

ANP105 Series - 277V

Single Class 2 Output, Ballast Size,
CV / CC Mode, Dimmable LED Driver



Features and Applications:

- One Class 2 DC Output - 100W / 75W / 60W / 40W / 25W
- Active Power Factor Correction
- 100W / 75W / 60W: Silicone Encapsulated For Outdoor Wet and Indoor Damp and Dry Locations - IP67
- 40W / 25W: Indoor Usage - IP20
- Case Material - SECC
- Built-in EMI Filter For Low Noise
- Over-Current and Over-Voltage Protection with Auto-Recovery
- Dimmable Output in Both CV and CC Mode
- Match the Conventional Ballast Dimension

All specifications are typical at nominal input, full load, at 25°C unless otherwise stated.

Electrical Specifications

INPUT

| | |
|---------------------|------------------------------------------|
| Input Voltage Range | 90-305Vac (Rated 100-277Vac) |
| Input Frequency | 47 - 63Hz |
| Input Current | max. 1.5A@115Vac/60Hz,full load |
| Inrush Current | 80A @230Vac/60Hz,full load cold start |
| Leakage Current | 0.5mA max. |
| Power Factor | ≥0.9 at full load, entire input range |
| THD | <20% @ 80% load, 277Vac |

OUTPUT

| | |
|--------------------------|---------------------------------------------------------|
| Output Regulation | 5% (V for CV, I for CC mode) |
| Efficiency | See Table 1 @ Page 2 |
| Over Voltage Protection | <130% nominal voltage |
| Short Circuit Protection | Shutdown & Auto Recovery |
| OTP Protection | 1 or 2-Stage Protection (See Page 4 & 5 for Details) |
| Start-up Time | < 3 sec. |
| Dimming Control | 0 - 10Vdc (10V for max. output) |

Safety Certifications


| | |
|----|----------------------------------------------------------------------------------------------------|
| UL | UL879 (In SAM) UL8750, UL1310 (Class 2) E File#: E328880, E307120 100W/75W/60W: Wet Location |
|----|----------------------------------------------------------------------------------------------------|



General Specifications

| | |
|----------------------|---------------------------------------------------------------|
| Weight | TBD |
| Warranty Info / MTBF | Contact Amperor for detailed warranty and MTBF information |
| Dimension | 211mm x 41.4mm x 30mm 8.31" x 1.63" x 1.18" |

Environmental Specifications

| | |
|----------------------------|-------------------------------------------------------------------------------------------------|
| Min. Operating Temp. | -30°C @ Tambient |
| Max. Operating Temp. | 85°C @ Tcase |
| 2 Stage Thermal Protection | Output Drops to 50%@Tcase 85C (if applied, see page 5) Output Shutdown @ Tcase 95C |
| 1 Stage Thermal Protection | Output Shutdown @ Tcase 85C |
| Storage Temp. | -40°C to +85°C |
| Relative Humidity | 10% to 95% (non-Condensing) |
| Enclosure Sealed per | 100W / 75W / 60W - IP67 40W / 25W - IP20 |
| Cooling | Conduction |
| RoHS | Compliant  |

EMC / Safety

| | |
|---------------------|-------------------------------------------------------------|
| Conducted Emissions | EN55015,FCC part 15 level B |
| Radiated Emissions | EN55015,FCC part 15 level B |
| Surge | EN61000-4-5, Level 4, Criteria B (L&N/PE: 4KV, L/N: 2KV) |

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Order Information

Table1: ANP105-XXP1-277-WWW-UU Model vs. Output Specifications

| Model | Max. Output Voltage (V) | Rated Output Current (A) | Output Voltage Range (V) | Max. Output Power (W) | Min. Efficiency (115Vac input 100% load) |
|---------------------|-------------------------|--------------------------|--------------------------|-----------------------|------------------------------------------|
| ANP105-35P1-277-100 | 35 | 2.8 | 21 ~ 35 | 100 | 89.00% |
| ANP105-24P1-277-100 | 24 | 4.16 | 15 ~ 24 | 100 | 89.00% |
| ANP105-24P1-277-075 | 24 | 3.2 | 15 ~ 24 | 75 | 89.00% |
| ANP105-42P1-277-060 | 42 | 1.4 | 25 ~ 42 | 60 | 88.00% |
| ANP105-24P1-277-060 | 24 | 2.5 | 15 ~ 24 | 60 | 88.00% |
| ANP105-12P1-277-060 | 12 | 5 | 8 ~ 12 | 60 | 88.00% |
| ANP105-56P1-277-040 | 56 | 0.7 | 48 ~ 56 | 40 | 88.00% |
| ANP105-40P1-277-040 | 40 | 1 | 32 ~ 40 | 40 | 88.00% |
| ANP105-30P1-277-040 | 30 | 1.4 | 24 ~ 30 | 40 | 88.00% |
| ANP105-24P1-277-040 | 24 | 1.67 | 15 ~ 24 | 40 | 88.00% |
| ANP105-24P1-277-025 | 24 | 1.04 | 15 ~ 24 | 25 | 88.00% |

Notes:

How to Order with the Full Model Name - ANP105-XXP1-277-WWW-UU:

ANP105 - Amperor's Identification Name for this Driver Family

"XX" - Replaced by the Max. Output Voltage of the Driver. Ranging from 12 to 56.

P1 - This Driver does not Equipped with Output Voltage and Current Adjustment Knobs.

-277 - Rated AC Input Voltage: 100Vac - 277Vac

"WWW" - Replaced by the Max. Output Power of the Driver. Ranging from 25 to 100.

"UU" - Replaced by Dimming Options:

-**VD**: with CV mode Dimming,

-**CD**: with CC mode Dimming,

-**VN**: CV mode output without Dimming,

-**CN**: CC mode output without Dimming,

Examples:

ANP105-24P1-277-100-VD:

Max. 24V / 100W output, with CV mode dimmer built-in.

ANP105-12P1-277-060-CN:

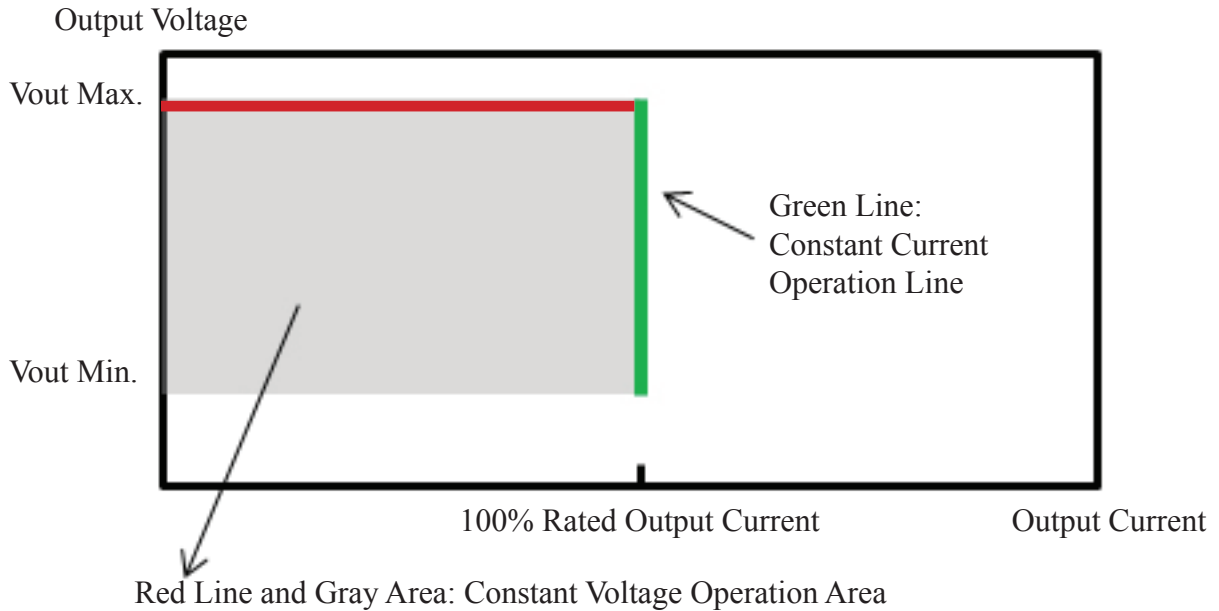
5A / 60W, CC mode output, w/o dimming function built-in.

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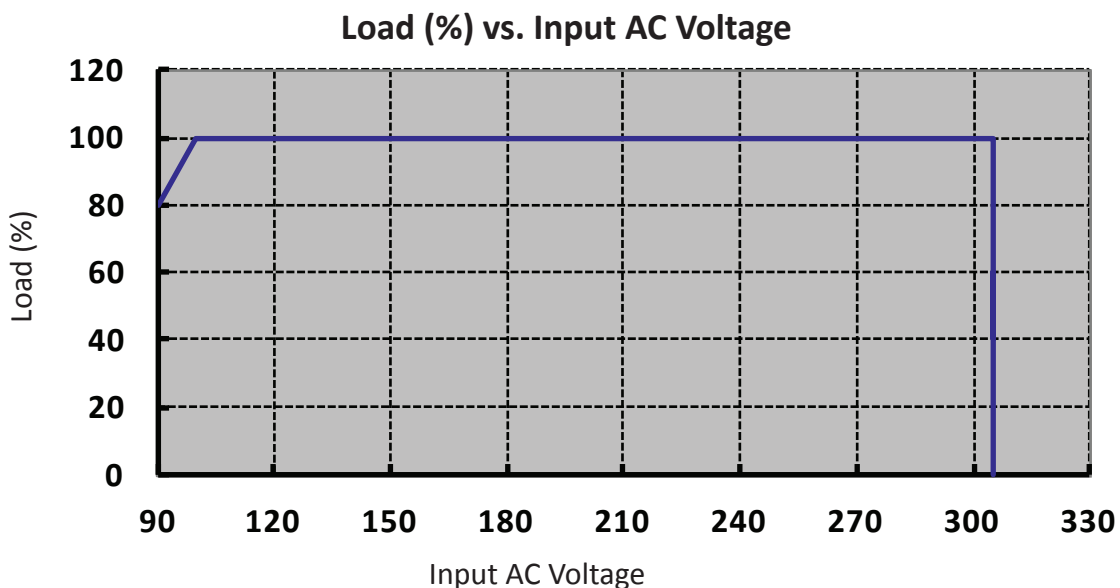


Constant Current / Constant Voltage Operation



1. If the current draw from the load is equal to the rated output current of the driver, the driver will operate in CC mode. (on the **Green Line** above)
2. If the current draw from the load is less than the rated output current of the driver, the driver will operate in CV mode. When working with the CV mode LED light tube / module / strip, the driver operates on the **Red Line** above. Please contact Amperor for detailed explanation.

Derating Curve - Output Current vs. Input Voltage

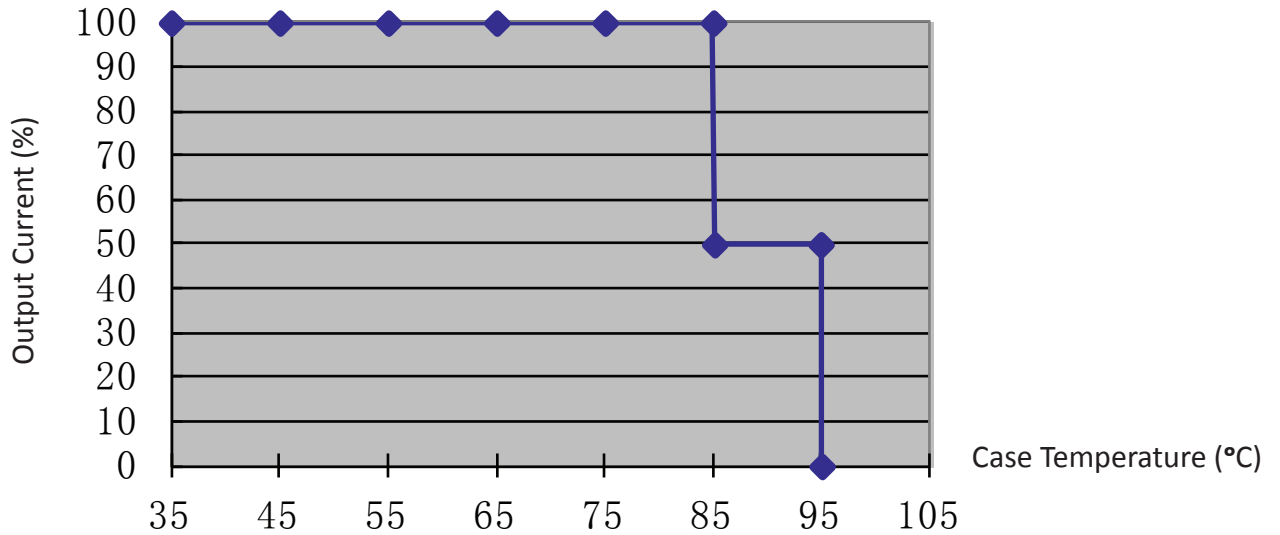


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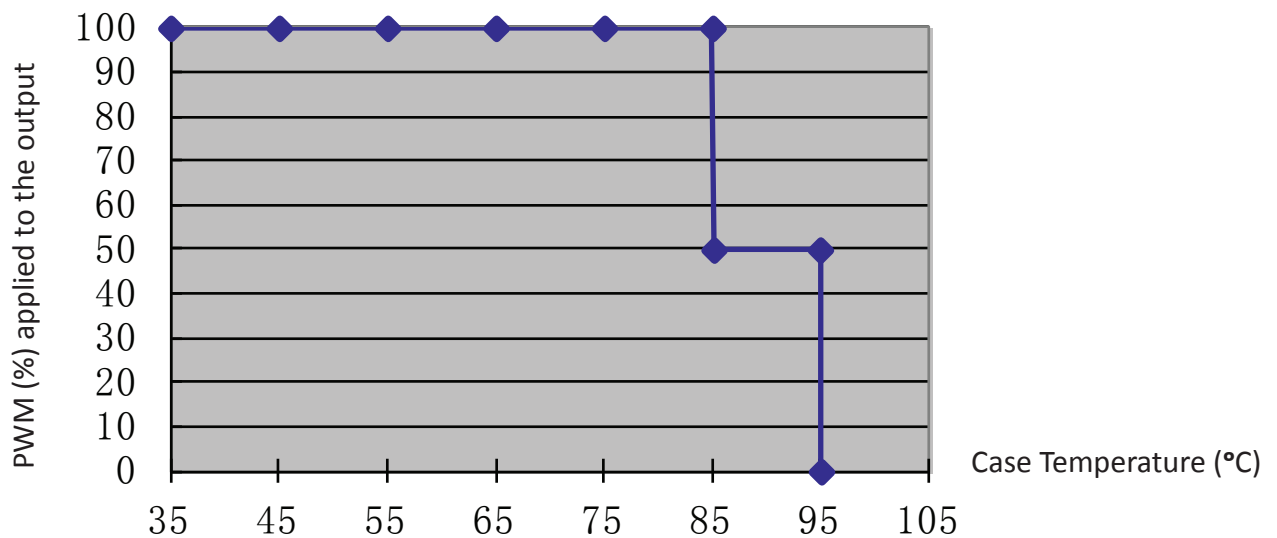


2 Stage OTP Operation in CC mode (both CD and CN options) - 100W / 75W



Note: The min. temperature the driver can operate in is -30°C (Ambient Temperature)

2 Stage OTP Operation in CV mode (only VD option) - 100W / 75W



Note: The min. temperature the driver can operate in is -30°C (Ambient Temperature)

All other models that are not listed above, is using the 1 Stage OTP scheme - the output will shut-down at $T_{case} = 85^{\circ}C$. See page 5 for the full list.

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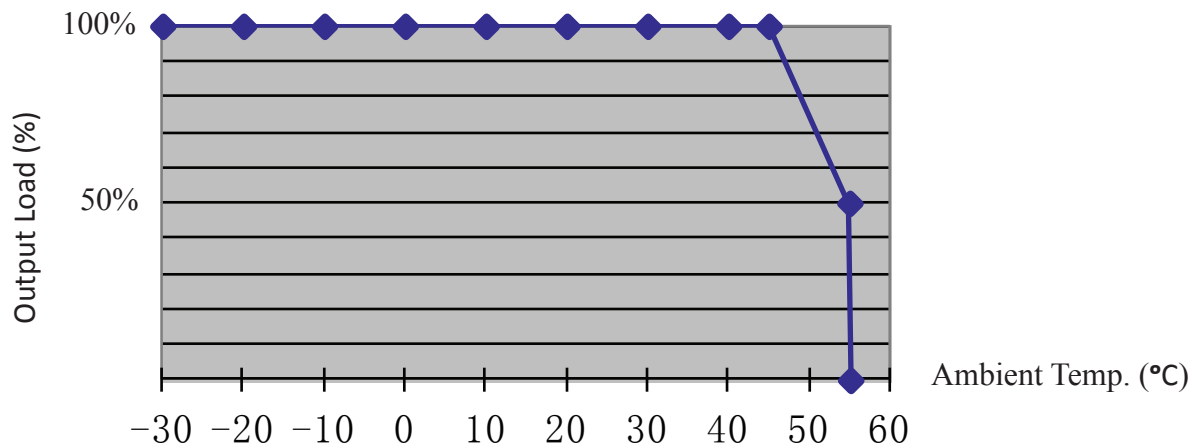
Model Name vs. OTP Scheme Type

| Model | OTP Type |
|------------------------|-----------------|
| ANP105-35P1-277-100-CD | 2 Stage |
| ANP105-35P1-277-100-CN | 2 Stage |
| ANP105-35P1-277-100-VD | 2 Stage |
| ANP105-35P1-277-100-VN | 2 Stage, Note 1 |
| ANP105-24P1-277-100-CD | 2 Stage |
| ANP105-24P1-277-100-CN | 2 Stage |
| ANP105-24P1-277-100-VD | 2 Stage |
| ANP105-24P1-277-100-VN | 2 Stage, Note 1 |
| ANP105-24P1-277-075-CD | 2 Stage |
| ANP105-24P1-277-075-CN | 2 Stage |
| ANP105-24P1-277-075-VD | 2 Stage |
| ANP105-24P1-277-075-VN | 2 Stage, Note 1 |
| ANP105-42P1-277-060-CD | 1 Stage |
| ANP105-42P1-277-060-CN | 1 Stage |
| ANP105-42P1-277-060-VD | 1 Stage |
| ANP105-42P1-277-060-VN | 1 Stage |
| ANP105-24P1-277-060-CD | 1 Stage |
| ANP105-24P1-277-060-CN | 1 Stage |
| ANP105-24P1-277-060-VD | 1 Stage |
| ANP105-24P1-277-060-VN | 1 Stage |
| ANP105-12P1-277-060-CD | 1 Stage |
| ANP105-12P1-277-060-CN | 1 Stage |

| Model | OTP Type |
|------------------------|----------|
| ANP105-12P1-277-060-VD | 1 Stage |
| ANP105-12P1-277-060-VN | 1 Stage |
| ANP105-56P1-277-040-CD | 1 Stage |
| ANP105-56P1-277-040-CN | 1 Stage |
| ANP105-56P1-277-040-VD | 1 Stage |
| ANP105-56P1-277-040-VN | 1 Stage |
| ANP105-40P1-277-040-CD | 1 Stage |
| ANP105-40P1-277-040-CN | 1 Stage |
| ANP105-40P1-277-040-VD | 1 Stage |
| ANP105-40P1-277-040-VN | 1 Stage |
| ANP105-30P1-277-040-CD | 1 Stage |
| ANP105-30P1-277-040-CN | 1 Stage |
| ANP105-30P1-277-040-VD | 1 Stage |
| ANP105-30P1-277-040-VN | 1 Stage |
| ANP105-24P1-277-040-CD | 1 Stage |
| ANP105-24P1-277-040-CN | 1 Stage |
| ANP105-24P1-277-040-VD | 1 Stage |
| ANP105-24P1-277-040-VN | 1 Stage |
| ANP105-24P1-277-025-CD | 1 Stage |
| ANP105-24P1-277-025-CN | 1 Stage |
| ANP105-24P1-277-025-VD | 1 Stage |
| ANP105-24P1-277-025-VN | 1 Stage |

Note 1: The 1st OTP is achieved by limiting the output current to 50% of the max. load.

Suggested De-rating Curve for Models with 1 Stage OTP Scheme

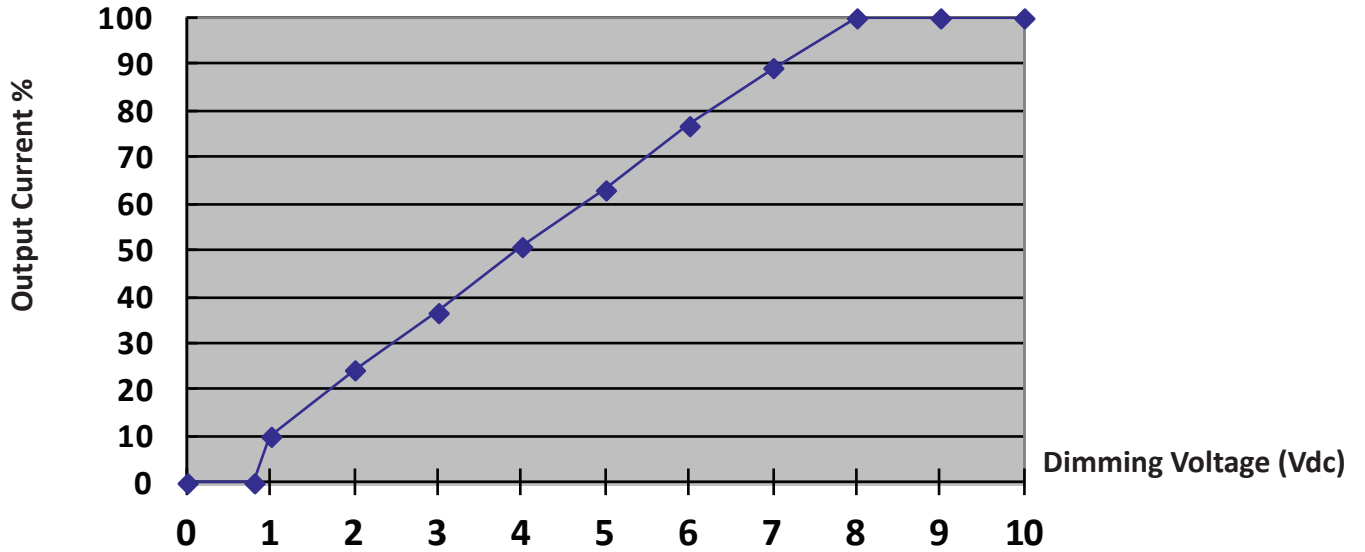


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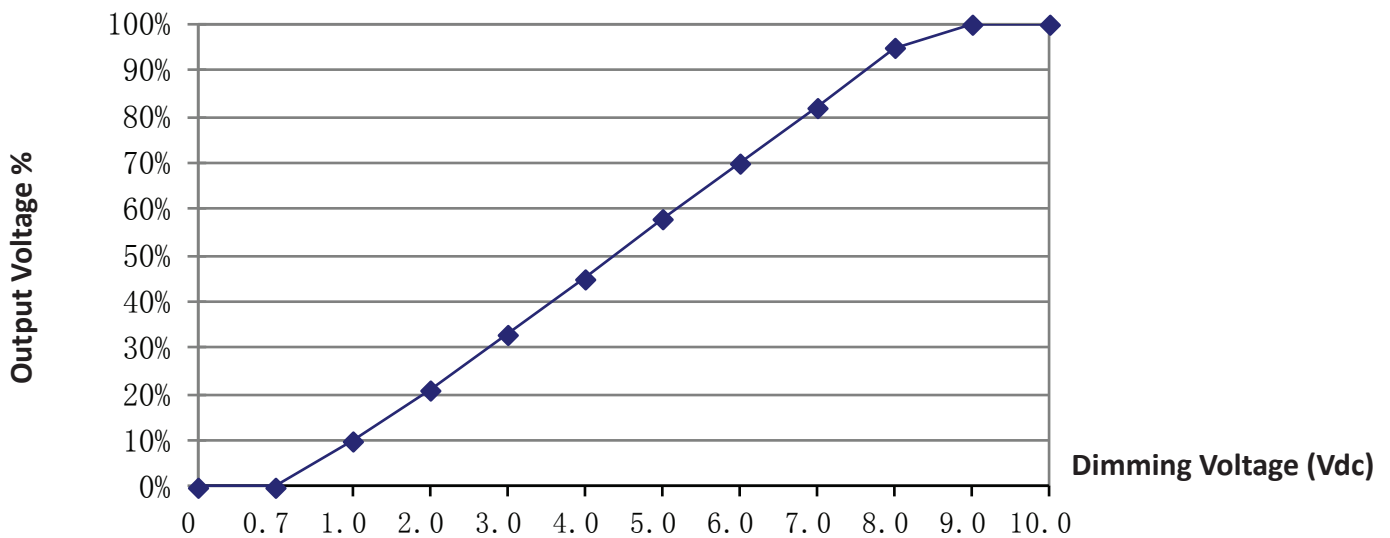
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Constant Current Output Dimming Curve



Constant Voltage Output Dimming Curve

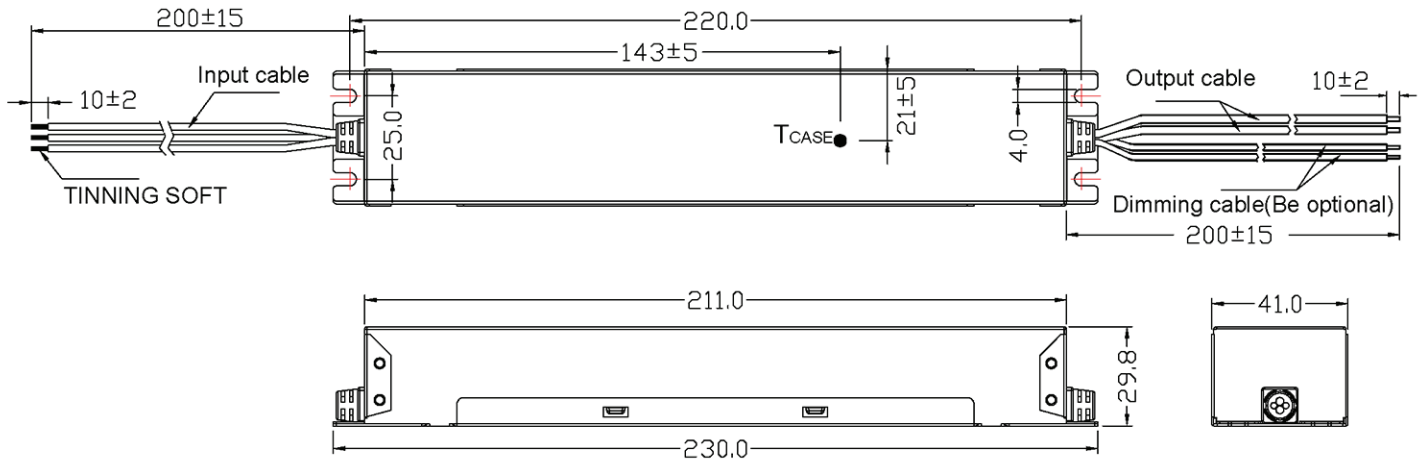


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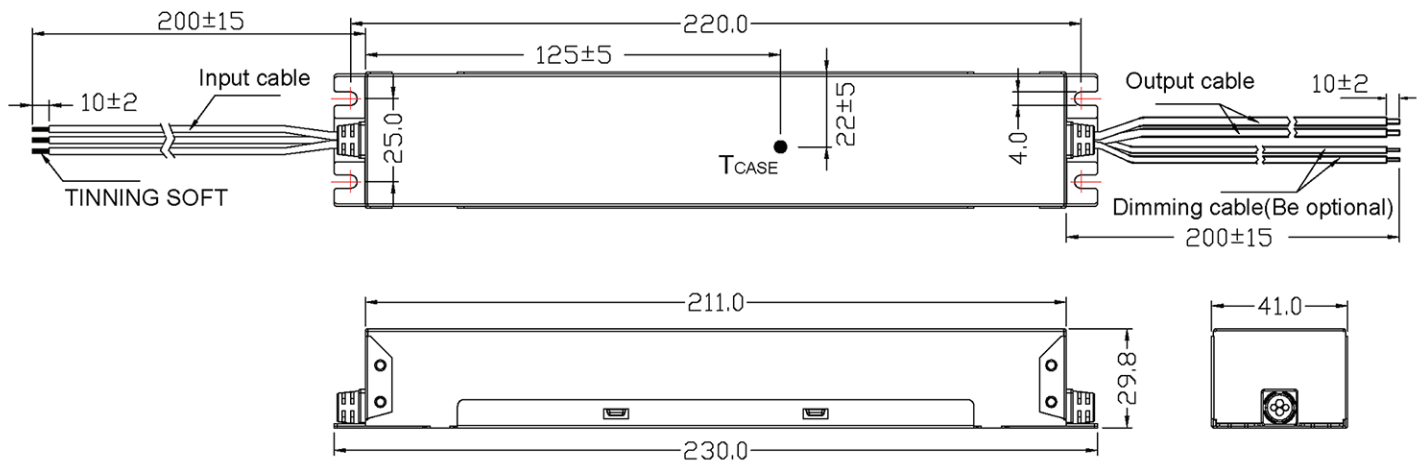
Single Class 2 Output, Ballast Size,
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AmperorTM
power by design

100W / 75W / 60W Mechanical Drawing



40W / 25W Mechanical Drawing



NOTE:

1. AC input cable:UL1015 18AWG,white(L),black(N),yellow/green(G);
2. DC output cable :UL1015 18AWG,red(+),black(-);
Dimming cable(Be optional):UL1015 22AWG,violet(+),gray(-);
3. Tcase is CASE's Max temperature.
4. Other ALL TOLERANCE: ±0.5
- 5.UNIT:MM