

## Product Features

- 1, Constant current output
- 2, High Quality of light
- 3, High Reliability
- 3, Low Output Current Ripple
- 4, Non-isolated
- 5, Internal usage
- 6, DIP Switch 100/150/200/250/300/350/400/450mA

## 1) Compliances and Approvals

|                                          |              |
|------------------------------------------|--------------|
| Approvals                                | CE EAC       |
| Built-in/independent                     | Built in     |
| Ingress protection                       | IP20         |
| Suitable for fixture of protection Class | Class I      |
| Output Safety Level                      | Non-isolated |
| Environmental                            | Indoor       |
| Features                                 | Fixed        |

## 2) Electric Input Characteristics

|                           | Symbol | Remarks             | Min. | Typical     | Max. | Unit  |
|---------------------------|--------|---------------------|------|-------------|------|-------|
| <b>Input Voltage</b>      |        |                     |      |             |      |       |
| Rated mains voltage       | Vin    | Nominal range       | 220  | -           | 240  | Vac   |
| Mains voltage range       | Vin.op | operational         | 195  | -           | 264  | Vac   |
| Mains frequency nominal   | fn     | Nominal range       | 50   | -           | 60   | Hz    |
| Rated mains voltage       | Vin    | Nominal range       | 195  | -           | 264  | Vdc   |
| <b>Input Current</b>      |        |                     |      |             |      |       |
| Input current             | Iin    | @230Vac, full load  |      | 0.22        |      | A     |
| Input inrush current      |        | @264Vac, 50% width  |      | 36.8A,176us |      | A, us |
| Power Factor              | PF     | @230Vac, full load  | 0.95 |             |      |       |
| Total Harmonic distortion | THD    | @230Vac, full load  |      |             | 10   | %     |
| System Efficiency         | η      | @230Vac, full load  |      | 91          |      | %     |
| <b>Input Power</b>        |        |                     |      |             |      |       |
| Input Power               | Pin    | @230Vac, full load  |      |             | 44   | W     |
| Input Power@ open load    |        | rated input voltage |      |             | 0.5  | W     |
| Input Power@ standby      |        | rated input voltage |      | NA          |      |       |
| <b>Dimming</b>            |        |                     |      |             |      |       |
| Dimming type              |        |                     |      | DIP SWITCH  |      |       |

## 3) Electric Output Characteristics

| ) Electric Output Characteristics                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Symbol | Remarks                                     | Min.                            | Typical | Max. | Unit |      |      |      |      |      |     |     |     |         |       |     |     |    |         |       |     |    |     |         |       |     |    |    |         |       |    |     |     |         |       |    |     |    |         |       |    |    |     |         |       |    |    |    |        |       |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|---------------------------------------------|---------------------------------|---------|------|------|------|------|------|------|------|-----|-----|-----|---------|-------|-----|-----|----|---------|-------|-----|----|-----|---------|-------|-----|----|----|---------|-------|----|-----|-----|---------|-------|----|-----|----|---------|-------|----|----|-----|---------|-------|----|----|----|--------|-------|
| Output Voltage                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |        |                                             |                                 |         |      |      |      |      |      |      |      |     |     |     |         |       |     |     |    |         |       |     |    |     |         |       |     |    |    |         |       |    |     |     |         |       |    |     |    |         |       |    |    |     |         |       |    |    |    |        |       |
| Output voltage range                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Vo     | measured at end of wire                     | 50                              |         | 200  | Vdc  |      |      |      |      |      |     |     |     |         |       |     |     |    |         |       |     |    |     |         |       |     |    |    |         |       |    |     |     |         |       |    |     |    |         |       |    |    |     |         |       |    |    |    |        |       |
| Output voltage @no load                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Vo.max | open load                                   |                                 | 260     |      | Vdc  |      |      |      |      |      |     |     |     |         |       |     |     |    |         |       |     |    |     |         |       |     |    |    |         |       |    |     |     |         |       |    |     |    |         |       |    |    |     |         |       |    |    |    |        |       |
| Output Current                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |        |                                             |                                 |         |      |      |      |      |      |      |      |     |     |     |         |       |     |     |    |         |       |     |    |     |         |       |     |    |    |         |       |    |     |     |         |       |    |     |    |         |       |    |    |     |         |       |    |    |    |        |       |
| Output Current                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Io     |                                             | 100/150/200/250/300/350/400/450 |         |      | mA   |      |      |      |      |      |     |     |     |         |       |     |     |    |         |       |     |    |     |         |       |     |    |    |         |       |    |     |     |         |       |    |     |    |         |       |    |    |     |         |       |    |    |    |        |       |
| Default Setting Current                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Io     |                                             |                                 | 450     |      | mA   |      |      |      |      |      |     |     |     |         |       |     |     |    |         |       |     |    |     |         |       |     |    |    |         |       |    |     |     |         |       |    |     |    |         |       |    |    |     |         |       |    |    |    |        |       |
| DIP when power on is NOT allowed, please disconnect the AC power before DIP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |        |                                             |                                 |         |      |      |      |      |      |      |      |     |     |     |         |       |     |     |    |         |       |     |    |     |         |       |     |    |    |         |       |    |     |     |         |       |    |     |    |         |       |    |    |     |         |       |    |    |    |        |       |
| <table><tr><td>PIN1</td><td>PIN2</td><td>PIN3</td><td>Uout</td><td>Iout</td></tr><tr><td>OFF</td><td>OFF</td><td>OFF</td><td>50-200V</td><td>100mA</td></tr><tr><td>OFF</td><td>OFF</td><td>ON</td><td>50-200V</td><td>150mA</td></tr><tr><td>OFF</td><td>ON</td><td>OFF</td><td>50-200V</td><td>200mA</td></tr><tr><td>OFF</td><td>ON</td><td>ON</td><td>50-160V</td><td>250mA</td></tr><tr><td>ON</td><td>OFF</td><td>OFF</td><td>50-133V</td><td>300mA</td></tr><tr><td>ON</td><td>OFF</td><td>ON</td><td>50-114V</td><td>350mA</td></tr><tr><td>ON</td><td>ON</td><td>OFF</td><td>50-100V</td><td>400mA</td></tr><tr><td>ON</td><td>ON</td><td>ON</td><td>50-88V</td><td>450mA</td></tr></table> |        |                                             |                                 |         |      |      | PIN1 | PIN2 | PIN3 | Uout | Iout | OFF | OFF | OFF | 50-200V | 100mA | OFF | OFF | ON | 50-200V | 150mA | OFF | ON | OFF | 50-200V | 200mA | OFF | ON | ON | 50-160V | 250mA | ON | OFF | OFF | 50-133V | 300mA | ON | OFF | ON | 50-114V | 350mA | ON | ON | OFF | 50-100V | 400mA | ON | ON | ON | 50-88V | 450mA |
| PIN1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | PIN2   | PIN3                                        | Uout                            | Iout    |      |      |      |      |      |      |      |     |     |     |         |       |     |     |    |         |       |     |    |     |         |       |     |    |    |         |       |    |     |     |         |       |    |     |    |         |       |    |    |     |         |       |    |    |    |        |       |
| OFF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | OFF    | OFF                                         | 50-200V                         | 100mA   |      |      |      |      |      |      |      |     |     |     |         |       |     |     |    |         |       |     |    |     |         |       |     |    |    |         |       |    |     |     |         |       |    |     |    |         |       |    |    |     |         |       |    |    |    |        |       |
| OFF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | OFF    | ON                                          | 50-200V                         | 150mA   |      |      |      |      |      |      |      |     |     |     |         |       |     |     |    |         |       |     |    |     |         |       |     |    |    |         |       |    |     |     |         |       |    |     |    |         |       |    |    |     |         |       |    |    |    |        |       |
| OFF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | ON     | OFF                                         | 50-200V                         | 200mA   |      |      |      |      |      |      |      |     |     |     |         |       |     |     |    |         |       |     |    |     |         |       |     |    |    |         |       |    |     |     |         |       |    |     |    |         |       |    |    |     |         |       |    |    |    |        |       |
| OFF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | ON     | ON                                          | 50-160V                         | 250mA   |      |      |      |      |      |      |      |     |     |     |         |       |     |     |    |         |       |     |    |     |         |       |     |    |    |         |       |    |     |     |         |       |    |     |    |         |       |    |    |     |         |       |    |    |    |        |       |
| ON                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | OFF    | OFF                                         | 50-133V                         | 300mA   |      |      |      |      |      |      |      |     |     |     |         |       |     |     |    |         |       |     |    |     |         |       |     |    |    |         |       |    |     |     |         |       |    |     |    |         |       |    |    |     |         |       |    |    |    |        |       |
| ON                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | OFF    | ON                                          | 50-114V                         | 350mA   |      |      |      |      |      |      |      |     |     |     |         |       |     |     |    |         |       |     |    |     |         |       |     |    |    |         |       |    |     |     |         |       |    |     |    |         |       |    |    |     |         |       |    |    |    |        |       |
| ON                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | ON     | OFF                                         | 50-100V                         | 400mA   |      |      |      |      |      |      |      |     |     |     |         |       |     |     |    |         |       |     |    |     |         |       |     |    |    |         |       |    |     |     |         |       |    |     |    |         |       |    |    |     |         |       |    |    |    |        |       |
| ON                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | ON     | ON                                          | 50-88V                          | 450mA   |      |      |      |      |      |      |      |     |     |     |         |       |     |     |    |         |       |     |    |     |         |       |     |    |    |         |       |    |     |     |         |       |    |     |    |         |       |    |    |     |         |       |    |    |    |        |       |
| Output Current tolerance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |        |                                             | -7.5                            |         | 7.5  | %    |      |      |      |      |      |     |     |     |         |       |     |     |    |         |       |     |    |     |         |       |     |    |    |         |       |    |     |     |         |       |    |     |    |         |       |    |    |     |         |       |    |    |    |        |       |
| Current Ripple                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |        | @230Vac (Imax-Imin)/(Imax+Imin)             |                                 | 1       |      | %    |      |      |      |      |      |     |     |     |         |       |     |     |    |         |       |     |    |     |         |       |     |    |    |         |       |    |     |     |         |       |    |     |    |         |       |    |    |     |         |       |    |    |    |        |       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |        | @230Vac (Imax-Imin)/(Imax+Imin) (100-150mA) |                                 | 2       |      | %    |      |      |      |      |      |     |     |     |         |       |     |     |    |         |       |     |    |     |         |       |     |    |    |         |       |    |     |     |         |       |    |     |    |         |       |    |    |     |         |       |    |    |    |        |       |
| Output Power                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |        |                                             |                                 |         |      |      |      |      |      |      |      |     |     |     |         |       |     |     |    |         |       |     |    |     |         |       |     |    |    |         |       |    |     |     |         |       |    |     |    |         |       |    |    |     |         |       |    |    |    |        |       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Po     | output performance power                    |                                 |         | 40   | W    |      |      |      |      |      |     |     |     |         |       |     |     |    |         |       |     |    |     |         |       |     |    |    |         |       |    |     |     |         |       |    |     |    |         |       |    |    |     |         |       |    |    |    |        |       |
| Isolation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |        |                                             |                                 |         |      |      |      |      |      |      |      |     |     |     |         |       |     |     |    |         |       |     |    |     |         |       |     |    |    |         |       |    |     |     |         |       |    |     |    |         |       |    |    |     |         |       |    |    |    |        |       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | In-Out | 3000Vac. for 1min                           |                                 | NA      |      | mA   |      |      |      |      |      |     |     |     |         |       |     |     |    |         |       |     |    |     |         |       |     |    |    |         |       |    |     |     |         |       |    |     |    |         |       |    |    |     |         |       |    |    |    |        |       |

| 4) Robustness                | Symbol       | Remarks                                                                | Min. | Typical | Max. | Unit |
|------------------------------|--------------|------------------------------------------------------------------------|------|---------|------|------|
| <b>General</b>               |              |                                                                        |      |         |      |      |
| Electric strength            | Input-Output | 50Hz/60Hz and be applied for 1 min                                     |      | NA      |      | Vrms |
|                              | Input-GND    |                                                                        |      | 1480    |      | Vrms |
| Insulation Resistance Test   |              | 500Vd.c. for 1min, For SELV part is 100 Vd.c.                          | 2    |         |      | MΩ   |
| <b>Reliability</b>           |              |                                                                        |      |         |      |      |
| Rated Life@Tc.max            |              | 10% failure                                                            |      |         | 50K  | Hrs  |
| Rated Life@Tc.life           |              | 10% failure                                                            |      |         | 100K | Hrs  |
| Surge                        | L-N          |                                                                        |      | 1       |      | kV   |
| Surge                        | L/N-PE       |                                                                        |      | 2       |      | kV   |
| <b>Environment Operation</b> |              |                                                                        |      |         |      |      |
| Ambient temperature          | Ta           |                                                                        | -40  |         | 45   | °C   |
| Maximum Tcase                | Tc.max       |                                                                        |      |         | 80   | °C   |
| Tc life                      | Tc.life      |                                                                        |      |         | 70   | °C   |
| Operation Humidity           | H.op         |                                                                        | 10   |         | 90   | %    |
| <b>Environment Storage</b>   |              |                                                                        |      |         |      |      |
| Storage temperature          | T.st         |                                                                        | -40  |         | 85   | °C   |
| Storage Humidity             | H.st         |                                                                        | 10   |         | 90   | %    |
| <b>Abnormal Condition</b>    |              |                                                                        |      |         |      |      |
| Input Over Voltage           |              | Protected, no damage to driver <sup>①</sup>                            |      | Without |      | Vac  |
| Output Short Circuit         |              | Protected, no damage to driver <sup>②</sup>                            |      | With    |      |      |
| Output Open load             |              | Output voltage limited to Vo.max <sup>③</sup>                          |      | 215     |      | Vdc  |
| Too High Ambient Temperature |              | Protected by built-in thermal protection in controller IC <sup>④</sup> |      | With    |      |      |
| Input Over Power             |              | Input power should be limited and no damage to driver <sup>⑤</sup>     |      |         | 44   | W    |

① If the LED driver connects to Input Voltage 380Vac, then the protection Turn On and the Led driver is switched off until its connect to Input voltage 220-240Vac.  
In this protection mode, the led driver does not blink and can be not damage more than 48 hours

② Auto Recovery

③ Auto Recovery

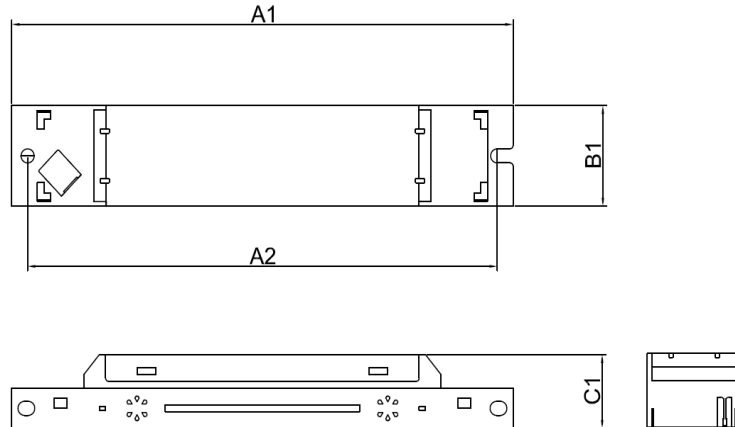
④ The output current decreases

⑤ There is risk to damage the LED driver or decreases the life time.

#### 5) Warranty

- Warrenty 5 years
- Except for the following circumstance:
  - 1) Improper Installation or operation
  - 2) Misuse
  - 3) Abuse
  - 4) Unauthorized or improper repair alteration
  - 5) Accident or negligence in use, storage, transportation.
  - 6) Any natural destroy
  - 7) Exceed the specifiaction as per the product datasheet

| 6) Mechanical properties | Symbol | Remarks                         | Unit |
|--------------------------|--------|---------------------------------|------|
| Dimensions               |        | L W H M                         |      |
|                          |        | 160(A1) 30(B1) 22(C1) 149.8(A2) | mm   |
| Housing Material         |        | Metal                           |      |



| 7) Physical properties | Symbol | Remarks                                                  | Unit |
|------------------------|--------|----------------------------------------------------------|------|
| Weight                 |        | 98                                                       | gram |
| Qty to Carton          |        | 100                                                      | pcs  |
| Carton Size:           |        | 32*17*27                                                 | cm   |
| G.W:                   |        | 10.5                                                     | kgs  |
| Potting Raw materials  |        | without                                                  |      |
| Printing               |        | printing can be changed by customer's email confirmation |      |

size:96\*27mm

**INPUT**

**OSSDAT**

**LED Driver**

**PL-HMD-040WA0450C**

220-240Vac 50/60Hz

|      |             |      |        |
|------|-------------|------|--------|
| Pin  | 44W         | Iin  | 0.22A  |
| PF   | 0.95        | Umax | 260V   |
| Iout | 450mA       | Uout | 50-88V |
| Ta   | -40...+45°C | Tc   | 80°C   |

| PIN1 | PIN2 | PIN3 | Uout    | Iout  |
|------|------|------|---------|-------|
| OFF  | OFF  | OFF  | 50-200V | 100mA |
| OFF  | OFF  | ON   | 50-200V | 150mA |
| OFF  | ON   | OFF  | 50-200V | 200mA |
| OFF  | ON   | ON   | 50-160V | 250mA |
| ON   | OFF  | OFF  | 50-133V | 300mA |
| ON   | OFF  | ON   | 50-114V | 350mA |
| ON   | ON   | OFF  | 50-100V | 400mA |
| ON   | ON   | ON   | 50-88V  | 450mA |

**OUTPUT**

9-10mm 0.5-0.75 Cable

Made in China

| Connection         | Signal | Cable Description       | Remark                  |
|--------------------|--------|-------------------------|-------------------------|
| Input              | L      | 0.5-0.75mm <sup>2</sup> | grey, push-in terminal  |
|                    | N      | 0.5-0.75mm <sup>2</sup> | grey, push-in terminal  |
|                    | G      | 0.5-0.75mm <sup>2</sup> | grey, push-in terminal  |
| Output             | +      | 0.5-0.75mm <sup>2</sup> | red, push-in terminal   |
|                    | -      | 0.5-0.75mm <sup>2</sup> | black, push-in terminal |
| Connection Marking | Yes    |                         |                         |

## 8) Directives / Test Standards

## Directives / Test Standards

**Safety**

IEC61347-1、IEC61347-2-13

**EMC**

EN55015、CISPR15、EN61000-3-2、EN61547、EN61000-4-2、EN61000-4-3、EN61000-4-4、EN61000-4-5、EN61000-4-6、EN61000-4-11

## 9) Addition Remarks

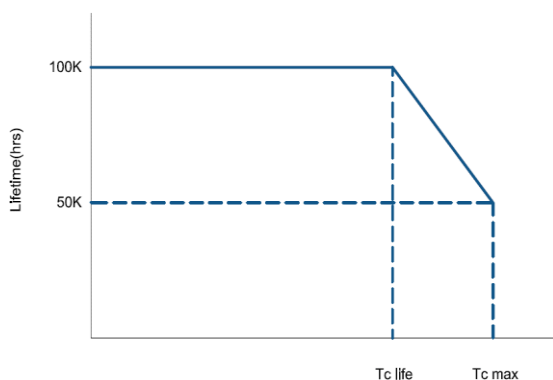
- The LED driver used in combination with the end device is one of the accessories of the whole light fixture, and the EMC of the whole light fixture is not only susceptible to the driver itself, but to the LED light fixture and the whole light fixture's wiring. The manufacturer of LED light fixture should re-confirm the EMC of the whole light fixture before the whole light fixture is finished.

- The luminaire manufacturer is responsible for the correct choice and installation of the LED drivers according to the application and product datasheets. Operating conditions of the LED drivers may never exceed the specifications as per the product datasheet.

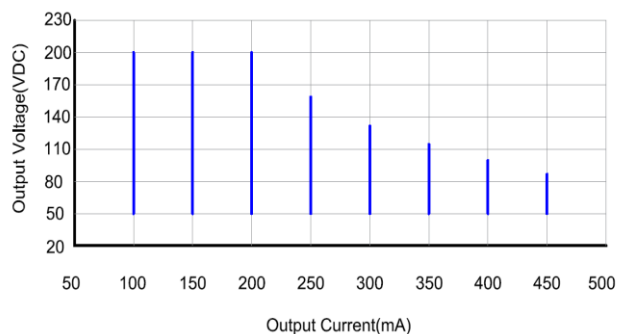
- All parameters, if not specified, are measured at 230Vac full loading and 25°C ambient temperature

## 10) Performance

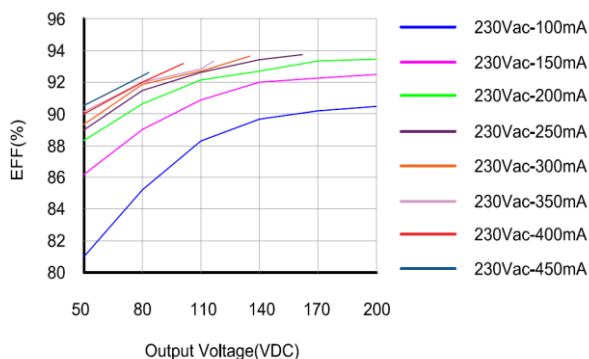
**Lifetime vs. Temperature Curve**



**Operating window**



**Efficiency VS. Load**



**Power Factor Characteristics**

