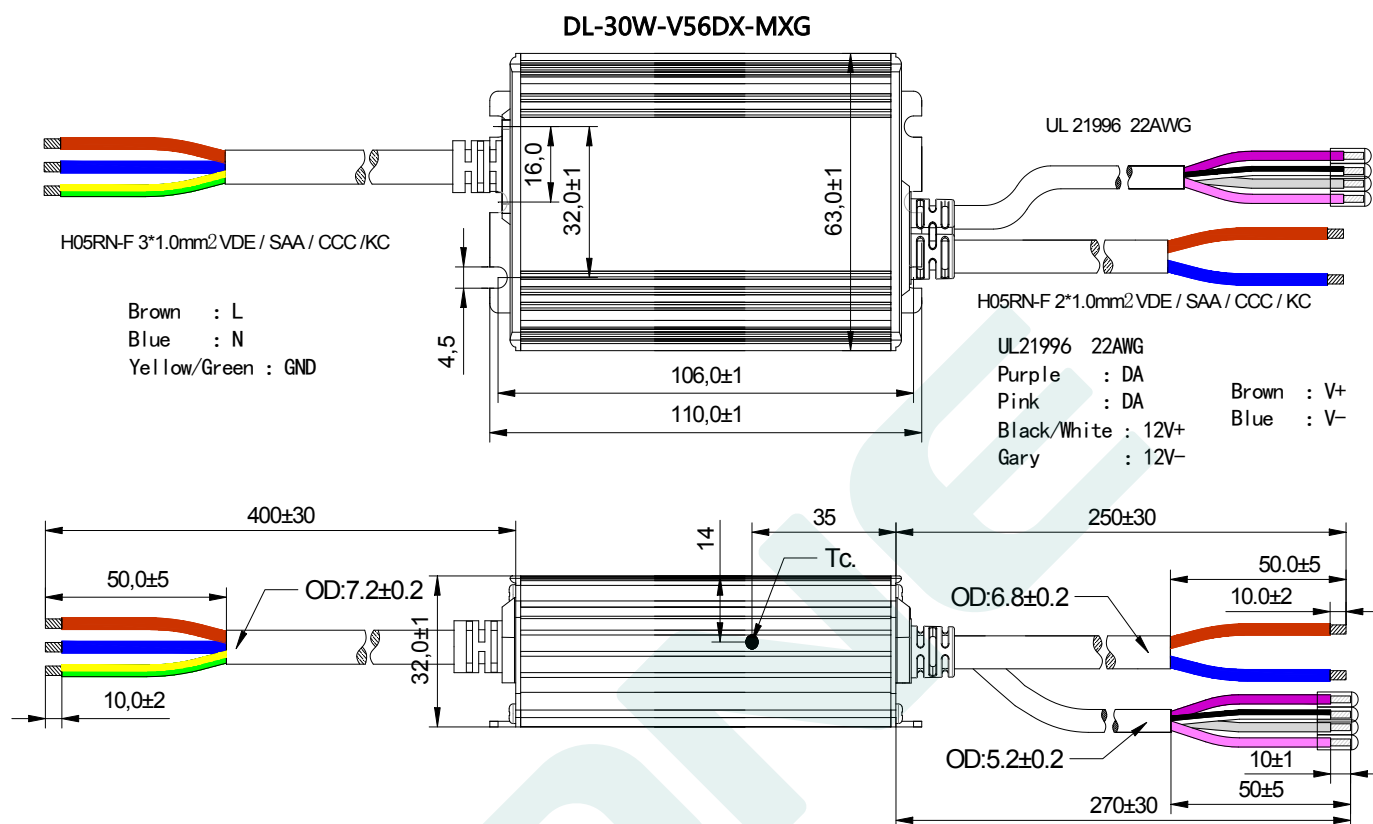


#### Notes:

1. The driver does not need to be powered on during the programming process.
2. Please refer to DONE DALI-2 programmer data sheet for details.

## Mechanical specification

Size ( mm ) L110\*W63\*H32

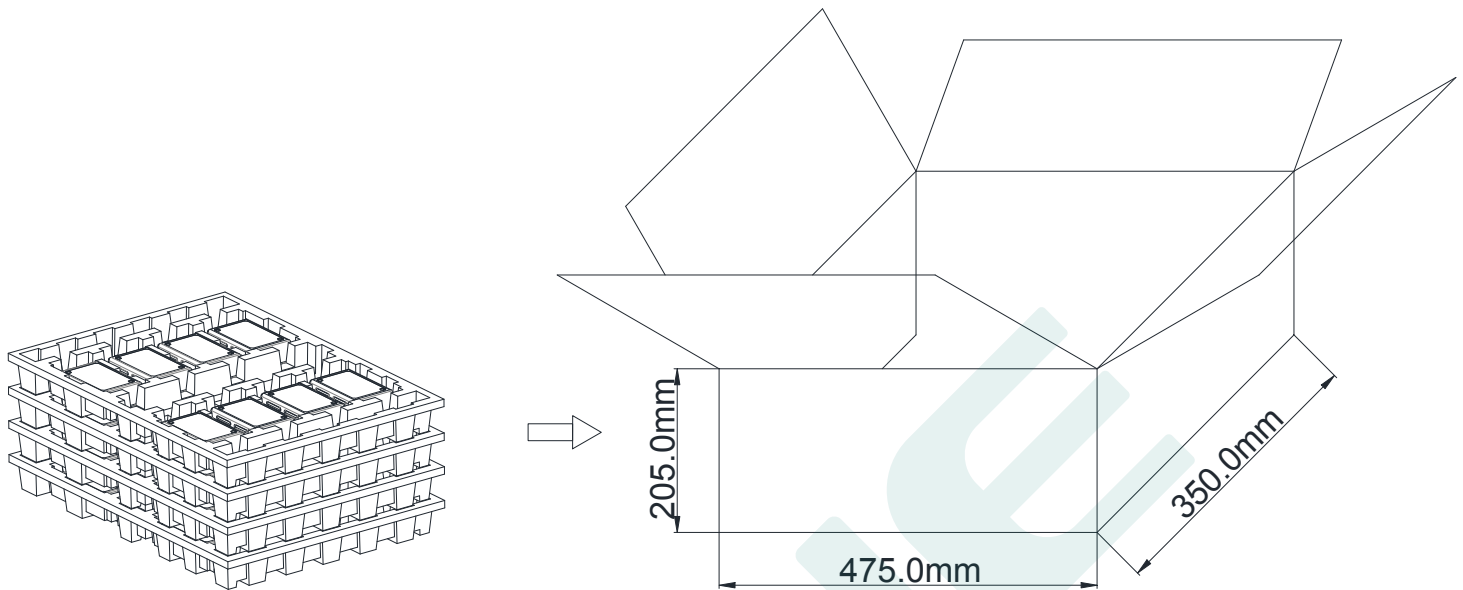


## Weight

Weight 430g

## Packaging

Packaging ( mm )      L475\*W350\*H205



Note: One Carton 4 layers and 8 pcs 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, America and India.
2. The LED DRIVER with Chinese label is only used for China market.

Version

| DATE      | DESCRIPTION      | REV. | CHECK                                                                                                                                              |
|-----------|------------------|------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| 2026.3.17 | Initial version. | V1.0 | <div><div><div>JH</div><div>2026.03.17</div><div>09:42:08 +08'00'</div></div><div><div>郭延香</div><div>2026.03.17 09:42:08 +08'00'</div></div></div> |
|           |                  |      |                                                                                                                                                    |
|           |                  |      |                                                                                                                                                    |
|           |                  |      |                                                                                                                                                    |
|           |                  |      |                                                                                                                                                    |
|           |                  |      |                                                                                                                                                    |
|           |                  |      |                                                                                                                                                    |

MANUFACTRUER

| EDIT                                                                                                                                                                              | CHECK                                                                                              | APPROVE                                                                                                                                                                                                                       |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <div><div><div>LYS</div><div>2026.03.17</div><div>08:56:35</div><div>+08'00'</div></div><div><div>郭延香</div><div>2026.03.17</div><div>09:20:45</div><div>+08'00'</div></div></div> | <div><div><div>郭照康</div><div>GZK</div><div>2026.03.17</div><div>09:40:06 +08'00'</div></div></div> | <div><div><div>张明生</div><div>数字签名者: ZHS</div><div>DN : cn=ZHS, o=DONE,</div><div>ou=YFZX,</div><div>email=zhanghongsheng@d</div><div>onepower.com, c=CN</div><div>日期: 2026.03.17 10:00:14</div><div>+08'00'</div></div></div> |

