

## SPECIFICATION

**Product name : LAS-120H-470A**

**Release date : 2023/4/15**

|                                                                                  |                |                               |     |      |
|----------------------------------------------------------------------------------|----------------|-------------------------------|-----|------|
|  | Product Type   | LED INTEGRATED SPECIAL DRIVER |     |      |
|                                                                                  | Product Series | LAS-120H-470A Series          | REV | V2.0 |

## Features

- Class I type for insulation
- Input voltage range:200-240V ~ 50/60Hz
- Efficiency 95% (Typ.)
- Constant current output ,with power limitation for control mode
- Version 1: Half glue (IP42); (optional IP65)  
Version 2: bare plate construction (XP series)
- Surge level:  
differential mode : 4kV  
common mode :6kV
- guaranteed Lifetime : 5 year warranty for half glue; 3 year warranty for bare plate



## Applications

Industrial lighting、Venue lighting

## Model list

| Model NO.        | Rated Input voltage | Max Output power | Output voltage | The default current | Eff. |
|------------------|---------------------|------------------|----------------|---------------------|------|
| LAS-120H-470A    | 200-240V 50/60Hz    | 120W             | 410-470Vdc     | 0.26A               | ≥95% |
| LAS-120H-470A-XP | 200-240V 50/60Hz    | 120W             | 410-470Vdc     | 0.26A               | ≥95% |

### Note:

1. Test conditions: Ta=25℃, under 230Vac input,after running for 30 minutes with full load .

|                                                                                  |                |                               |     |      |
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## Input characteristics

| Parameter             | Min    | Typ.    | Max    | Remark                        |
|-----------------------|--------|---------|--------|-------------------------------|
| Rated input voltage   | -      | 230Vac  | -      | -                             |
| Input voltage range   | 200Vac | -       | 240Vac | -                             |
| Rated frequency range | -      | 50/60Hz | -      | -                             |
| Power factor          | 0.95   | -       | -      | @230Vac input ,with full load |
| T.H.D.                | -      | -       | 15%    | @230Vac input ,with full load |
| Input current         | -      | -       | 0.65A  | @180Vac input ,with full load |
| Inrush current        | -      | -       | 70A    | 230Vac, cold start (25°C)     |

## Output characteristics

| Parameter                                                 | Min         | Typ.           | Max    | Remark                        |
|-----------------------------------------------------------|-------------|----------------|--------|-------------------------------|
| Rated current<br>LAS-120H-470A<br>LAS-120H-470A-XP        | -<br>-<br>- | 0.26A<br>0.26A | -<br>- | @230Vac input ,with full load |
| Output current range<br>LAS-120H-470A<br>LAS-120H-470A-XP | 0.24A       | -              | 0.30A  | @230Vac input ,with full load |
| Output voltage range<br>LAS-120H-470A<br>LAS-120H-470A-XP | 410V        | -              | 470V   | -                             |
| Rated power@230Vac)<br>LAS-120H-470A<br>LAS-120H-470A-XP  | -           | 120W<br>120W   | -      | @230Vac input ,with full load |
| No-load voltage<br>LAS-120H-470A<br>LAS-120H-470A-XP      | -           | -              | 520V   | -                             |

|                                                                                  |                |                               |     |      |
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## Output characteristics

| Parameter                                              | Min | Typ. | Max   | Remark                                       |
|--------------------------------------------------------|-----|------|-------|----------------------------------------------|
| Efficiency@230Vac<br>LAS-120H-470A<br>LAS-120H-470A-XP | -   | 95%  | -     | @230Vac input ,with full load                |
| Accuracy of output current                             | -5% | -    | +5%   | For constant-power range ,<br>with full load |
| Line regulation                                        | -3% | -    | +3%   | full load                                    |
| Load regulation                                        | -3% | -    | +3%   | full load                                    |
| Starting time                                          | -   | -    | 500ms | 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;

## Protections

| Protection                      | description                                                                                                                                                                                                  |
|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Over temperature protection     | Could recover automatically; Bare plate test when the IC temperature is greater than $100 \pm 3$ C, the output power gradually decreases as the IC temperature increases.                                    |
| Input under-pressure protection | When the input voltage is less than 180 Vac, the output power gradually decreases with the decrease of the input voltage.                                                                                    |
| Output overload protection      | Overload protection is triggered when the load voltage is greater than $500 \pm 5$ Vdc; Protection mode: hiccup restart, which can be automatically restored after the load abnormal conditions are removed. |
| Output short circuit protection | Hiccup mode; it can be automatically restored after the abnormal conditions are removed.                                                                                                                     |

**Note:**

1. Unless otherwise specified, all parameters should be measured at the condition of 230Vac (50Hz) input ,with rated load ,and ambient temperature of 25°C;
2. Including setting error, linear adjustment rate and load adjustment rate;

|                                                                                  |                |                               |     |      |
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## Environmental characteristics

| Environmental categories     | Parameter                                                                                |
|------------------------------|------------------------------------------------------------------------------------------|
| Working temperature          | -40 ~ +55℃ @200-240Vac((Refer to "Service Life Curve"))                                  |
| Safety case temperature      | -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                         | 230Khrs min. MIL-HDBK-217F (Ta=25℃)                                                      |
| Lifetime                     | 50000 hours @230Vac,80% load, Tcase=75℃,.Refer to” Tcase VS Lifetime” curve for details. |

## Safety and EMC

| Safety categories    | Standard                                                                                                  |
|----------------------|-----------------------------------------------------------------------------------------------------------|
| Safety               | GB19510.1、GB19510.14、EN61347-1、EN61347-2-13、IEC61347-1、IEC61347-2-13、AS/NZS61347.1、AS61347.2.13、EN 62384; |
| EMC                  | EN 55015、EN 61547、EN 61000-3-2、GB/T 17743、GB17625.1、EN 61000-3-3                                          |
| Surge level          | Differential mode L-N ±4KV(2Ω),common mode L, N-PE±6KV (12Ω) Refer toIEC61000-4-5 2014                    |
| High-pot test        | I/P-PE :1.5KVac                                                                                           |
| Insulation impedance | I/P-PE:100MΩ / 500VDC; I/P-O/P:100MΩ / 500VDC / 25℃/ 70% RH                                               |
| Leakage current      | <5mA@230Vac                                                                                               |

### 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.**

|                                                                                  |                |                               |     |      |
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I-V Working area

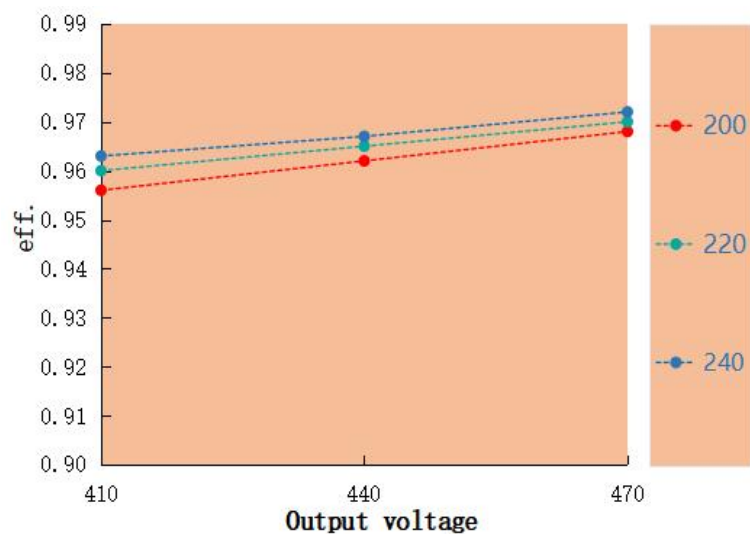
LAS-120H-470A

| Load                 | Output |        |        |        |        |        |       |
|----------------------|--------|--------|--------|--------|--------|--------|-------|
| Load working Voltage | 410V   | 420V   | 430V   | 440V   | 450V   | 460V   | 470V  |
| Io_MAX               | 0.26A  | 0.26A  | 0.26A  | 0.26A  | 0.26A  | 0.26A  | 0.26A |
| Po_MAX               | 106.6W | 109.2W | 111.8W | 114.4W | 117.0W | 119.6W | 120W  |

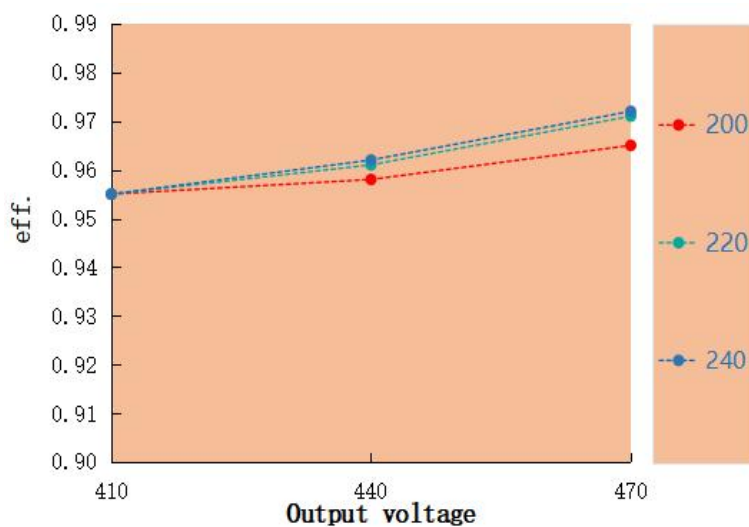
LAS-120H-470A-XP

| Load                 | Output |        |        |        |        |        |       |
|----------------------|--------|--------|--------|--------|--------|--------|-------|
| Load working Voltage | 410V   | 420V   | 430V   | 440V   | 450V   | 460V   | 470V  |
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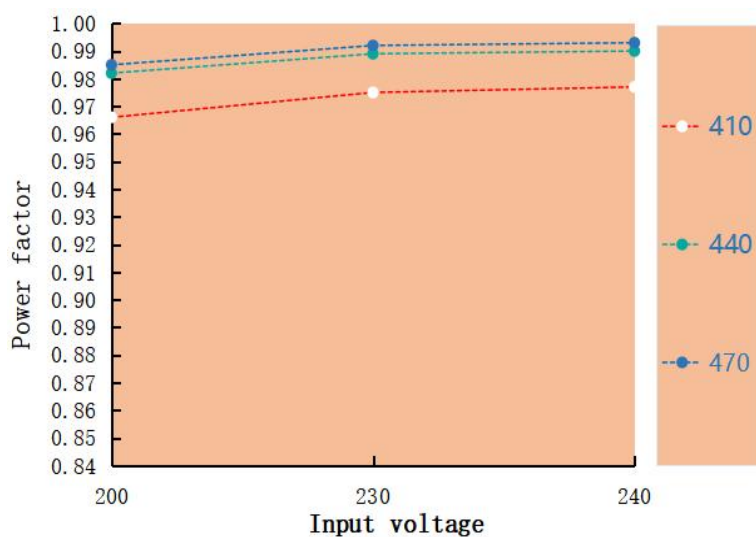
**Eff. VS Output voltage LAS-120H-470A**



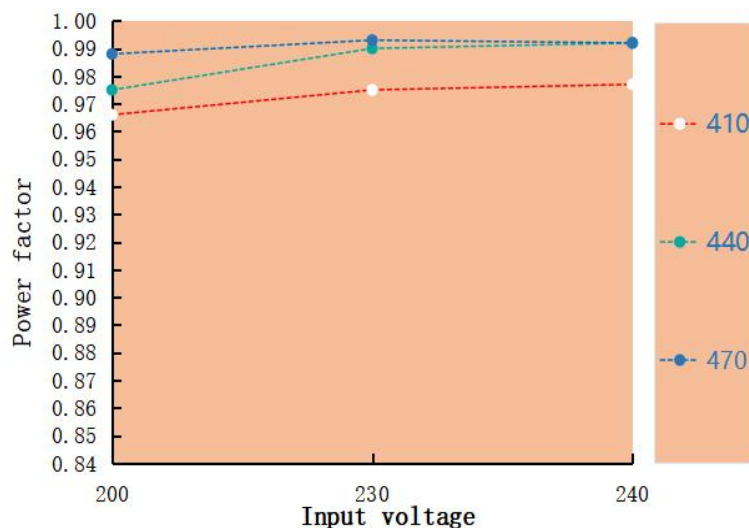
**Eff. VS Output voltage LAS-120H-470A-XP**



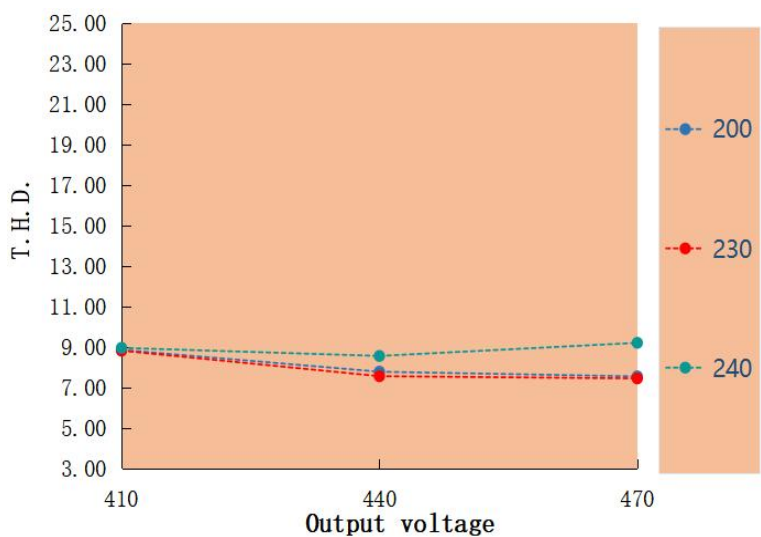
**Power factor VS Input voltage LAS-120H-470A**



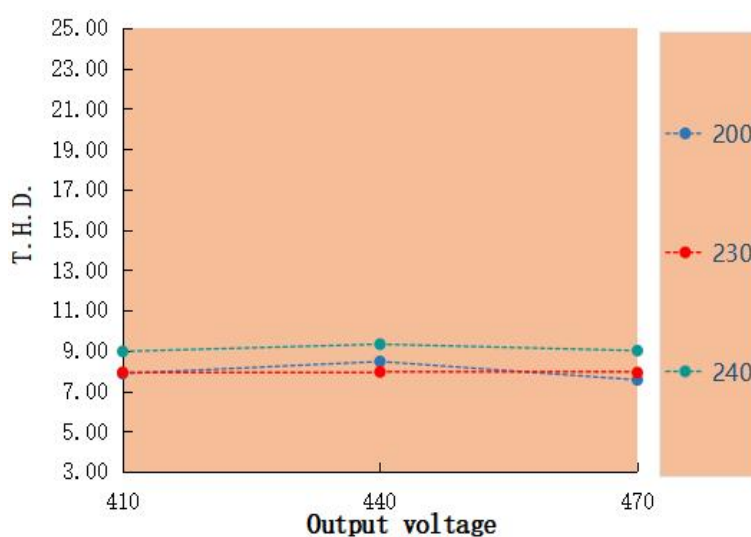
**Power factor VS Input voltage LAS-120H-470A-XP**



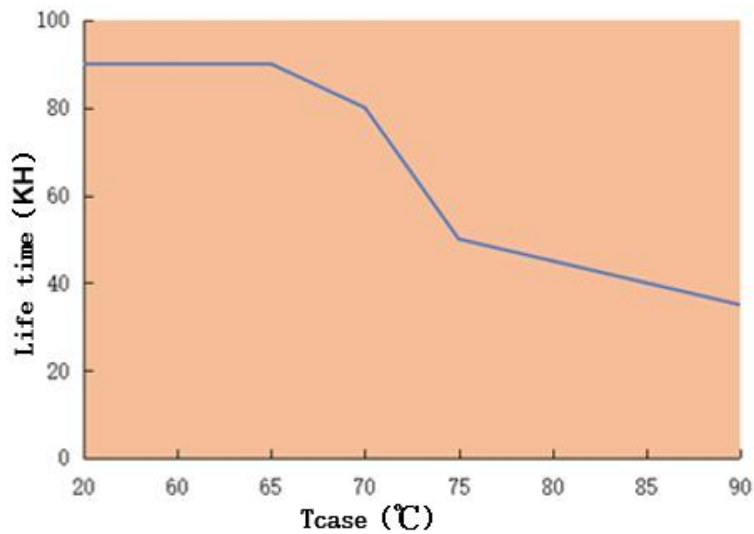
**T.H.D. VS Output voltage LAS-120H-470A**



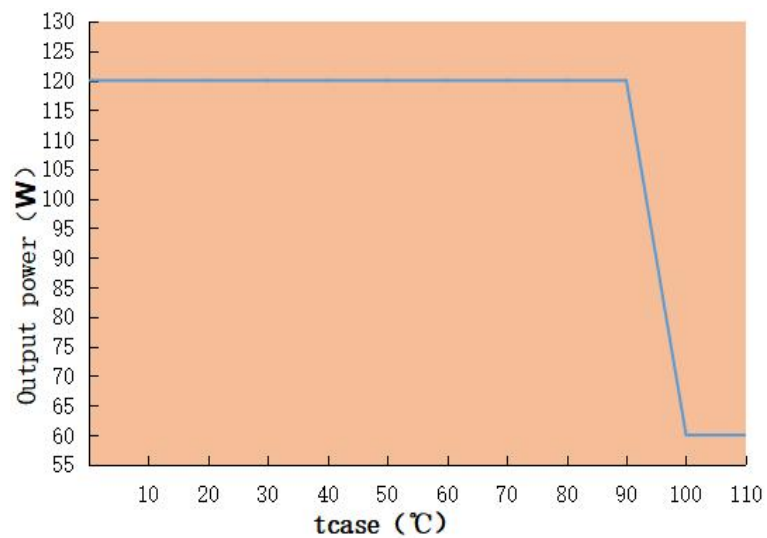
**T.H.D. VS Output voltage LAS-120H-470A-XP**



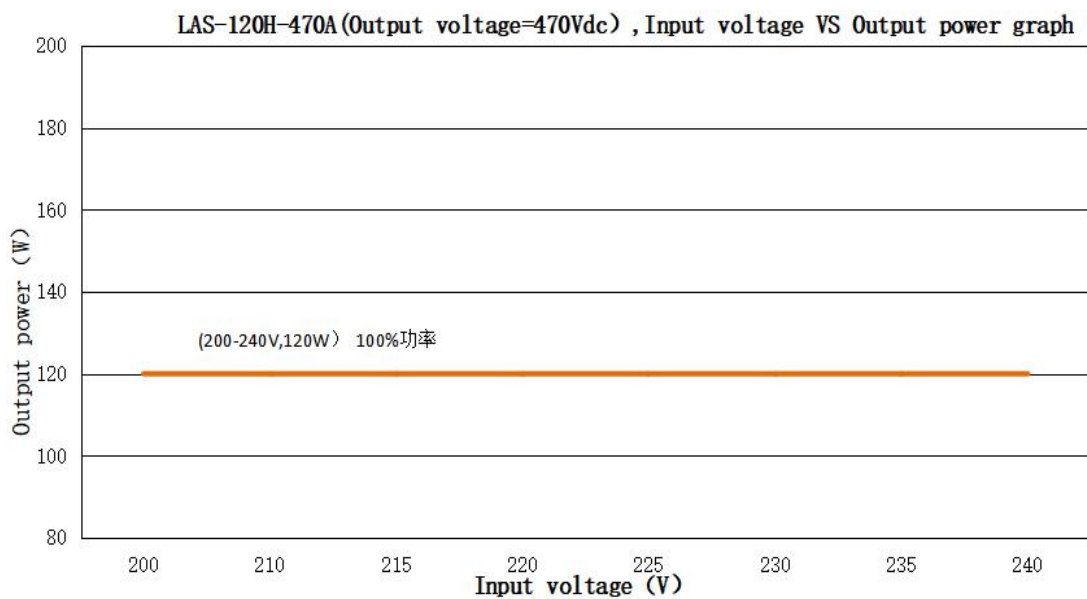
Tcase VS Life time LAS-120H-470A



Output power VS Tcase LAS-120H-470A



Output power VS Input voltage

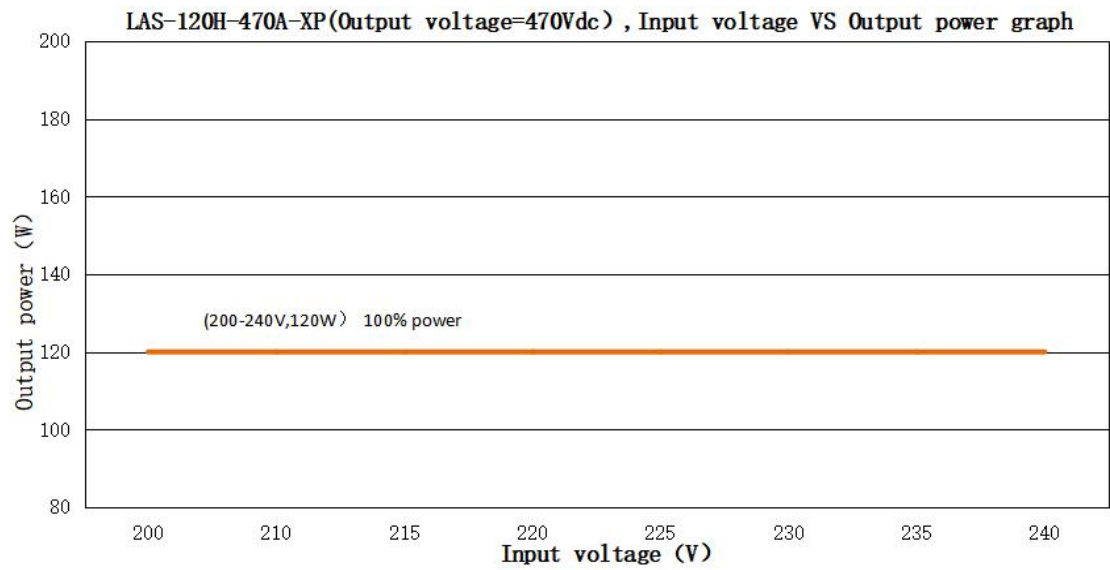


LAS-120H-470A(Vdc=470Vdc, the rated output current &amp; power under different input voltage)

| Input Voltage | 200Vac | 210Vac | 215Vac | 220Vac | 225Vac | 230Vac | 235Vac | 240Vac |
|---------------|--------|--------|--------|--------|--------|--------|--------|--------|
| Io            | 0.26A  | 0.26A  | 0.26A  | 0.26A  | 0.26A  | 0.26A  | 0.26A  | 0.26A  |
| Po            | 120W   | 120W   | 120W   | 120W   | 120W   | 120W   | 120W   | 120W   |

|                           |                |                               |     |      |
|---------------------------|----------------|-------------------------------|-----|------|
| <b>SUNCOM<sup>®</sup></b> | Product Type   | LED INTEGRATED SPECIAL DRIVER |     |      |
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Output power VS Input voltage



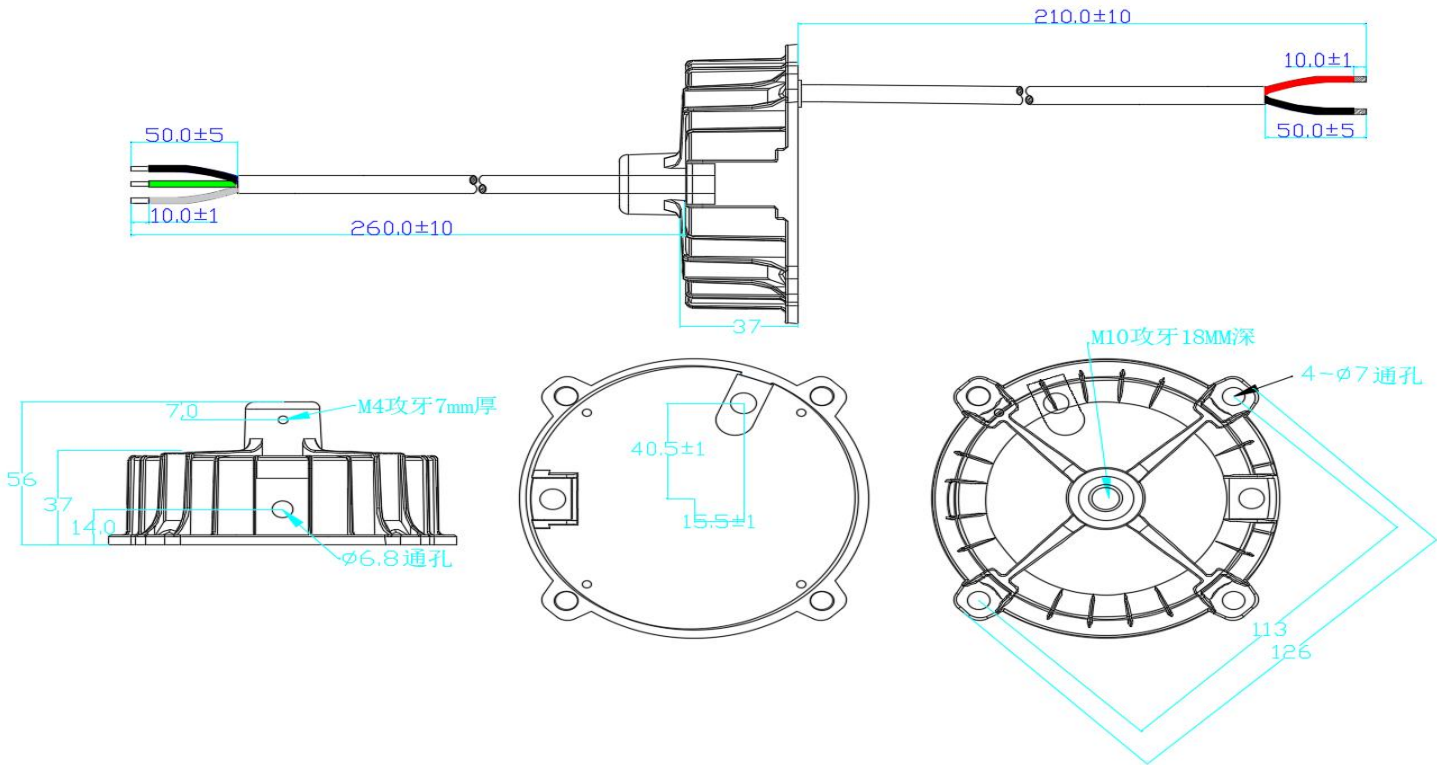
| LAS-120H-470A-XP(Vdc=470Vdc, the rated output current & power under different input voltage) |        |        |        |        |        |        |        |        |
|----------------------------------------------------------------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|
| Input Voltage                                                                                | 200Vac | 210Vac | 215Vac | 220Vac | 225Vac | 230Vac | 235Vac | 240Vac |
| Io                                                                                           | 0.26A  | 0.26A  | 0.26A  | 0.26A  | 0.26A  | 0.26A  | 0.26A  | 0.26A  |
| Po                                                                                           | 120W   | 120W   | 120W   | 120W   | 120W   | 120W   | 120W   | 120W   |

|                                                                                  |                |                               |     |      |
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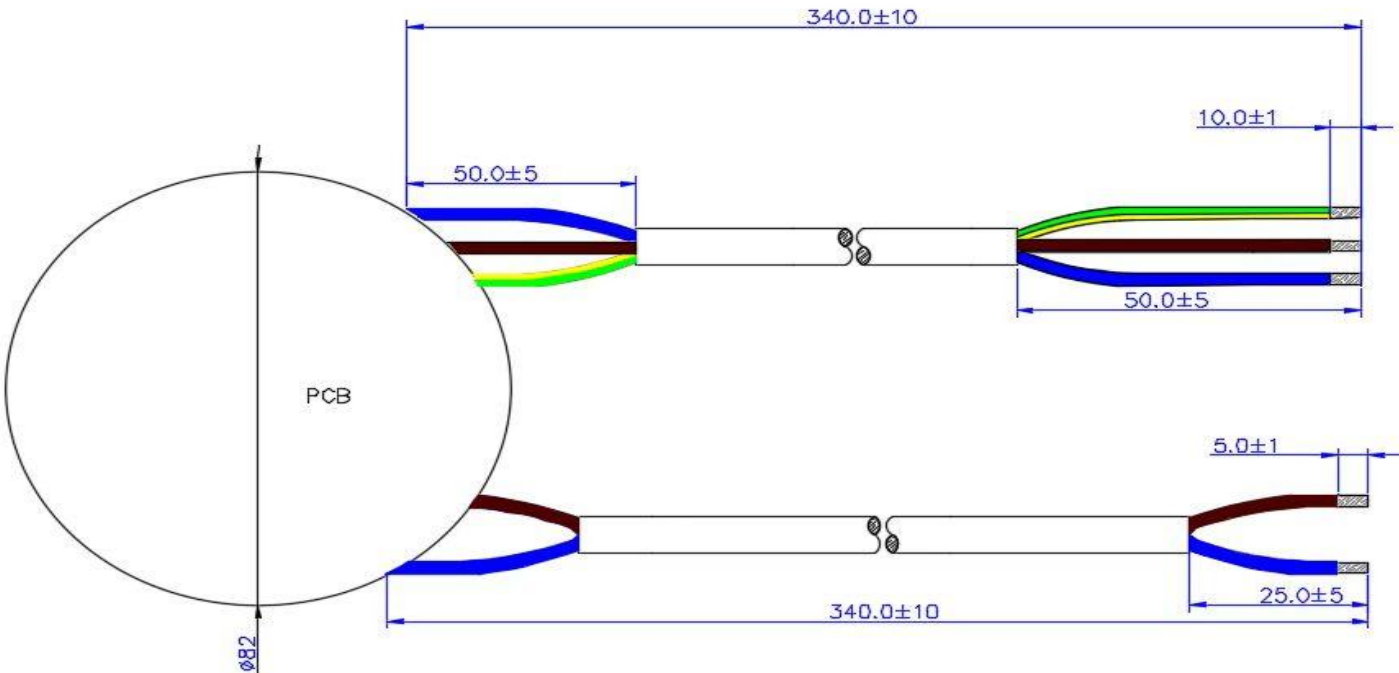
Mechanical specification

|             |                       |                          |  |  |
|-------------|-----------------------|--------------------------|--|--|
| Size (mm)   | Φ 126mm    H 56mm     |                          |  |  |
| Weight (Kg) | LAS-120H-470A    460g | LAS-120H-470A-XP    170g |  |  |

LAS-120H-470A



LAS-120H-470A-XP



|                                                                                  |                |                               |     |      |
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Version

| DATE       | DESCRIPTION                                  | REV. | CHECK |
|------------|----------------------------------------------|------|-------|
| 2023.04.15 | Initial version.                             | V1.0 |       |
| 2023.04.27 | Efficiency has been adjusted from 96% to 95% | V2.0 |       |