

## 120W constant current waterproof led driver



### ■ Features

- Constant Current (C.C.) output
- Built-in active PFC function, High efficiency up to 92%
- Input voltage/Full range(up to 305VAC)
- Protections:Short circuit/Over current/Over load/Over temperature
- Transformer copper wire is F class,Temperature up to 155°C
- THD≤15%(Bipolar), 5 years warranty
- Customizable dimming:0/1-10V or DALI or PWM
- Noise free, flicker free
- OEM & ODM, no MOQ, Support customization

### ■ Applications

- LED outdoor lighting
- LED landscape light
- LED architectural light
- LED street light
- LED flood light
- LED wall washer light
- LED high light
- LED underground light
- LED tunel light
- LED garden lights
- LED line light
- LED stage lights
- LED Spot light

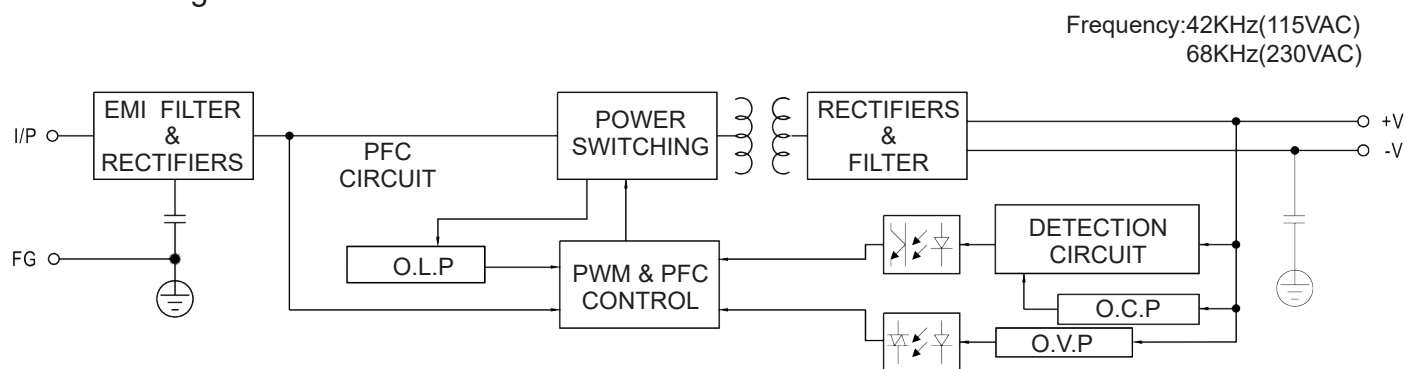
### ■ Description

The constant current waterproof series produced by Zoran Technology is an AC-to-DC driver.operates from 90~305VAC and offers models with different rated voltage ranging ~between 20V and 200V. Thanks to the high efficiency up to 92%, with the fanless design, the entire series is able to operate for -40~ +80 °C case temperature under free air convection.Dimming and other functions can be customized.

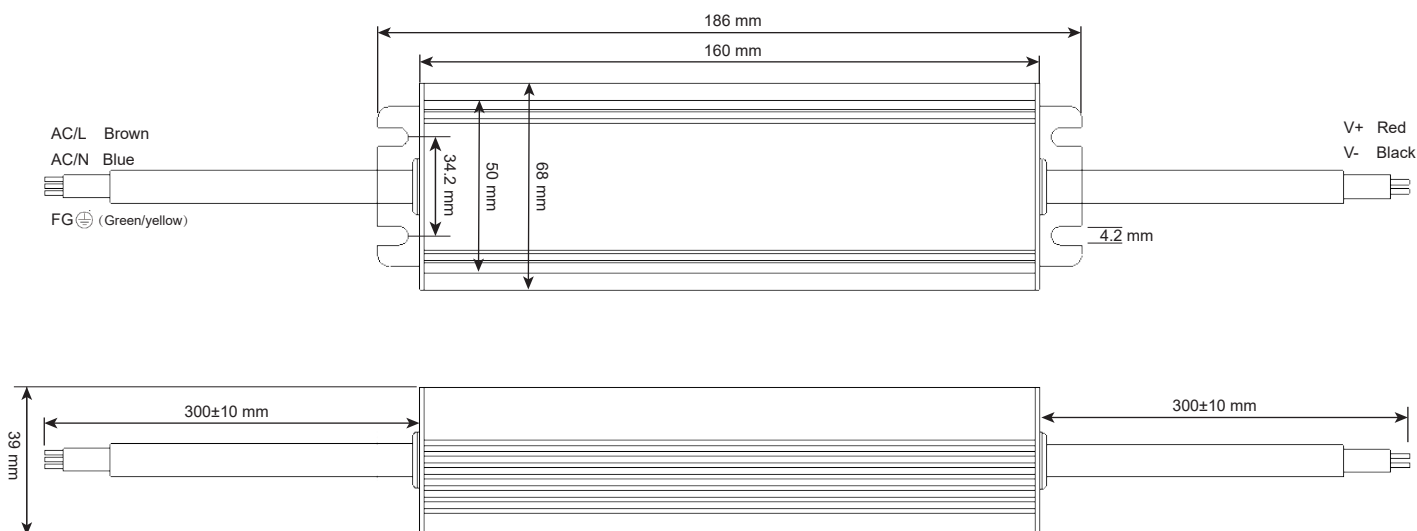
## ■ Electrical Specification

| MODEL        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | ZR-HCM42NB-120W                                                                                                            | ZR-HCM60NB-120W | ZR-HCM80NB-120W | ZR-HCM100NB-120W | ZR-HCM120NB-120W |
|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|-----------------|-----------------|------------------|------------------|
| Output       | Output Voltage <small>Note.1</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 27-42 VDC                                                                                                                  | 43-60 VDC       | 60-80 VDC       | 80-100 VDC       | 100-120 VDC      |
|              | Output Current <small>Note.2</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 2860 mA                                                                                                                    | 2000 mA         | 1500 mA         | 1200 mA          | 1000 mA          |
|              | Rated Power                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 120 W                                                                                                                      | 120 W           | 120 W           | 120 W            | 120 W            |
|              | Current Tolerance <small>Note.4</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | ±3%                                                                                                                        | ±3%             | ±3%             | ±3%              | ±3%              |
|              | Auxiliary output(customizable)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 12VDC                                                                                                                      | 12VDC           | 12VDC           | 12VDC            | 12VDC            |
|              | Setup,Rise Time <small>Note.6</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 500ms,100ms/115VAC 500ms,100ms/230VAC                                                                                      |                 |                 |                  |                  |
|              | Hold Up Time (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 10ms/115VAC 230VAC                                                                                                         |                 |                 |                  |                  |
| Input        | Rate Voltage <small>Note.5</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 90~265VAC or 100-277VAC                                                                                                    |                 |                 |                  |                  |
|              | Frequency Rance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 48-62Hz                                                                                                                    |                 |                 |                  |                  |
|              | Power Factor                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | PF≥0.98/115VAC PF≥0.96/230VAC PF≥0.95/265VAC at full load                                                                  |                 |                 |                  |                  |
|              | THD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | THD≤15%(Bipolar)                                                                                                           |                 |                 |                  |                  |
|              | Full load Efficiency                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | ≥90%                                                                                                                       | ≥90%            | ≥91%            | ≥91%             | ≥92%             |
|              | AC Current (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 1.16A/115VAC 0.58A/230VAC 0.5A/265VAC                                                                                      |                 |                 |                  |                  |
|              | No-load power consumption                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | ≤1.0W                                                                                                                      |                 |                 |                  |                  |
| Protection   | Over Current                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 95-108%                                                                                                                    |                 |                 |                  |                  |
|              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Protection type:Constant current limiting,recovers automatically after fault condition is removed                          |                 |                 |                  |                  |
|              | Over Load                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | ≤120% Recovers automatically after fault condition is removed                                                              |                 |                 |                  |                  |
|              | Short Circuit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Hiccup Mode,Recovers automatically after fault condition is removed                                                        |                 |                 |                  |                  |
|              | Over Temperature                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Shut down O/P voltage,re-power on to recover                                                                               |                 |                 |                  |                  |
| Environmen   | Working Temperature                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | -40~+80 ℃ (Refer to “Derating curve”)                                                                                      |                 |                 |                  |                  |
|              | Max Case Temperature                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | +90 ℃                                                                                                                      |                 |                 |                  |                  |
|              | Working Humidity                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 20-95%RH non-condensing                                                                                                    |                 |                 |                  |                  |
|              | Storage TEMP. Humidity                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | -40~+80 ℃ 10-95%RH                                                                                                         |                 |                 |                  |                  |
|              | TEMP. Coefficient                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | ±0.03%/ ℃ (0-50 ℃ )                                                                                                        |                 |                 |                  |                  |
| Safety & EMC | Safe Standards                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | U8750,CSA C22.2 No.250.13-12;ENEC AS/NZS IEC EN61347-1;AS/NZS IEC EN61347-2-13 independent EN62348;GB19510.14 IP65 or IP67 |                 |                 |                  |                  |
|              | Withstand Voltage                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | I/P-O/P:3.75KVAC I/P-FG:2.0KVAC O/P-FG:1.0KVAC                                                                             |                 |                 |                  |                  |
|              | Isolation Resistance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | I/P-O/P,I/P-FG,O/P-FG:100M ohms/500VDC/25 ℃ /70%RH                                                                         |                 |                 |                  |                  |
|              | EMC Emission                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Compliance to EN55015,EN61000-3-2 Class C(≥60% load);EN61000-3-3;GB17743;GB17625.1                                         |                 |                 |                  |                  |
|              | EMC Immunity                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Compliance to EN61000-4-2,3,4,5,6,8,11;EN61547 heavy industry level(surge 4KV)                                             |                 |                 |                  |                  |
| Others       | Dimension (L*W*H)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 186*68*39 mm                                                                                                               |                 |                 |                  |                  |
|              | Weight                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 900g                                                                                                                       |                 |                 |                  |                  |
|              | Packing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 20pcs/19kg/ctn                                                                                                             |                 |                 |                  |                  |
| Note         | 1.All parameters Not specially mentioned are measured at 230VAC input, rated load and 25 ℃ of ambient temperature.<br>2.Ripple&Noise are measured at 20MHz of bandwidth by using a 12”twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.<br>3.Tolerance: includes set up tolerance, line regulation and load regulation.<br>4.The power supply 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 manufactures must re-qualify EMC Directive on the complete installation again.<br>5.Please refer to the product warranty on Zoran Technology website <a href="http://www.zorantech.com">http://www.zorantech.com</a> .<br>6.If you need other special parameters, please contact our customer service for consultation! |                                                                                                                            |                 |                 |                  |                  |

## Block Diagram

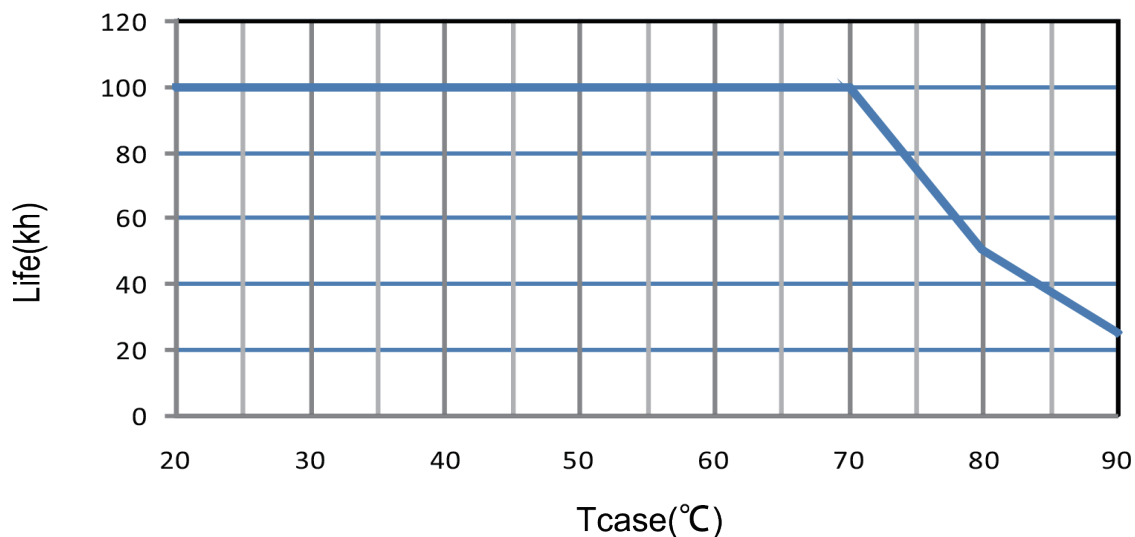


## Mechanical Specification

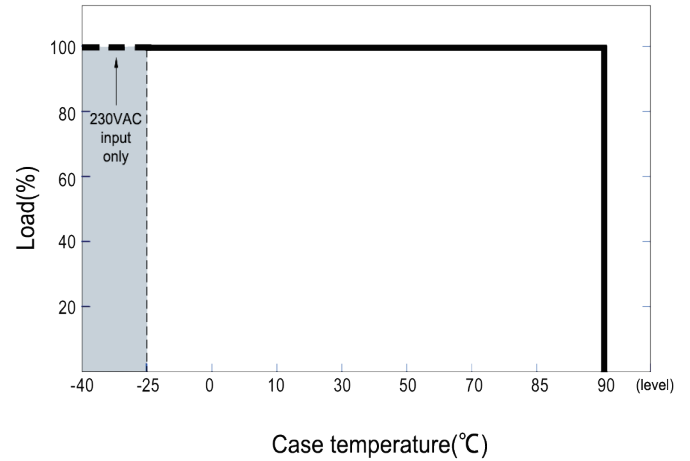
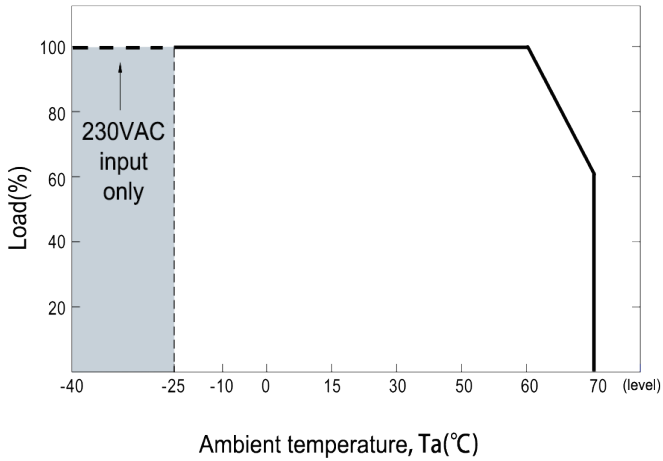


- ※ The yellow-green wire at the input is the ground (FG), the brown wire is the AC phase wire(L), and blue wire is the AC neutral wire (N);
- ※ The red wire at the output is the positive output voltage(V+) and black wire is the negative output voltage(V-);
- ※ In addition, the length and thickness of the input and output lines can be customized according to customer requirements. Please contact Zoran Customer Service for details;

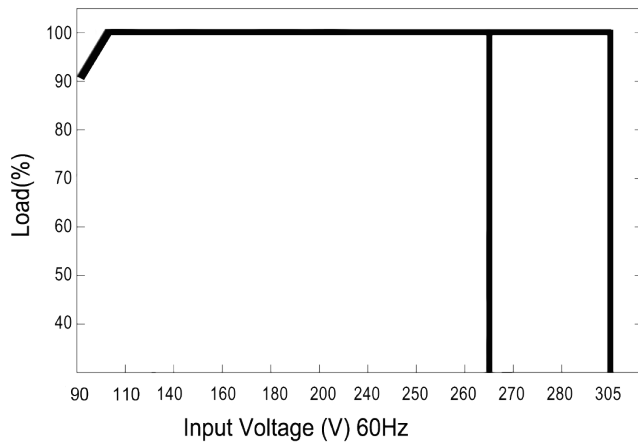
## Life



### Output load VS Temperature



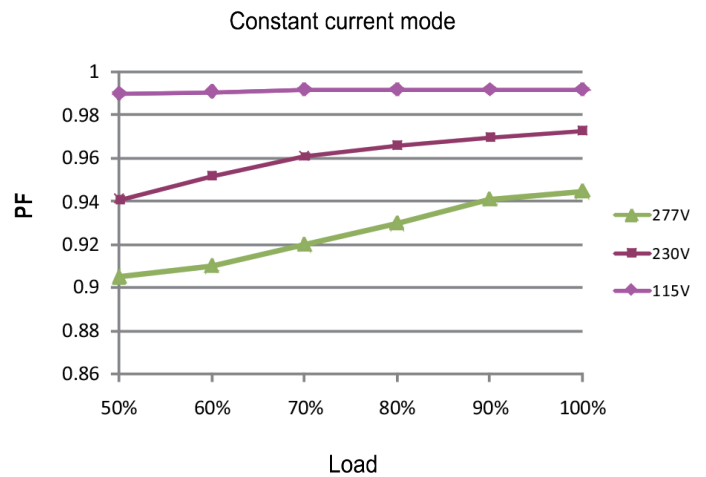
### Static characteristic curve



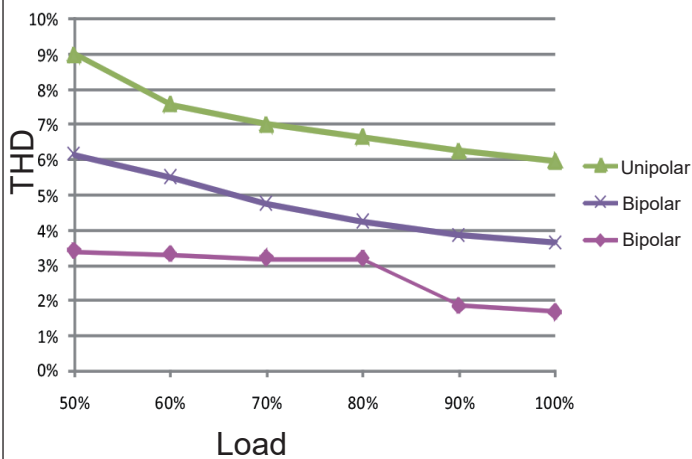
※ Derating output at low input voltage

### PF characteristic curve

※ Tcase at 80°C



### THD characteristic curve



### Efficiency VS Load

