

## Specification for Approval

Product Name: 200W High Bay Driver

G6-200M260A12T ( II ) ☒

Product Model: G6-200M260T ( II ) ☒

G6-200V260T ( II ) ☒

Rev. A.2

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| Prepared By | Checked By | Approved By |
|-------------|------------|-------------|
|             |            |             |

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| CUSTOMER AUTHORIZED SIGNATURE                                                   |            |             |
|---------------------------------------------------------------------------------|------------|-------------|
| Tested By                                                                       | Checked By | Approved By |
|                                                                                 |            |             |
| (Company seal) Return one copy to MOSO with approved signature and company seal |            |             |

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ECN History

|     |                                                   |            |
|-----|---------------------------------------------------|------------|
| A.1 | First edition                                     | 2023-12-21 |
| A.2 | Updated DIP switch diagram and mechanical outline | 2024-01-29 |
|     |                                                   |            |
|     |                                                   |            |
|     |                                                   |            |
|     |                                                   |            |
|     |                                                   |            |

## Description

G6T-( II ) series is specially designed for industrial lighting applications. It is constant current LED driver that operates from 90-305Vac with 0-10V and PWM dimming function. Internal potentiometer and dip switch can adjust power and color temperature. Such round integrated structure enables the driver to have a better heat dissipation, significantly improving reliability and extending product lifetime. To ensure trouble-free operations, protection is provided against input surge, output over voltage, short circuit, and over temperature.



## Product Features

- Universal input voltage: 90~305Vac;
- Non-isolated constant current design, Efficiency up to 96%;
- Dip switch adjustable power and color temperature;
- 12V/0.2A auxiliary power supply;
- 3 in 1 dimmable: 0-10Vdc/PWM/Resistor;
- Standby Power Consumption <0.5W;
- Surge protection: DM: 6KV, CM: 6KV;
- Protection: SCP/OVP/OTP;
- Ingress protection rating: IP65;
- Warranty: 5 years.

## Application

Suitable for industrial lighting.

## Models

| Model                 | Input Voltage (Vac) | MAX Output Power (W) | Output Voltage (Vdc) | Output Current Adjustable Range (A) | Default Current (A) | Eff. (Typ.) | PF(Typ.) | THD(Typ.) |
|-----------------------|---------------------|----------------------|----------------------|-------------------------------------|---------------------|-------------|----------|-----------|
| G6-200M260A12T ( II ) | 90~305              | 200                  | 180~260              | 0.50~0.93                           | 0.83                | 96%         | 0.97     | 10%       |
| G6-200M260T ( II )    | 90~305              | 200                  | 180~260              | 0.50~0.93                           | 0.83                | 96%         | 0.97     | 10%       |
| G6-200V260T ( II )    | 90~305              | 200                  | 180~260              | 0.50~0.93                           | 0.83                | 96%         | 0.97     | 10%       |

Notes:

[1].A12 means with 12V/0.2A auxiliary power supply; V means basic model without dimming; M means with 3-in-1 dimming

[2].All specifications are measured at 25°C ambient temperature, input voltage 230Vac, and the typical value tested at full load, if no specific note.

## Optional Model Features

| Model                 | Dim to off<br>0-10V/PWM<br>/Resistor | 1-10V/PWM<br>/Resistor | Adjustable power<br>( single DIP) | Adjustable power/ color<br>temperature ( double DIP) | Stepless<br>dimming | Notes                                                 |
|-----------------------|--------------------------------------|------------------------|-----------------------------------|------------------------------------------------------|---------------------|-------------------------------------------------------|
| G6-200M260A12T ( II ) | √                                    | -                      | optional                          | optional                                             | optional            | Standard: afterglow,<br>Without afterglow (optional); |
| G6-200M260T ( II )    | -                                    | √                      | optional                          | optional                                             | -                   | M version default dimming<br>does not turn off        |
| G6-200V260T ( II )    | -                                    | -                      | optional                          | optional                                             | -                   | V means basic model without<br>dimming                |

## Input Specifications

| Parameter                 | Min.   | Typ.    | Max.   | Notes                                                                       |
|---------------------------|--------|---------|--------|-----------------------------------------------------------------------------|
| Input Voltage Range       | 90Vac  | -       | 305Vac |                                                                             |
| Rated Input Voltage       | 100Vac | -       | 277Vac | Refer to Output Power vs. Input Voltage Curve                               |
| Input Frequency AC        | 47Hz   | 50/60Hz | 63Hz   |                                                                             |
| Max Input Current         | -      | -       | 2.4A   | 120Vac & 100% load                                                          |
| Max Input Power           | -      | -       | 240W   | 120Vac & 100% load                                                          |
| Leakage                   | -      | -       | 0.70mA | IEC 60598-1; 240Vac/50Hz                                                    |
| Inrush Current            | -      | -       | 100A   | 220Vac, 100% load                                                           |
| Standby Power Consumption | -      | -       | 0.5W   | 230Vac, dimming off, no load on auxiliary power<br>supply (For A12 version) |
| Power Factor              | 0.95   | 0.97    | -      | 230Vac, 50/60Hz, 100% load                                                  |
|                           | 0.90   | -       | -      | 120-277Vac, 50/60Hz, 70%-100% load                                          |
| THD                       | -      | 8%      | 10%    | 230Vac, 50/60Hz, 100% load                                                  |
|                           | -      | -       | 20%    | 120-277Vac, 50/60Hz, 70%-100% load                                          |
| MCB(B16)                  | -      | 9       | -      | 230Vac; 100% load                                                           |

## Output Specifications

| Parameter                           | Min.   | Typ.  | Max.   | Notes                                                                                         |
|-------------------------------------|--------|-------|--------|-----------------------------------------------------------------------------------------------|
| Output Voltage Range                | 180Vdc | -     | 260Vdc |                                                                                               |
| Open Circuit Voltage                | -      | -     | 310Vdc |                                                                                               |
| Output Current Adjustable Range     | 0.50A  | -     | 0.93A  |                                                                                               |
| Full Power Current Range            | 0.77A  | -     | 0.93A  | 215-260Vdc                                                                                    |
| Dip Switch Adjustable Power         |        | 0.83A |        | Max, 240Vdc, 100% load                                                                        |
|                                     |        | 0.67A |        | Middle, 240Vdc, 80% load                                                                      |
|                                     |        | 0.50A |        | Min, 240Vdc, 60% load                                                                         |
| Current Accuracy                    | -8%    | -     | +8%    |                                                                                               |
| Total Output Current Ripple (pk-pk) | -      | 10%   | 15%    | 20MHz BW full load & LED load the LED load ripple<br>is slightly different for different LEDs |
| Startup Overshoot Current           | -      | -     | 10%    | 120-277Vac full load condition, LED load                                                      |
| Auxiliary Source output voltage     | 10.8V  | 12V   | 13.8V  | For A12 version                                                                               |
| Auxiliary Source output current     | -      | -     | 200mA  |                                                                                               |
| Line Regulation                     | -5%    | -     | +5%    | 25°C±10°C ambient temperature, input<br>voltage changes from 120Vac to 277Vac                 |
| Load Regulation                     | -5%    | -     | +5%    | 25°C±10°C ambient temperature, 230Vac input, load<br>changes from 70% to 100%                 |
| Turn-on Delay Time                  | -      | -     | 1.0s   | 120-277Vac, 100% load                                                                         |

## General Specification

| Parameter                                    | Min.                                  | Typ.      | Max.  | Notes                                                                                                                                                                           |
|----------------------------------------------|---------------------------------------|-----------|-------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Efficiency @120Vac                           | 91%                                   | 93.5%     | -     | 0.83A, 240Vdc; 25°C ambient temperature, no load of auxiliary source                                                                                                            |
| Efficiency @230Vac                           | 93%                                   | 95.5%     | -     | 0.83A, 240Vdc; 25°C ambient temperature, no load of auxiliary source                                                                                                            |
| Efficiency @277Vac                           | 93%                                   | 96%       | -     | 0.83A, 240Vdc; 25°C ambient temperature, no load of auxiliary source                                                                                                            |
| MTBF                                         | -                                     | 200Khours | -     | 25°C±10 ambient temperature, 230Vac, 80% load (MIL-HDBK-217/SR-332)                                                                                                             |
| Lifetime                                     | -                                     | 50Khours  | -     | 230Vac & 100% load, Tc 75°C, refer to lifetime vs. case temperature curve                                                                                                       |
| Operating Temperature Ta                     | -40°C                                 | -         | +50°C |                                                                                                                                                                                 |
| Operating Case Temperature for Safety Tc_s   | -40°C                                 | -         | +90°C |                                                                                                                                                                                 |
| Operating Case Temperature for Warranty Tc_w | -40°C                                 | -         | +75°C | 5 years warranty shell temperature<br>Humidity: 10%-90% RH                                                                                                                      |
| Storage Temperature Ta                       | -40°C                                 | -         | +85°C | Humidity: 5%-95% RH                                                                                                                                                             |
| Altitude                                     | -60m                                  | -         | 4000m |                                                                                                                                                                                 |
| Over Temperature Protection Tc               | 90°C                                  | 95°C      | 100°C | Decreases output current, returning to normal after over temperature is removed                                                                                                 |
| Short Circuit Protection                     | -                                     | -         | 15W   | Constant current mode. The output shall return to normal when the fault condition is removed.                                                                                   |
| Output Over Voltage Protection               | -                                     | -         | 5W    | When the output voltage of the product exceeds the limit range, it will enter the protection state. When the fault is removed, the product will automatically return to normal. |
| Dimensions (Φ*H)mm                           | Φ127*H59                              |           |       |                                                                                                                                                                                 |
| Net Weight                                   | 700±50g/PCS                           |           |       |                                                                                                                                                                                 |
| Package (L*W*H)                              | 490*370*169 mm; 10PCS/Ctn., GW: 8.2Kg |           |       |                                                                                                                                                                                 |

## Dimming

| Parameter                     | Min.                   | Typ.  | Max.                  | Notes                        |
|-------------------------------|------------------------|-------|-----------------------|------------------------------|
| Absolute Maximum Voltage      | -                      | 10V   | 15V                   | On the Vdim (+) Pin          |
| Source Current on Vdim (+)Pin | -                      | 100uA | 200uA                 |                              |
| Dimming Range                 | 10% I <sub>o max</sub> | -     | 100% I <sub>set</sub> | I <sub>set</sub> =0.50-0.93A |
| Suggest Dimming Input 0-10V   | 0V                     | -     | 10V                   |                              |
| Turn-on voltage               | 0.8V                   | -     | 1.1V                  | For A12 version              |
| Turn-off voltage              | 0.6V                   | -     | 0.9V                  |                              |
| PWM in High Level             | 9.7V                   | -     | 10.3V                 |                              |
| PWM in Low Level              | 0V                     | -     | 0.3V                  |                              |
| PWM in Frequency Range        | 1KHz                   | -     | 2KHz                  |                              |
| PWM in Duty Cycle             | 1%                     | -     | 99%                   |                              |
| Turn-on duty cycle            | 8%                     | -     | 11%                   | For A12 version              |
| Turn-off duty cycle           | 6%                     | -     | 9%                    |                              |
| Resistor Range                | 0                      | -     | 100KΩ                 |                              |

## Safety Specifications

| Parameter                          | UL               | TUV     | Note                                                                                                                   |
|------------------------------------|------------------|---------|------------------------------------------------------------------------------------------------------------------------|
| Dielectric Strength (Input-Ground) | 1600Vac          | 1500Vac | 60s, Current not exceeding 5mA input L/N short-circuit                                                                 |
| Grounding Resistance               | $\leq 0.1\Omega$ |         | UL:25°C±10°C Ambient Temperature, pass 30A Current, 120s.<br>TUV:25°C±10°C Ambient Temperature, pass 25A Current, 60s. |
| Insulation Resistance              | $\geq 10M\Omega$ |         | Input-PE, 500Vdc/60s/25°C                                                                                              |

Notes: The voltage resistance requirement of aluminum substrate is greater than 2KVac.

## Safety Compliance

| Safety Category | Safety normative standards       | Certification | Notes |
|-----------------|----------------------------------|---------------|-------|
| CCC             | GB19510.1, GB19510.14            | √             |       |
| CE              | EN61347-1, EN61347-2-13, EN62493 | √             |       |
| ENEC            | EN61347-1, EN61347-2-13, EN62384 | √             |       |
| CB              | IEC61347-1, IEC61347-2-13        | √             |       |
| BIS             | IS 15885(PART 2/SEC 13)          |               |       |
| UL              | UL 8750                          | √             |       |
| CUL             | CSA C22.2 No.250.13              | √             |       |
| KC              | K61347-1, K61347-2-13            |               |       |
| PSE             | J61347-1, J61347-2-13            |               |       |
| SAA             | AS/NZS IEC 61347.2.13            | √             |       |
| SAA             | AS/NZS 61347.1                   | √             |       |

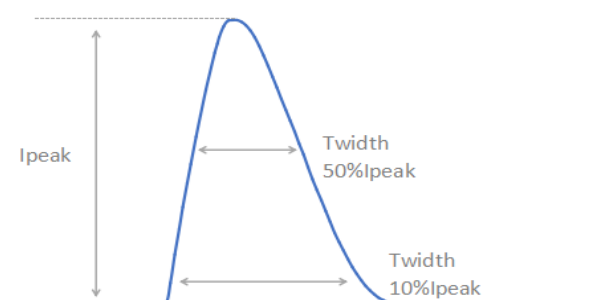
## EMC Compliance

| EMC Category         | Standards                  | Approved | Notes   |
|----------------------|----------------------------|----------|---------|
| CCC                  | GB/T 17743, GB 17625.1     | √        |         |
| CE                   | EN 55015                   | √        |         |
| CE                   | EN 61000-3-2, EN 61000-3-3 | √        |         |
| CE                   | EN61000-4-2,3,4,5,6,11     | √        |         |
| CE                   | EN 61547                   | √        |         |
| KC                   | K61547                     |          |         |
| KC                   | K00015                     |          |         |
| PSE                  | J55015                     |          |         |
| FCC                  | FCC part 15                | √        | Class B |
| Surge Shock Immunity | ANSI/C82.77-5-2017         |          |         |
|                      | IEC/EN 61000-4-5           | √        |         |
| Ringing Wave         | IEC/EN 61000-4-12          |          |         |
|                      | ANSI/IEEE C62.41.2         |          |         |

## RoHS

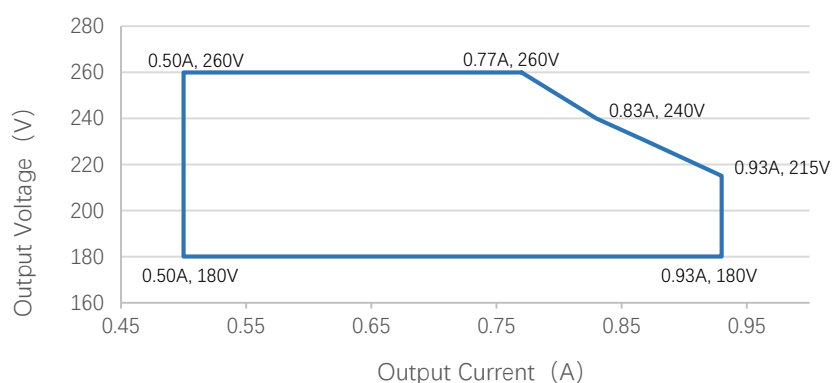
Our products comply with reference to RoHS Directive (EU) 2015/863 amending 2011/65/EU.

## Inrush Current Waveform

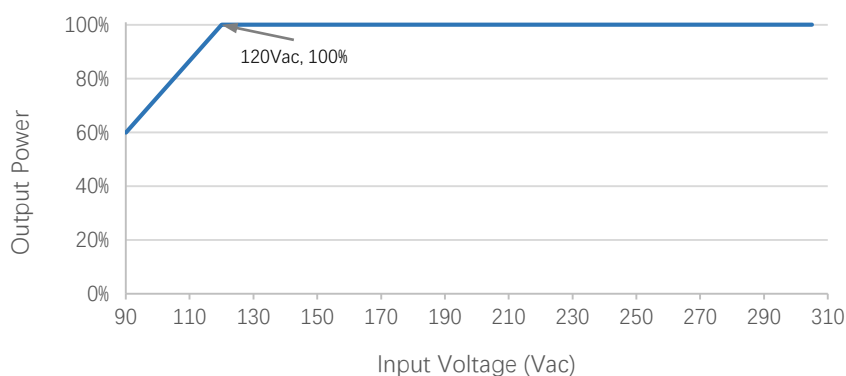


| $V_{in}$ | $I_{peak}$ | $T(@10\% \text{ of } I_{peak})$ | $T(@50\% \text{ of } I_{peak})$ |
|----------|------------|---------------------------------|---------------------------------|
| 220Vac   | 94.5A      | -                               | 160 $\mu$ s                     |

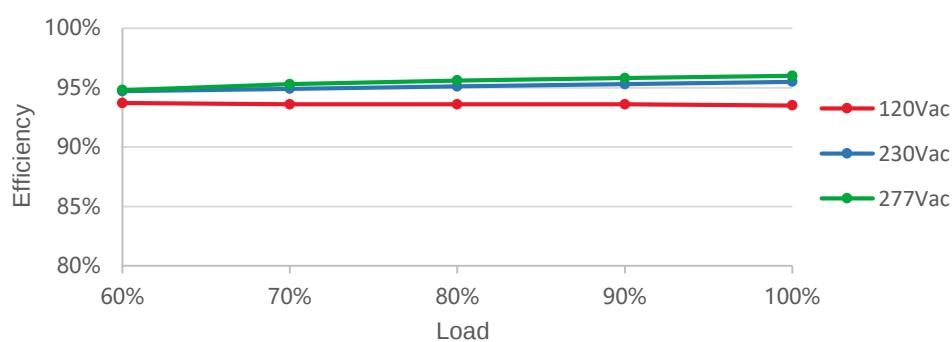
## Output Voltage vs. Output Current

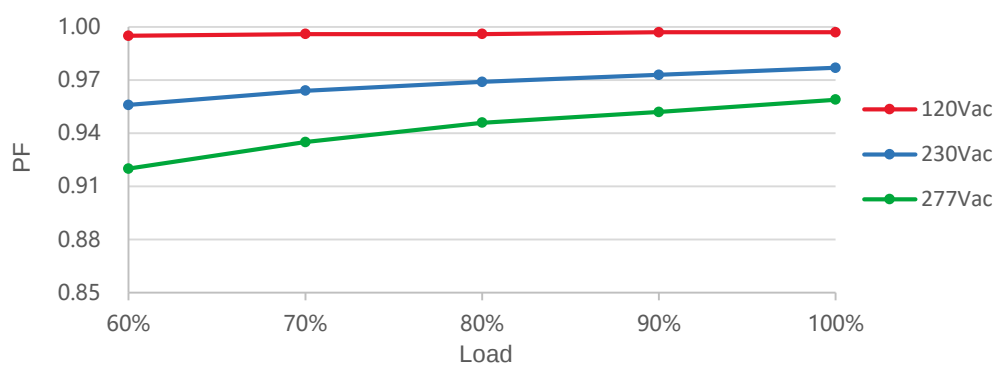
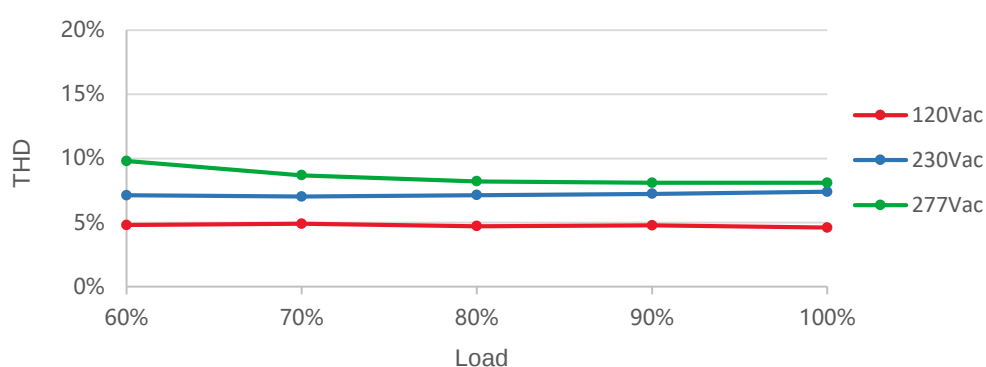
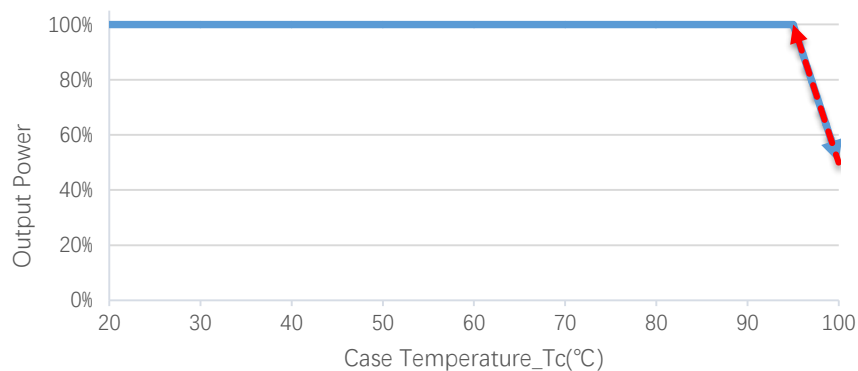
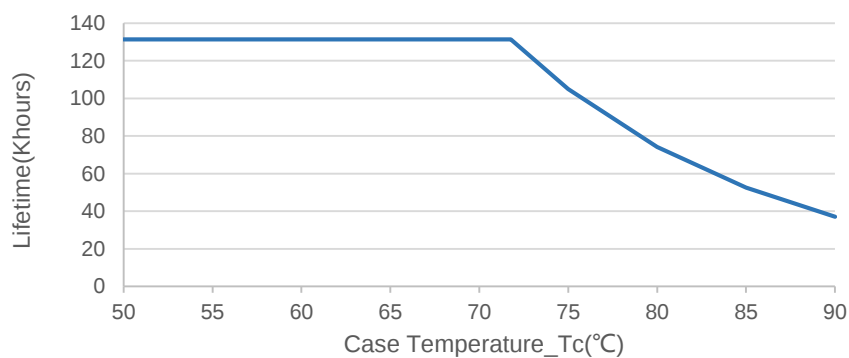


## Output Power vs. Input Voltage

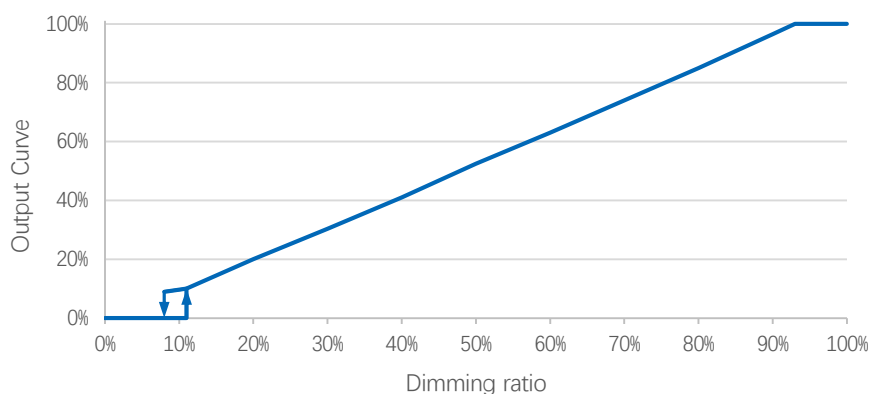


## Efficiency vs. Load

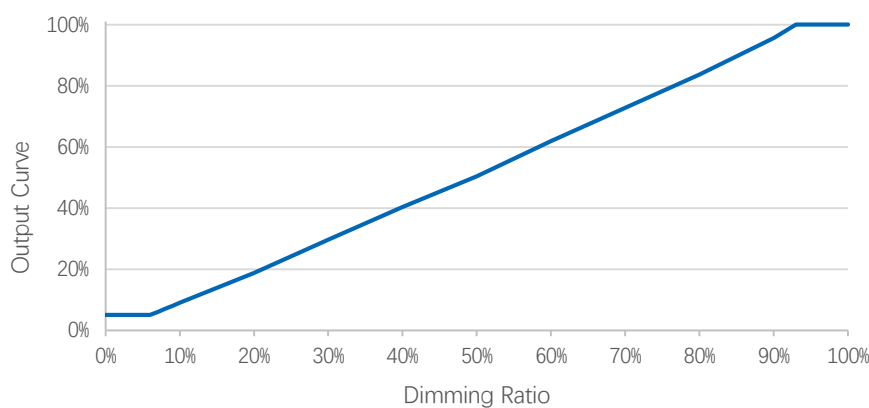


**PF vs. Load****THD vs. Load****Output Power vs. Case Temperature****Lifetime vs. Case Temperature**

## 0-10V/PWM/ Resistor Dimming

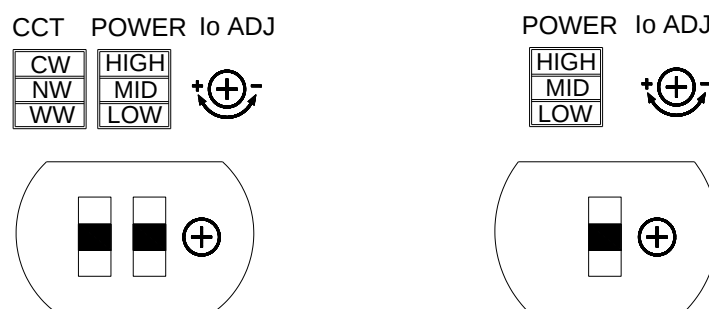


Notes: A12 version default dim to off.



Notes: M version default dimming does not turn off.

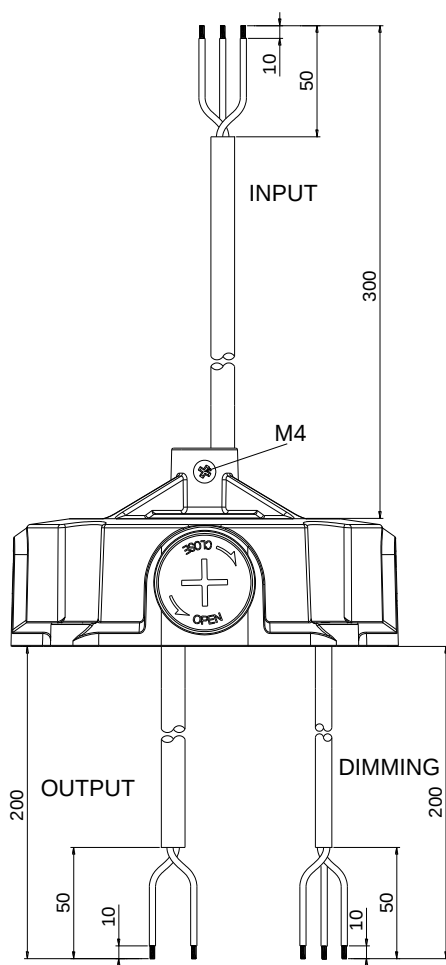
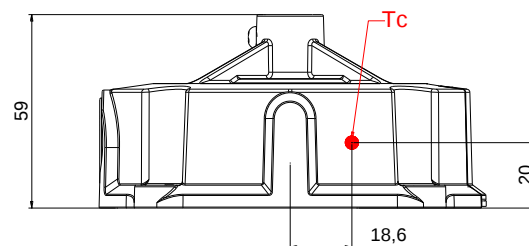
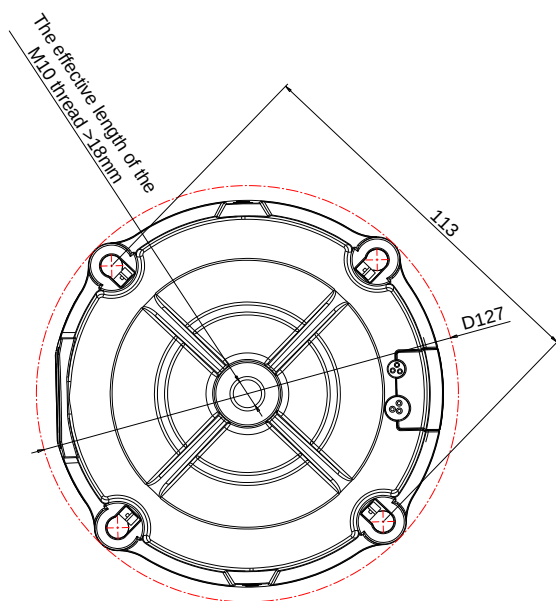
## Dip Switch Diagram



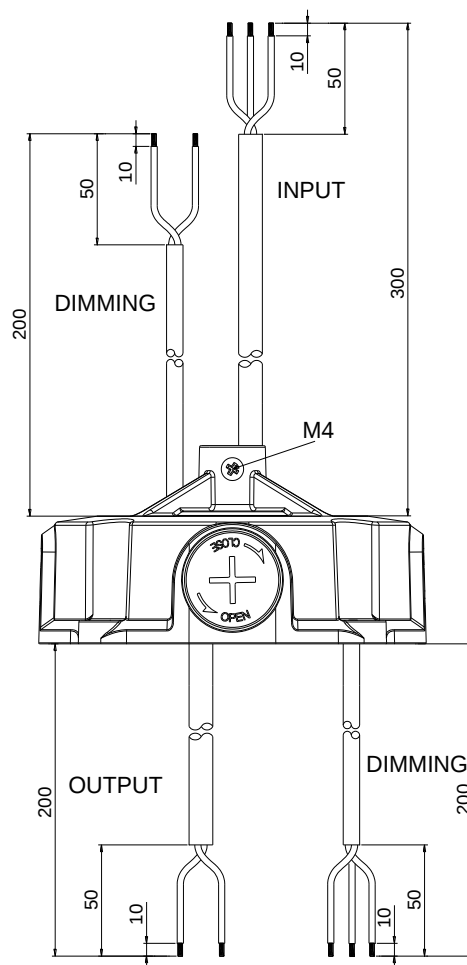
| Function          | Description               |                         |                         |
|-------------------|---------------------------|-------------------------|-------------------------|
| Color Temperature | Cool colors(CW)           | Mixed colors(NW)        | Warm colors(WW)         |
| Power             | HIGH (100%) : 0.83A(200W) | MID (80%) : 0.67A(160W) | LOW (60%) : 0.50A(120W) |

Notes: Using the dip switch when adjusting the color temperature or power, please operate it after the input is powered off.

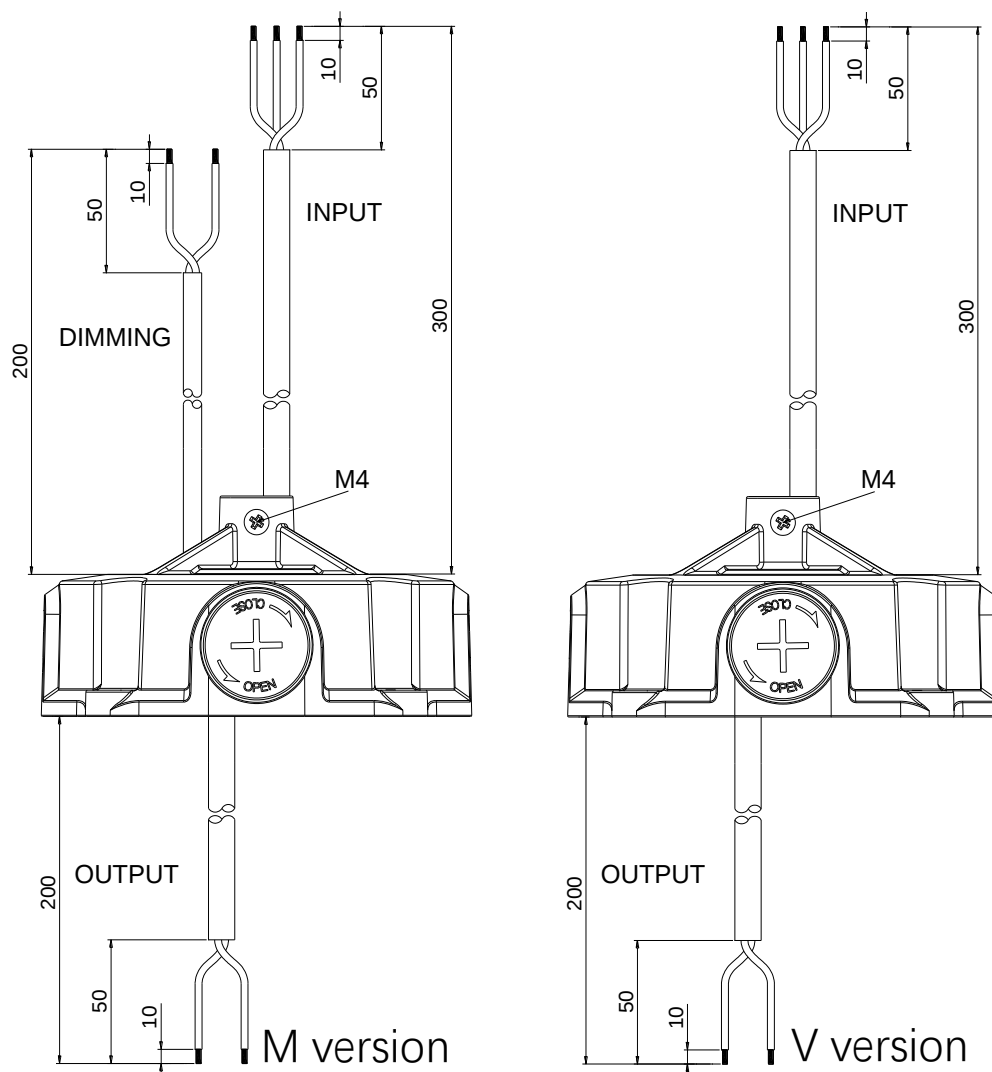
## Mechanical Outline



A12 version



A12 version



## Specifications

|         |                                                                                                                        |                     |
|---------|------------------------------------------------------------------------------------------------------------------------|---------------------|
| Input   | CCC+VDE H05RN-F 3*1.0 mm <sup>2</sup>                                                                                  | CCC/CE              |
|         | Outside Diameter: 7.2mm L=300±20mm Strip 50±3mm, Tinning 10±1mm; L: brown, N: blue, G: yellow/green                    |                     |
| Output  | UL SJTW 18AWG*3C                                                                                                       | UL                  |
|         | Outside Diameter: 7.8mm L=300±20mm, Strip 50±3mm Tinning 10±1mm; L: black, N: white, G: green                          |                     |
|         | CCC+VDE H05RN-F 2x1.0mm <sup>2</sup>                                                                                   | CCC/CE              |
|         | Outside Diameter: 6.8mm L=200±20mm Strip 50±3mm, Tinning 10±1mm; LED+: brown, LED-: blue                               |                     |
| Dimming | CCC+VDE H05RN-F 3x1.0mm <sup>2</sup>                                                                                   | CCC/CE (double DIP) |
|         | Outside Diameter: 7.8mm L=200±20mm Strip 50±3mm, Tinning 10±1mm; LED+: brown, LED1-: blue, LED2-: black                |                     |
|         | UL SJTW 18AWG*2C                                                                                                       | UL                  |
|         | Outside Diameter: 7.8mm L=200±20mm, Strip 50±3mm, Tinning 10±1mm; LED+: red, LED-: black                               |                     |
| Dimming | UL SJTW 18AWG*3C                                                                                                       | UL(double DIP)      |
|         | Outside Diameter: 7.8mm L=200±20mm, Strip 50±3mm, Tinning 10±1mm; LED+: red, LED1-: black, LED2-: pink                 |                     |
|         | UL 2733 22AWG*2C                                                                                                       | M version           |
|         | Outside Diameter: 5.45mm L=200±20mm, Strip 50±3mm, Tinning 10±1mm; DIM+: purple, DIM-: pink                            |                     |
| Dimming | UL 21996 22AWG*3C                                                                                                      | A12 version         |
|         | Outside Diameter: 5.0mm L=200±20mm, Strip 50±3mm, Tinning 10±1mm; DIM+: purple, DIM-: pink/12V-, black and white: 12V+ |                     |