



120W Constant Voltage + Constant Current LED Driver

**NPF-120** series



## ■ Features

- Constant Voltage + Constant Current mode output
- Plastic housing with Class II design
- Built-in active PFC function
- No load power consumption <0.15W
- IP67 rating for indoor or outdoor installations
- Typical lifetime >50000 hours
- 5 years warranty

## ■ Applications

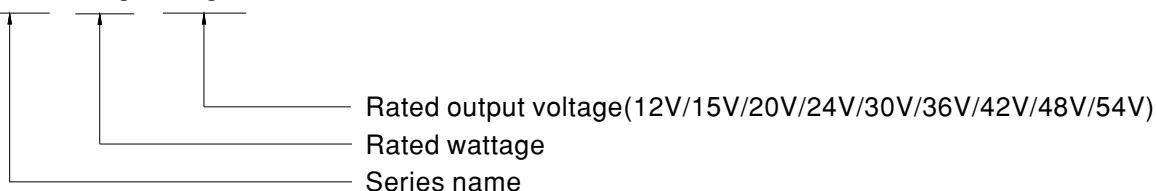
- LED panel lighting
- LED downlight
- LED decorative lighting
- LED tunnel lighting
- Moving sign
- Type "HL" for use in Class I, Division 2 hazardous (Classified) location

## ■ Description

NPF-120 series is a 120W AC/DC LED driver featuring the dual modes constant voltage and constant current output. NPF-120 operates from 90~305VAC and offers models with different rated voltage ranging between 12V and 54V. Thanks to the high efficiency up to 90.5%, with the fanless design, the entire series is able to operate for -40°C ~ +90°C case temperature under free air convection. The entire series is rated with IP67 ingress protection level and is suitable to work for a variety of applications at dry, damp or wet locations.

## ■ Model Encoding

**NPF - 120 - 20**





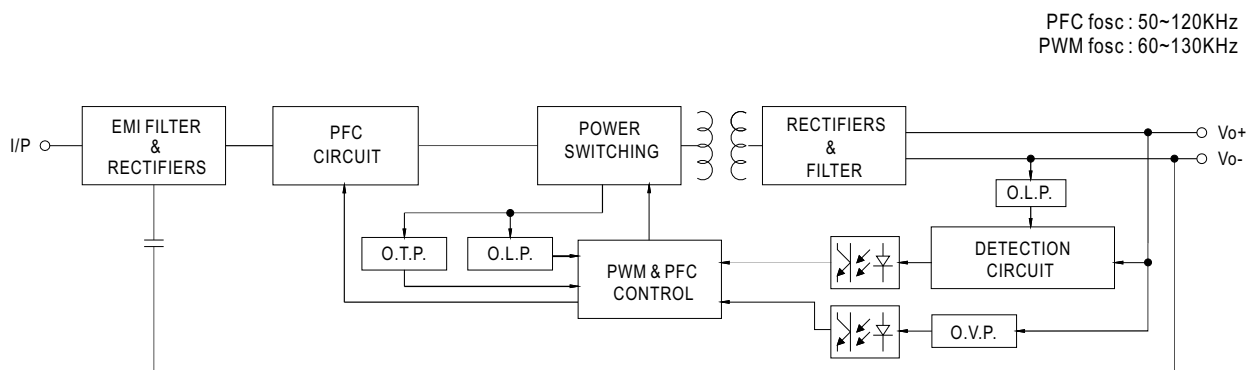
## 120W Constant Voltage + Constant Current LED Driver

## NPF-120 series

## SPECIFICATION

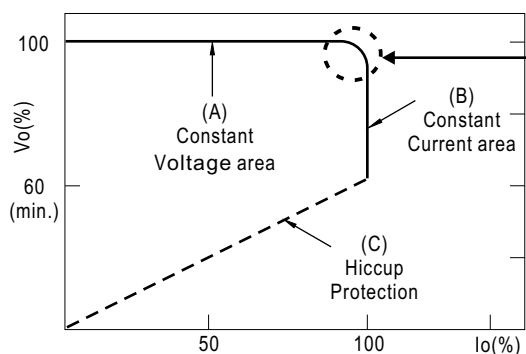
| MODEL               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | NPF-120-12                                                                                                                                                                   | NPF-120-15 | NPF-120-20 | NPF-120-24 | NPF-120-30 | NPF-120-36 | NPF-120-42 | NPF-120-48 | NPF-120-54 |  |
|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|------------|------------|------------|------------|------------|------------|------------|--|
| OUTPUT              | DC VOLTAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 12V                                                                                                                                                                          | 15V        | 20V        | 24V        | 30V        | 36V        | 42V        | 48V        | 54V        |  |
|                     | CONSTANT CURRENT REGION <small>Note.2</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 7.2 ~ 12V                                                                                                                                                                    | 9 ~ 15V    | 12 ~ 20V   | 14.4 ~ 24V | 18 ~ 30V   | 21.6 ~ 36V | 25.2 ~ 42V | 28.8 ~ 48V | 32.4 ~ 54V |  |
|                     | RATED CURRENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 10A                                                                                                                                                                          | 8A         | 6A         | 5A         | 4A         | 3.4A       | 2.9A       | 2.5A       | 2.3A       |  |
|                     | RATED POWER <small>Note.5</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 120W                                                                                                                                                                         | 120W       | 120W       | 120W       | 120W       | 122.4W     | 121.8W     | 120W       | 124.2W     |  |
|                     | RIPPLE & NOISE (max.) <small>Note.3</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 150mVp-p                                                                                                                                                                     | 150mVp-p   | 150mVp-p   | 150mVp-p   | 200mVp-p   | 200mVp-p   | 250mVp-p   | 250mVp-p   | 350mVp-p   |  |
|                     | VOLTAGE TOLERANCE <small>Note.4</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | ±4.0%                                                                                                                                                                        | ±4.0%      | ±4.0%      | ±4.0%      | ±3.0%      | ±2.0%      | ±1.0%      | ±1.0%      | ±1.0%      |  |
|                     | LINE REGULATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | ±0.5%                                                                                                                                                                        | ±0.5%      | ±0.5%      | ±0.5%      | ±0.5%      | ±0.5%      | ±0.5%      | ±0.5%      | ±0.5%      |  |
|                     | LOAD REGULATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | ±2.0%                                                                                                                                                                        | ±1.5%      | ±1.0%      | ±0.5%      | ±0.5%      | ±0.5%      | ±0.5%      | ±0.5%      | ±0.5%      |  |
|                     | SETUP, RISE TIME <small>Note.6</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 500ms, 80ms 115VAC / 230VAC                                                                                                                                                  |            |            |            |            |            |            |            |            |  |
| HOLD UP TIME (Typ.) | 16ms/230VAC 16ms/115VAC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                              |            |            |            |            |            |            |            |            |  |
| INPUT               | VOLTAGE RANGE <small>Note.5</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 90 ~ 305VAC 127 ~ 431VDC<br>(Please refer to "STATIC CHARACTERISTIC" section)                                                                                                |            |            |            |            |            |            |            |            |  |
|                     | FREQUENCY RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 47 ~ 63Hz                                                                                                                                                                    |            |            |            |            |            |            |            |            |  |
|                     | POWER FACTOR                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | PF ≥ 0.97/115VAC, PF ≥ 0.96/230VAC, PF ≥ 0.94/277VAC@full load<br>(Please refer to "POWER FACTOR (PF) CHARACTERISTIC" section)                                               |            |            |            |            |            |            |            |            |  |
|                     | TOTAL HARMONIC DISTORTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | THD< 20% (@load≥60%/115VAC, 230VAC; @load≥75%/277VAC)<br>(Please refer to "TOTAL HARMONIC DISTORTION(THD)" section)                                                          |            |            |            |            |            |            |            |            |  |
|                     | EFFICIENCY (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 89%                                                                                                                                                                          | 89%        | 90%        | 90.5%      | 89.5%      | 90%        | 90%        | 90%        | 90.5%      |  |
|                     | AC CURRENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 1.3A / 115VAC 0.65A / 230VAC 0.55A / 277VAC                                                                                                                                  |            |            |            |            |            |            |            |            |  |
|                     | INRUSH CURRENT(Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | COLD START 60A(twidth=520μs measured at 50% Ipeak) at 230VAC; Per NEMA 410                                                                                                   |            |            |            |            |            |            |            |            |  |
|                     | MAX. No. of PSUs on 16A CIRCUIT BREAKER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 4 units (circuit breaker of type B) / 6 units (circuit breaker of type C) at 230VAC                                                                                          |            |            |            |            |            |            |            |            |  |
|                     | LEAKAGE CURRENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <0.25mA / 277VAC                                                                                                                                                             |            |            |            |            |            |            |            |            |  |
|                     | NO LOAD POWER CONSUMPTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <0.15W                                                                                                                                                                       |            |            |            |            |            |            |            |            |  |
| PROTECTION          | OVER CURRENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 95 ~ 108%<br>Constant current limiting, recovers automatically after fault condition is removed                                                                              |            |            |            |            |            |            |            |            |  |
|                     | SHORT CIRCUIT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Hiccup mode, recovers automatically after fault condition is removed                                                                                                         |            |            |            |            |            |            |            |            |  |
|                     | OVER VOLTAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 15 ~ 17V                                                                                                                                                                     | 17.5 ~ 21V | 23 ~ 27V   | 28 ~ 34V   | 34 ~ 40V   | 41 ~ 46V   | 46 ~ 54V   | 54 ~ 60V   | 59 ~ 66V   |  |
|                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Shut down and latch off o/p voltage, re-power on to recover                                                                                                                  |            |            |            |            |            |            |            |            |  |
|                     | OVER TEMPERATURE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Shut down o/p voltage, re-power on to recover                                                                                                                                |            |            |            |            |            |            |            |            |  |
| ENVIRONMENT         | WORKING TEMP.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Tcase=-40 ~ +90℃ (Please refer to " OUTPUT LOAD vs TEMPERATURE" section)                                                                                                     |            |            |            |            |            |            |            |            |  |
|                     | MAX. CASE TEMP.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Tcase=+90℃                                                                                                                                                                   |            |            |            |            |            |            |            |            |  |
|                     | WORKING HUMIDITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 20 ~ 95% RH non-condensing                                                                                                                                                   |            |            |            |            |            |            |            |            |  |
|                     | STORAGE TEMP., HUMIDITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | -40 ~ +80℃, 10 ~ 95% RH                                                                                                                                                      |            |            |            |            |            |            |            |            |  |
|                     | TEMP. COEFFICIENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ±0.03%/℃ (0 ~ 50℃)                                                                                                                                                           |            |            |            |            |            |            |            |            |  |
|                     | VIBRATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 10 ~ 500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes                                                                                                      |            |            |            |            |            |            |            |            |  |
| SAFETY & EMC        | SAFETY STANDARDS <small>Note.8</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | UL8750(type"HL"), CSA C22.2 No. 250.13-12, ENEC EN61347-1, EN61347-2-13 independent, EN62384, EAC TP TC 004, GB19510.1, GB19510.14, IP67 approved; Design refer to EN60335-1 |            |            |            |            |            |            |            |            |  |
|                     | WITHSTAND VOLTAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | I/P-O/P:3.75KVAC                                                                                                                                                             |            |            |            |            |            |            |            |            |  |
|                     | ISOLATION RESISTANCE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | I/P-O/P:100M Ohms / 500VDC / 25℃ / 70% RH                                                                                                                                    |            |            |            |            |            |            |            |            |  |
|                     | EMC EMISSION <small>Note.8</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Compliance to EN55015,EN61000-3-2 Class C (@load ≥ 60%) ; EN61000-3-3; GB17743 and GB17625.1, EAC TP TC 020                                                                  |            |            |            |            |            |            |            |            |  |
|                     | EMC IMMUNITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Compliance to EN61000-4-2,3,4,5,6,8,11; EN61547, light industry level (surge immunity Line-Line 2KV); EAC TP TC 020                                                          |            |            |            |            |            |            |            |            |  |
| OTHERS              | MTBF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 965.5K hrs min. Telcordia SR-332 (Bellcore) ; 295.1Khrs min. MIL-HDBK-217F (25℃)                                                                                             |            |            |            |            |            |            |            |            |  |
|                     | DIMENSION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 191*63*37.5mm (L*W*H)                                                                                                                                                        |            |            |            |            |            |            |            |            |  |
|                     | PACKING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 0.97Kg; 15pcs/15.6Kg/0.87CUFT                                                                                                                                                |            |            |            |            |            |            |            |            |  |
| NOTE                | <div>1. All parameters NOT specially mentioned are measured at 230VAC input, rated current and 25℃ of ambient temperature.</div> <div>2. Please refer to "DRIVING METHODS OF LED MODULE".</div> <div>3. Ripple &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf &amp; 47uf parallel capacitor.</div> <div>4. Tolerance : includes set up tolerance, line regulation and load regulation.</div> <div>5. De-rating may be needed under low input voltages. Please refer to "STATIC CHARACTERISTIC" sections for details.</div> <div>6. Length of set up time is measured at first cold start. Turning ON/OFF the driver may lead to increase of the set up time.</div> <div>7. The driver is considered as a component that will be operated in combination with 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.</div> <div>8. This series meets the typical life expectancy of &gt;50,000 hours of operation when Tcase, particularly (Tc) point (or TMP, per DLC), is about 75℃ or less.</div> <div>9. Please refer to the warranty statement on MEAN WELL's website at <a href="http://www.meanwell.com">http://www.meanwell.com</a></div> <div>10. The ambient temperature derating of 3.5℃/1000m with fanless models and of 5℃/1000m with fan models for operating altitude higher than 2000m(6500ft).</div> <div>11. For any application note and IP water proof function installation caution, please refer our user manual before using.</div> <div><a href="https://www.meanwell.com/Upload/PDF/LED_EN.pdf">https://www.meanwell.com/Upload/PDF/LED_EN.pdf</a></div> <div>※ Product Liability Disclaimer : For detailed information, please refer to <a href="https://www.meanwell.com/serviceDisclaimer.aspx">https://www.meanwell.com/serviceDisclaimer.aspx</a></div> |                                                                                                                                                                              |            |            |            |            |            |            |            |            |  |

## ■ BLOCK DIAGRAM



## ■ DRIVING METHODS OF LED MODULE

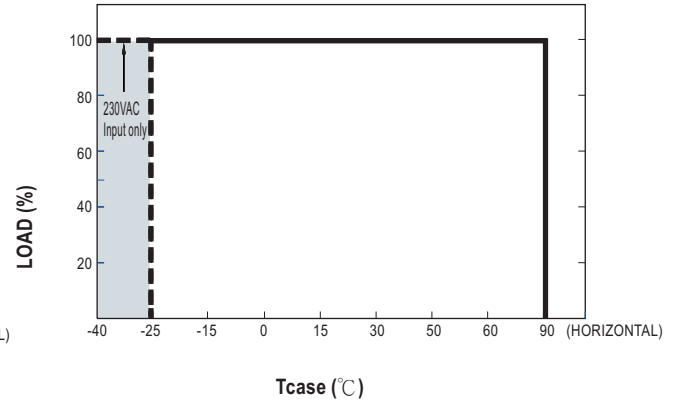
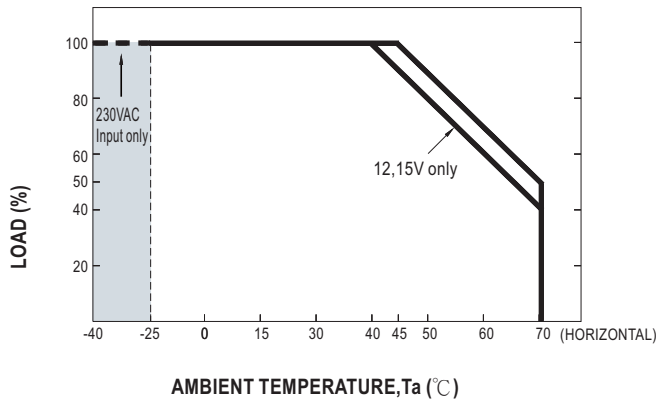
※ This series is able to work in either Constant Current mode (a direct drive way) or Constant Voltage mode (usually through additional DC/DC driver) to drive the LEDs.



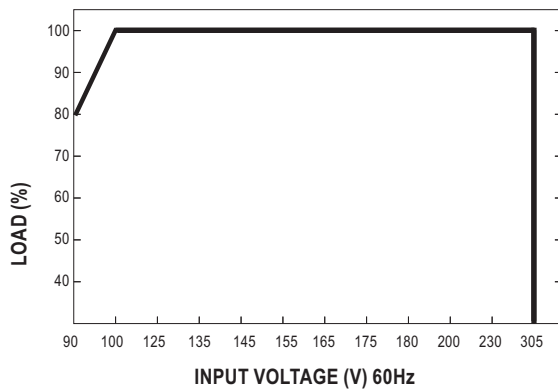
Typical output current normalized by rated current (%)

In the constant current region, the highest voltage at the output of the driver depends on the configuration of the end systems.  
Should there be any compatibility issues, please contact MEAN WELL.

### OUTPUT LOAD vs TEMPERATURE



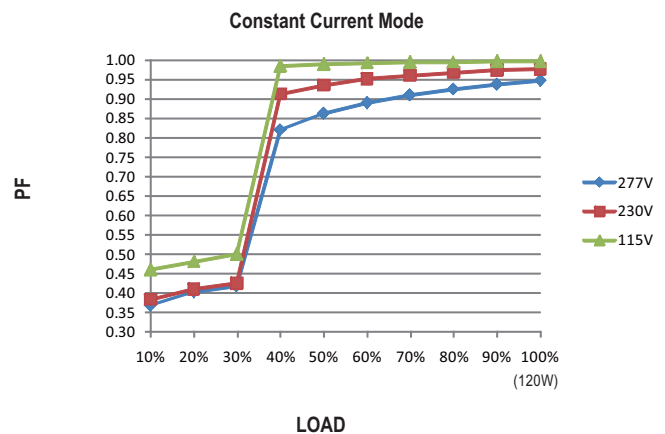
### STATIC CHARACTERISTIC



※ De-rating is needed under low input voltage.

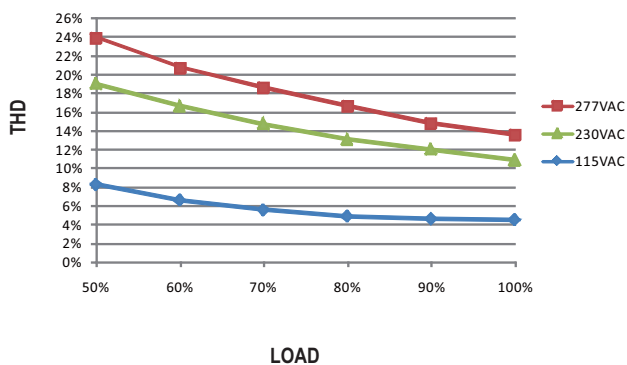
### POWER FACTOR (PF) CHARACTERISTIC

※ Tcase at 80°C



### TOTAL HARMONIC DISTORTION (THD)

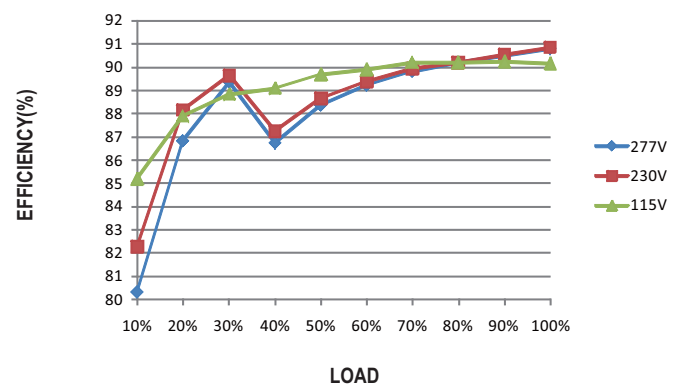
※ 48V Model, Tcase at 80°C



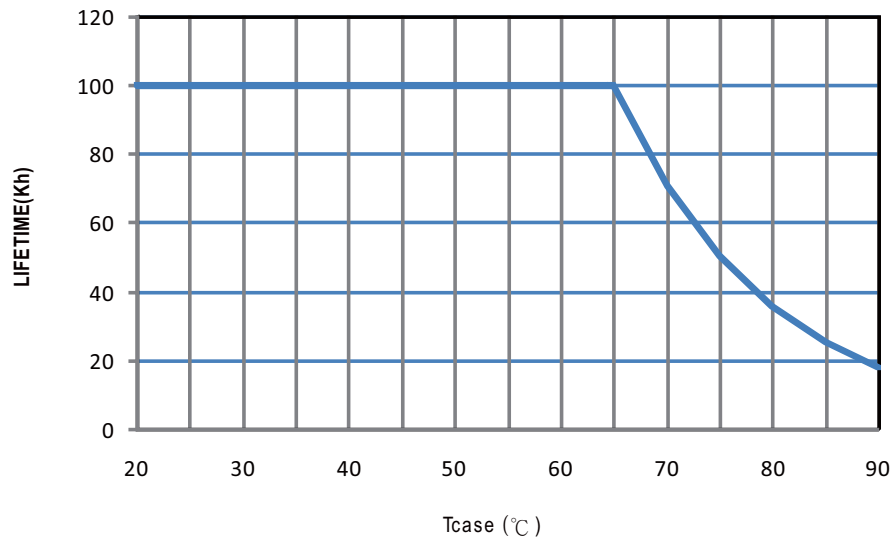
### EFFICIENCY vs LOAD

NPF-120 series possess superior working efficiency that up to 90% can be reached in field applications.

※ 48V Model, Tcase at 80°C

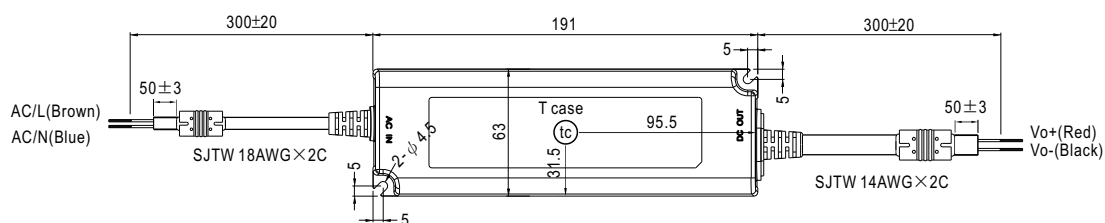


■ LIFE TIME

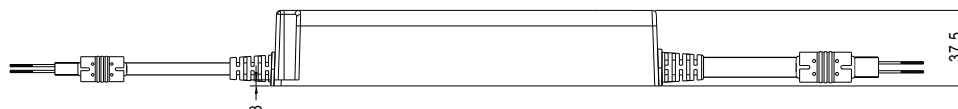


## MECHANICAL SPECIFICATION

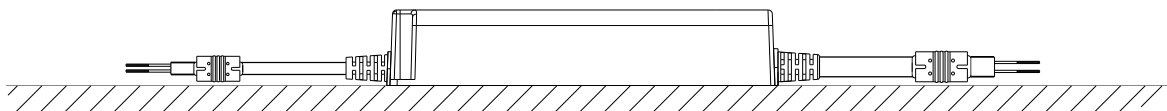
CASE NO.: PWM-120 Unit:mm



• (tc) : Max. Case Temperature



## Recommend Mounting Direction



## INSTALLATION MANUAL

Please refer to : <http://www.meanwell.com/manual.html>