

### Constant Voltage Driver

Model: LV(100-250)W48CG2



| Model       | Rated Input Voltage | Input Power | Input Current | PF    | Output Power Range | Output Voltage | Output Current | Efficiency (typ.) | Cementing product |
|-------------|---------------------|-------------|---------------|-------|--------------------|----------------|----------------|-------------------|-------------------|
| LV100W48CG2 | 220-240VAC          | ≤115W       | ≤0.6A         | ≥0.95 | 0-100.8W           | 48V            | 0-2.1A         | 92%               | N                 |
| LV150W48CG2 |                     | ≤168W       | ≤0.9A         |       | 0-150W             |                | 0-3.125A       | 92%               | Y                 |
| LV250W48CG2 |                     | ≤275W       | ≤1.5A         |       | 0-250W             |                | 0-5.21A        | 93%               | Y                 |

\* Test result @230V, 50Hz, Full Load.

\* Recommended minimum power is 10% load.

### 1. Parameters

| Category   | Item                      | Technical Norm                            |          |          |                                                     |
|------------|---------------------------|-------------------------------------------|----------|----------|-----------------------------------------------------|
| Features   | Output Type               | Constant Voltage                          |          |          |                                                     |
|            | Dimmable Type             | Non-dimmable                              |          |          |                                                     |
|            | Output Features           | Isolation SELV                            |          |          |                                                     |
|            | IP Grade                  | IP20                                      |          |          |                                                     |
|            | Insulation Class          | Class II                                  |          |          |                                                     |
| Input      | Rated Input Voltage       | 220-240VAC                                |          |          |                                                     |
|            | Range of AC Input Voltage | 176-264VAC                                |          |          |                                                     |
|            | Range of DC Input Voltage | 175-280VDC(EMI not evaluated)             |          |          |                                                     |
|            | Frequency                 | Rate:50/60Hz, Range:47~63Hz               |          |          |                                                     |
|            | Power Factor              | ≥0.95, 220-240VAC, Rated Load, see graphs |          |          |                                                     |
|            | THD                       | ≤7% 230VAC, Rated Load, see graphs        |          |          |                                                     |
|            | Standby Power Consumption | ≤0.5W, @230VAC,NO Load                    |          |          |                                                     |
| Output     | Output Voltage            | 48VDC±2%                                  |          |          |                                                     |
|            | No load Voltage           | 48VDC+3%                                  |          |          |                                                     |
|            | Output Voltage Ripple     | <480mV <sub>PK-PK</sub> (0.5%)            |          |          |                                                     |
|            | Line Regulation           | ±1%                                       |          |          |                                                     |
|            | Load Regulation           | ±2%                                       |          |          |                                                     |
|            | Filcker                   | SVM ≤0.4, PstLM ≤1.0                      |          |          |                                                     |
|            | Overshoot                 | <105%Vo                                   |          |          |                                                     |
|            | Start-up Time             | ≤0.5S (220-240VAC)                        |          |          |                                                     |
|            | Efficiency                | 100W                                      | ≥90%     | 92% typ. | 230VAC, Rated Load, at output terminals, see graphs |
|            |                           | 150W                                      | ≥90%     | 92% typ. |                                                     |
| 250W       |                           | ≥91%                                      | 93% typ. |          |                                                     |
| Protection | Short Circuit Protection  | Auto Recovery                             |          |          |                                                     |
|            | Over Current Protection   | 120%-180%Io, Auto Recovery                |          |          |                                                     |

|              |                                     |                                                                                                                                                |                             |
|--------------|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|
|              | Over Voltage Protection             | 110%-150%Vo, Auto Recovery                                                                                                                     |                             |
|              | Over Temperature Protection         | 90<Tc<110℃, Auto Recovery                                                                                                                      |                             |
|              | Insulation voltage                  | I/P to O/P,3KVac/5mA/1min                                                                                                                      |                             |
|              | Insulation resistance               | >100M ohm @ 500VDC                                                                                                                             |                             |
|              | Leakage current                     | I/P to O/P < 250μA                                                                                                                             |                             |
| Environment  | Ta/Operation Temperature            | -25....+45℃                                                                                                                                    |                             |
|              | Ts/Storage Temperature              | -40....+85℃                                                                                                                                    |                             |
|              | Tc/Enclosure Temperature For Safety | 90℃                                                                                                                                            |                             |
|              | Humidity                            | 5% 85%RH                                                                                                                                       |                             |
|              | Atmosphere                          | 86-108KPa                                                                                                                                      |                             |
| Construction | Connection Method                   | Terminal                                                                                                                                       |                             |
|              | Cable Terminals                     | Input                                                                                                                                          | 1 terminal block(300V 10A)  |
|              |                                     | 100W/150W                                                                                                                                      | 1 terminal block(300V 10A)  |
|              |                                     | Output 250W                                                                                                                                    | 2 terminals block(300V 10A) |
|              | Installation                        | Independent                                                                                                                                    |                             |
|              | Input Wire Cross Section            | 0.75mm²-1.5 mm²                                                                                                                                |                             |
|              | Output Wire Cross Section           | 100W/150W                                                                                                                                      | 1*0.75mm²-1.5 mm²           |
|              |                                     | 250W                                                                                                                                           | 2*0.75mm²-1.5 mm²           |
|              | Cable stripping lengths             | 6mm                                                                                                                                            |                             |
|              | Output Cable Length                 | Max. 3M                                                                                                                                        |                             |
|              | Cable diameters range               | Input                                                                                                                                          | 2.2-4mm or 9.5-10.5mm       |
|              |                                     | Output & Dimming                                                                                                                               | 2.2-4mm                     |
|              | Dimension                           | 100W/150W                                                                                                                                      | 350*30*18mm (L*W*H)         |
|              |                                     | 250W                                                                                                                                           | 400*40*22mm (L*W*H)         |
| Standards    | Certification                       | CE,CB ENEC, SAA                                                                                                                                |                             |
|              | Safety Standards                    | EN61347-2-13:2014/A1:2017,EN 61347-1:2015/A1:2021, EN IEC 62384:2020,EN61347-1:2015, EN62493:2015, AS61347.2.13:2018,AS/NZS 61347.1:2016 IncA1 |                             |
|              | EMC Standards                       | EN IEC 55015:2019,EN IEC 55015:2019/A11:2020, EN IEC 61000-3-2:2019/A1:2021,EN61547:2009, EN 61000-3-3:2013/A2:2021                            |                             |
|              | Performance                         | EN62384                                                                                                                                        |                             |
|              | Surge                               | L-N:2KV                                                                                                                                        |                             |
| Others       | RoHS                                | 2011/65/EU                                                                                                                                     |                             |
|              | MTBF                                | ≥250KHours,Ta=25℃(MIL-HDBK-217F)                                                                                                               |                             |
|              | Life Time(@Ta max)                  | 100W                                                                                                                                           | ≥100K Hrs                   |
|              |                                     | 150W                                                                                                                                           | ≥55K Hrs                    |
|              |                                     | 250W                                                                                                                                           | ≥63K Hrs                    |
|              | Warranty                            | 5years                                                                                                                                         |                             |
|              | Noise                               | ≤ 24dB @Background noise ≤18dB , Interval≥15cm                                                                                                 |                             |

### Remark:

All Parameters, if not specified, are measured at 230VAC/50Hz and 25°C ambient temperature.

Terminal wiring must be operated with a suitable screwdriver. After installation, check to make sure that the terminals cannot be pressed against the wire sheath

LED Driver is a component of the luminaires, Luminaires and wire layout will affect the EMC, please check the EMC with end products again.

Output ripple should be measured at the output end which has with 0.1uF/100V ceramic capacitance and 10uF/100V Aluminum capacitance connected in parallel. Measured using oscilloscope with bandwidth limited to 20MHz.

## 2. Connected quantities of different current Breaker

| TYPE   | LV100W48CG2 Connected quantities of different current Breaker |                    |                    |                    |                  |                  | Input Voltage | Inrush Current<br><50A | Time  |
|--------|---------------------------------------------------------------|--------------------|--------------------|--------------------|------------------|------------------|---------------|------------------------|-------|
|        | current (A)                                                   | 10                 | 13                 | 16                 | 20               | 25               |               |                        |       |
|        | Installation wire diameter                                    | 1.5mm <sup>2</sup> | 2.5mm <sup>2</sup> | 2.5mm <sup>2</sup> | 4mm <sup>2</sup> | 4mm <sup>2</sup> |               |                        |       |
| TYPE B |                                                               | 13                 | 17                 | 21                 | 27               | 33               | @230VAC       | 45                     | 250us |
| TYPE C |                                                               | 21                 | 28                 | 34                 | 43               | 53               |               |                        |       |
| TYPE D |                                                               | 34                 | 44                 | 55                 | 68               | 85               |               |                        |       |

| TYPE   | LV150W48CG2 Connected quantities of different current Breaker |                    |                    |                    |                  |                  | Input Voltage | Inrush Current<br><60A | Time  |
|--------|---------------------------------------------------------------|--------------------|--------------------|--------------------|------------------|------------------|---------------|------------------------|-------|
|        | current (A)                                                   | 10                 | 13                 | 16                 | 20               | 25               |               |                        |       |
|        | Installation wire diameter                                    | 1.5mm <sup>2</sup> | 2.5mm <sup>2</sup> | 2.5mm <sup>2</sup> | 4mm <sup>2</sup> | 4mm <sup>2</sup> |               |                        |       |
| TYPE B |                                                               | 11                 | 14                 | 17                 | 21               | 27               | @230VAC       | 56                     | 185us |
| TYPE C |                                                               | 17                 | 22                 | 27                 | 34               | 43               |               |                        |       |
| TYPE D |                                                               | 27                 | 36                 | 44                 | 55               | 69               |               |                        |       |

| TYPE   | LV250W48CG2 Connected quantities of different current Breaker |                    |                    |                    |                  |                  | Input Voltage | Inrush Current<br><80A | Time  |
|--------|---------------------------------------------------------------|--------------------|--------------------|--------------------|------------------|------------------|---------------|------------------------|-------|
|        | current (A)                                                   | 10                 | 13                 | 16                 | 20               | 25               |               |                        |       |
|        | Installation wire diameter                                    | 1.5mm <sup>2</sup> | 2.5mm <sup>2</sup> | 2.5mm <sup>2</sup> | 4mm <sup>2</sup> | 4mm <sup>2</sup> |               |                        |       |
| TYPE B |                                                               | 8                  | 10                 | 13                 | 16               | 20               | @230VAC       | 76                     | 310us |
| TYPE C |                                                               | 13                 | 16                 | 20                 | 25               | 32               |               |                        |       |
| TYPE D |                                                               | 20                 | 26                 | 32                 | 40               | 51               |               |                        |       |

### 3. Label

☐ L  
☐ N  
 wire preparation  
  
 INPUT: 75...1.5"  
 OUTPUT: 0.75...1.5"

**KGP**  
 KGP Electronics GmbH  
 Hueckstraße 19  
 DE-58511 Lüdenscheid

**LED Driver**  
**LV100W48CG2**  
 Constant Voltage Type  
 For LED modules only

Input Voltage: 220-240V~  
 Input Frequency: 50/60Hz  
 Power Factor(λ): ≥0.95  
 I<sub>in</sub>: ≤0.6A

U<sub>rated</sub>=48V=  
 I<sub>range</sub>=0~2100mA  
 P<sub>range</sub>=0~100.8W  
 ta:-25to+45°C    tc:90°C

•tc  
     

**SELV**    

☐ I  
 +  
☐ OUTPUT

☐ L  
 INPUT  
☐ N  
 wire preparation  
 (6mm)  
 INPUT: 0.75-1.50  
 OUTPUT: 0.75-1.50

**KGP**  
 KGP Electronics GmbH  
 Hueckstraße 19  
 DE-58511 Lüdenscheid

**LED Driver**  
**LV150W48CG2**  
 Constant Voltage Type  
 For LED modules only

Input Voltage: 220-240V ~  
 Input Frequency: 50/60Hz  
 Power Factor(λ): ≥0.95  
 I in: ≤0.9A

U rated=48V=  
 I range=0-3125mA  
 P range=0-150W  
 ta: 25to+45°C tc: 90°C

•tc  









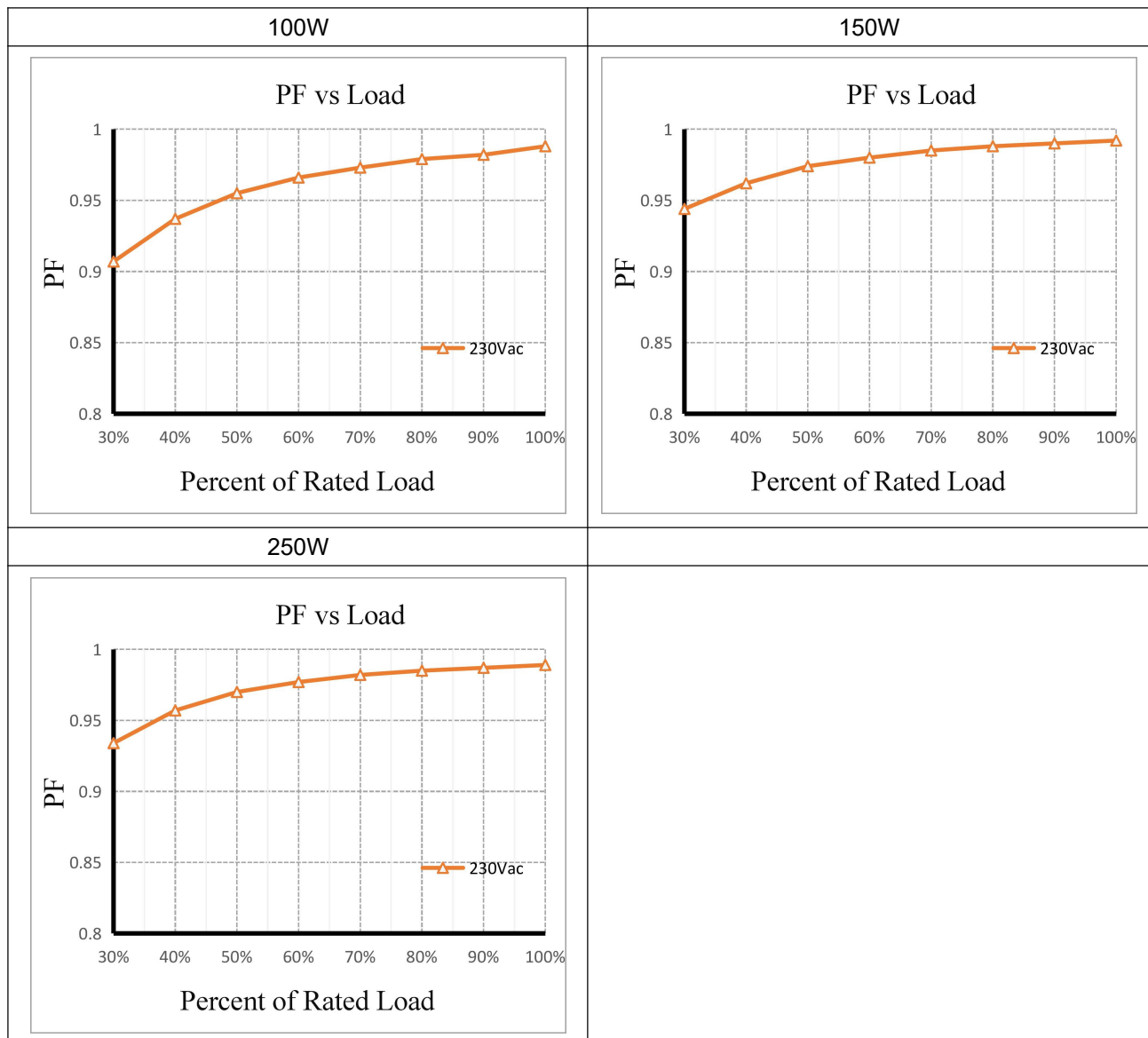



☐ +  
☐ -  
 OUTPUT

|                                                                                                                          |                                                                                           |                                                                                      |                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                           |
|--------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| <p>Input</p> <p>□ L</p> <p>□ N</p> <p>Wire preparation<br/>(mm)</p> <p>INPUT: 0.75-1.5 mm</p> <p>OUTPUT: 0.75-1.5 mm</p> | <p><b>KGP</b></p> <p>KGP Electronics GmbH<br/>Hueckstraße 19<br/>DE-58511 Lüdenscheid</p> | <p>LED Driver<br/>LV250W48CG2<br/>Constant Voltage Type<br/>For LED modules only</p> | <p>Input Voltage: 220-240V ~</p> <p>Input Frequency: 50/60Hz</p> <p>Power Factor(λ): ≥ 0.95</p> <p>I<sub>in</sub> : ≤ 1.5 A</p> | <p>• tc</p> <p>U<sub>rated</sub> = 48V</p> <p>I<sub>range</sub> = 0-5210 mA</p> <p>P<sub>range</sub> = 0-250W</p> <p>ta: -25to+45°C   tc: 90°C</p> <p>        </p> | <p>LED-</p> <p>LED+</p>  <p>OUTPUT</p> |
|--------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|

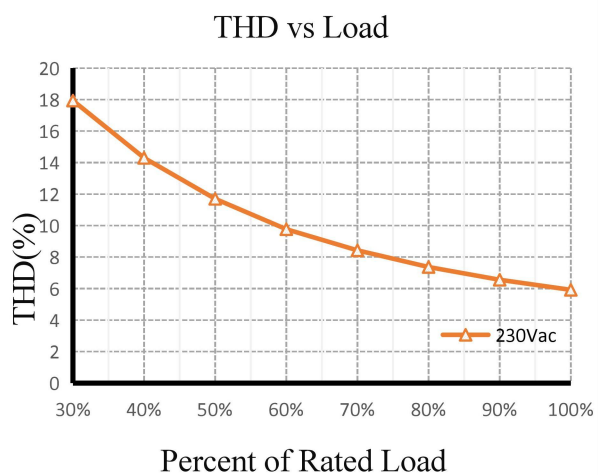
## 4. Graph

## PF VS LOAD Curve

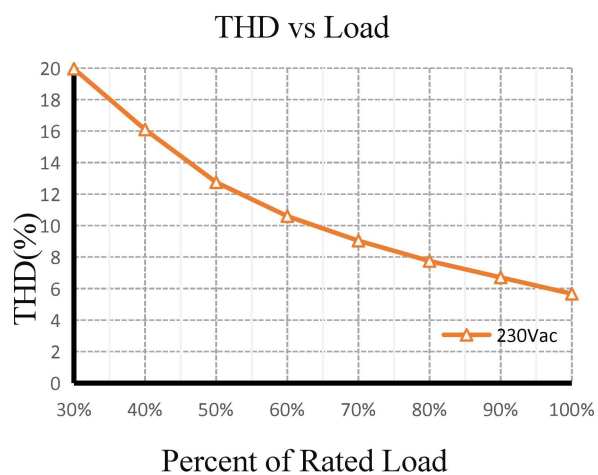


### THD VS LOAD Curve

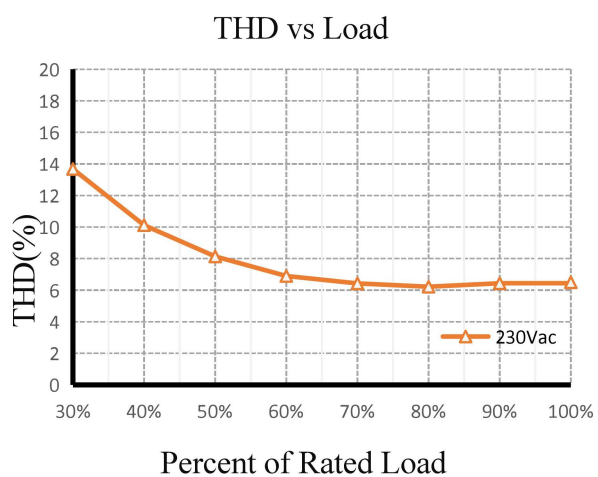
100W



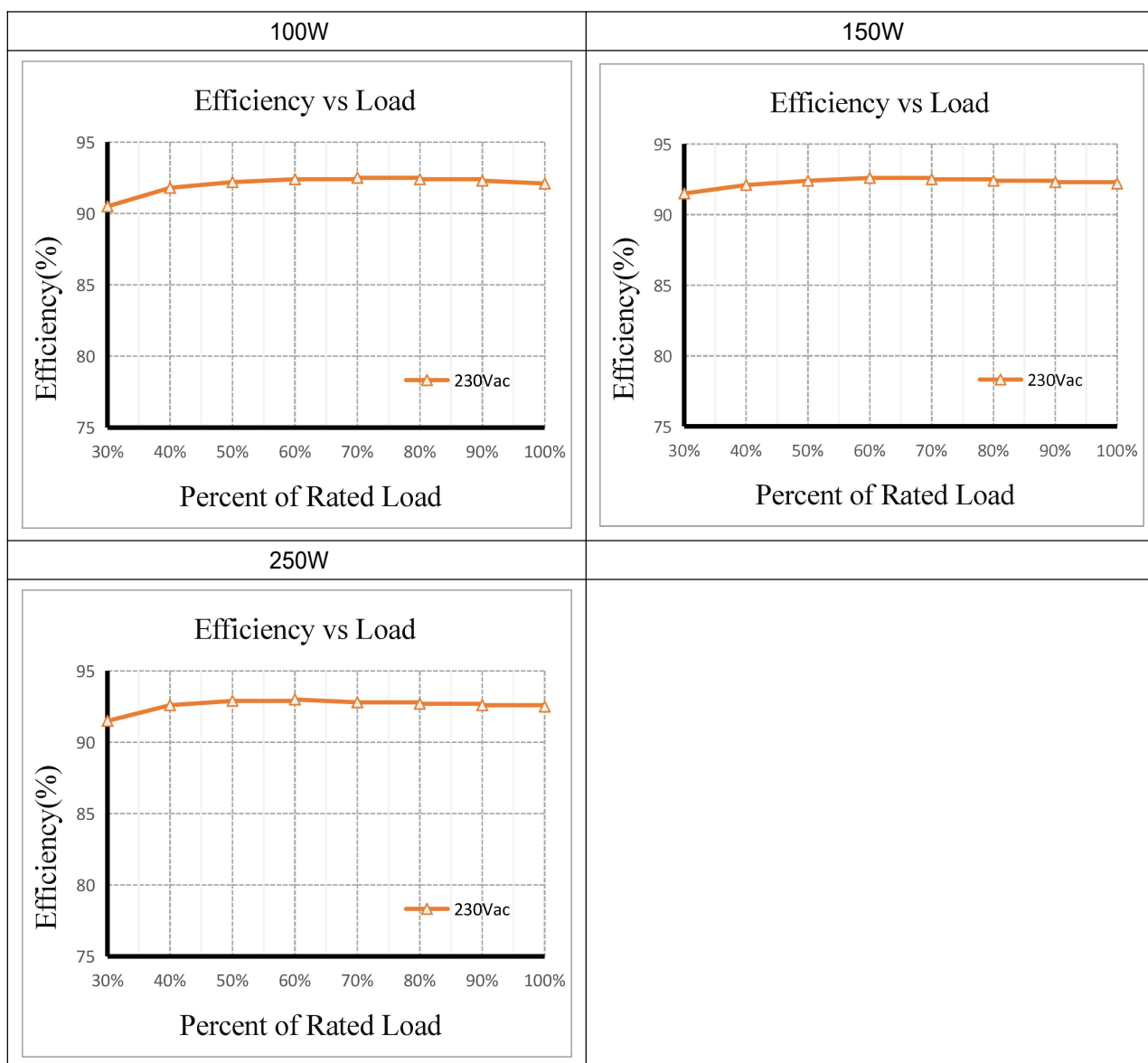
150W



250W

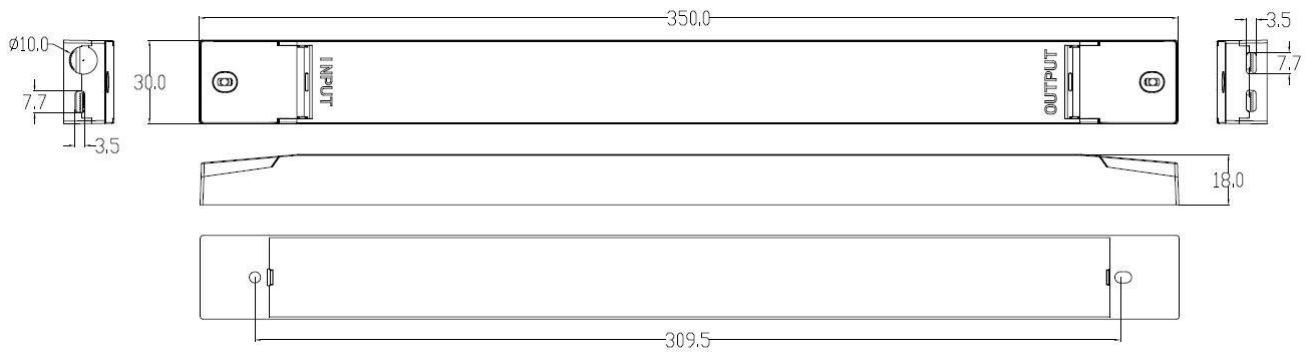


### Efficiency VS LOAD Curve

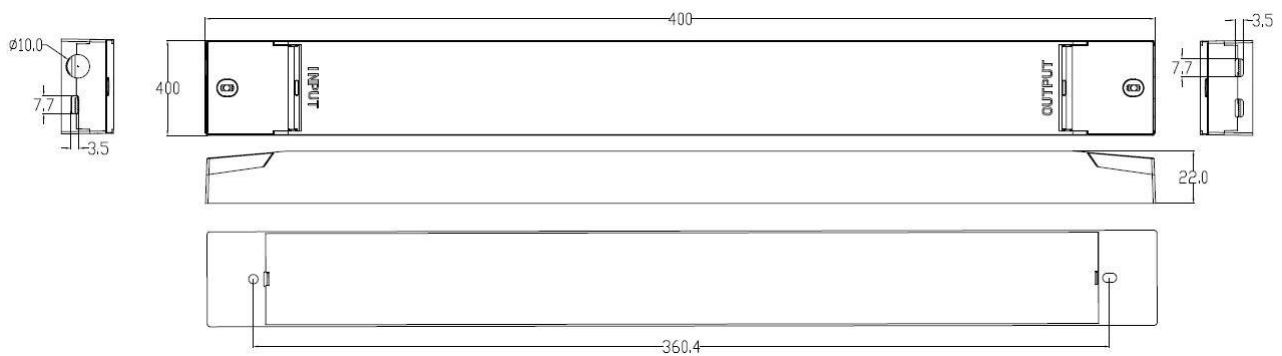


### 5. Dimension (Unit: mm)

#### LV100W48CG2 & LV150W48CG2:



#### LV250W48CG2:



**6. Packing information**

| Packing way                     | Model       | Carton<br>L*W*H(mm) | Pcs/Carton | Net eight/<br>Pcs(kg) | Net weight/<br>Carton(kg) | Gross<br>weight /<br>Carton(kg) |
|---------------------------------|-------------|---------------------|------------|-----------------------|---------------------------|---------------------------------|
| With white box<br>and manual    | LV100W48CG2 | 375*235*195         | 50         | 0.21                  | 10.5                      | 11.03                           |
|                                 | LV150W48CG2 | R15                 |            | 0.309                 | 15.45                     | 16.02                           |
|                                 | LV250W48CG2 | 420*230*160<br>R16  | 25         | 0.535                 | 13.375                    | 13.82                           |
| Without white<br>box and manual | LV100W48CG2 | 440*345*155         | 40         | 0.184                 | 7.36                      | 7.89                            |
|                                 | LV150W48CG2 | R15                 |            | 0.281                 | 11.24                     | 11.75                           |
|                                 | LV250W48CG2 | 440*300*155<br>R15  | 25         | 0.502                 | 12.55                     | 13.0                            |

**7. Wiring instructions**

- All connections must be kept as short as possible to ensure good EMI behaviour
- Mains leads should be kept apart from LED Driver and other leads (ideally 5 – 10 cm distance)
- Advice the maximum length of output wires is 3 m
- Secondary switching is not permitted (Except for constant voltage)
- Incorrect wiring can damage LED modules.
- The wiring must be protected against short circuits to earth (sharp edged metals parts, metal cable clips, louver, etc.)

**8. REVISION HISTORY**

| DATE       | VER  | REMARK                                     |
|------------|------|--------------------------------------------|
| 2022-04-13 | V1.0 | Initial release.                           |
| 2022-06-02 | V1.1 | Add circuit breaker table.                 |
| 2022-09-05 | V1.2 | Update safety standards and EMC standards. |
|            |      |                                            |
|            |      |                                            |
|            |      |                                            |