

# 10W ALFA DRIVER DATASHEET



IP 20 SELV          **RoHS**

## PRODUCT DESCRIPTION

- Leading and trailing edge dimming LED constant current independent driver
- $\pm 5\%$  output current accuracy(under maximum load)
- 90° C Maximum case operation temperature(Tc-point <sup>1</sup>)
- Reliable, Class II, SELV output according EN 61347
- Permissible AC cable 0.75-2.5mm<sup>2</sup> wire gauge, 3.5~10mm PVC jacket diameter
- Grow wire tested 650° for 30S and 850° for 5S
- Operating temperature <sup>1</sup>: -25° C ~ +45° C, the humidity: 20% ~ 85%
- Over 50,000 hrs nominal lifespan at Tc=70° C
- Protection for output open load, short circuits, over voltage and over temperature
- Five-year factory guarantee and lifetime technical support <sup>1</sup>

<sup>1</sup> Detailed data please refer to the "Specification" table .

## PARAMETERS

| MODEL  |                             | 10W Triac dimming LED Driver |
|--------|-----------------------------|------------------------------|
| Output | Output voltage              | 30-40V                       |
|        | Rated current               | 220mA                        |
|        | Maximum power               | 8.4W                         |
|        | Current tolerance           | $\pm 5\%$                    |
|        | Dimming Range               | Triac dimming                |
|        | Ripple voltage <sup>2</sup> | 1.2Vp-p                      |
|        | Ripple current              | 125mAp-p                     |
|        | Line regulation             | $\pm 5\%$                    |
|        | Load regulation             | $\pm 8\%$                    |
|        | Starting time               | <500mS                       |
|        | Turn off time               | <1.0S                        |

|  |   |   |                    |
|--|---|---|--------------------|
|  | Noise <sup>3</sup>                      | <22dB   |                    |
| Input  | Voltage                                 | Rated:220-240Vac; Range:198-264Vac;   |                    |
|  | Frequency                               | Rated:50-60Hz; Range:47-63Hz;   |                    |
|  | Power factor                            | ≥0.9 @ 36V Output voltage   |                    |
|  | I-THD <sup>4</sup>                      | ≤18%  |                    |
|  | Efficiency <sup>5</sup>                 | ≥82%  |                    |
|  | AC current                              | 100mA max.  |                    |
|  | Inrush current <sup>6</sup>             | 4.5A  |                    |
|  | Inrush current time                     | 130uS   |                    |
|  | Leakage current                         | <1mA  |                    |
|  | ON/OFF switches cycle                   | >100,000  |                    |
|  | Stand by power                          | ≤0.5w   |                    |
| Protection   | Over current                            | Constant current limiting, recovers automatically after fault condition is removed                          |                    |
|  | Over voltage                            | Shut down output voltage, with auto-recovery or re-power on to recovery                                     |                    |
|  | Over temperature                        | Shut down output voltage, recovers automatically after temperature goes down                                |                    |
|  | Short circuit                           | Constant current limiting, recovers automatically after fault condition is removed                          |                    |
| Safety & EMC   | Safety standards                        | EN61347-2-13; Design refer to TUV EN60950-1, TUV EN61347-1  |                    |
|  | Withstand voltage                       | I/P-O/P:3KVac I/P-FG:1.5KVac O/P-FG: 500Vdc   |                    |
|  | Isolation resistance                    | I/P-O/P, I/P-FG, O/P-FG:100M Ohms/500Vdc/25°C/75%RH   |                    |
|  | EMC emission <sup>7</sup>               | EN55015B, EN55022 Class B, EN61000-3-2, EN61000-3-3   |                    |
|  | EMC immunity                            | EN61000-4-2, EN61547, EN55024, EN-61000-4-5 Surge immunity Line-Earth: Line-Earth:1KV, L Line- N Line:0.5KV |                    |
| Environment  | Ambient temperature range <sup>9</sup>  | -25°C ~ +45°C   |                    |
|  | Max. case temperature(tc) <sup>10</sup> | 85°C  |                    |
|  | Relative humidity range                 | 20% ~ 85%RH   |                    |
|  | Storage temperature range               | -30°C ~ +75°C   |                    |
| Max. No. of PSUS(Driver supply unit) on miniature circuit breaker(MCB) | MCB TYPE B                              | 10A   | 65pcs @ full load  |
|  |   | 13A   | 104pcs @ full load |
|  |   | 16A   | 130pcs @ full load |
|  | MCB TYPE C                              | 10A   | 75pcs @ full load  |
|  |   | 13A   | 120pcs @ full load |
|  |   | 16A   | 187pcs @ full load |
| Others   | Dimming control mode                    | Triac dimming   |                    |
|  | Lifetime(hrs)@tc=60°C                   | > 50,000H   |                    |
|  | MTBF [MIL-HDBK-217F(ta=25°C)]           | 192.5K Hrs min  |                    |
|  | Glow wire test                          | 850°C for 5S; 650°C for 30S   |                    |
|  | Dimension L x W x H                     | 119x 45 x 27mm  |                    |
|  | Warranty years                          | 5 years   |                    |

"2" Ripple voltage is measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 100nF & 47uF parallel capacitor.

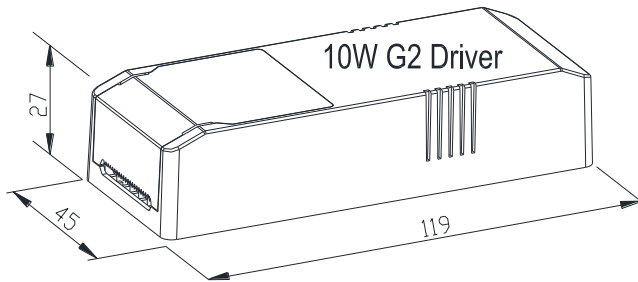
"3" The flicker for frequencies of 200 Hz or below, input voltage 230Vac , at 100% output current level and 20% output current level with dimmer attached, output current ripple is defined as  $[(I_{max} - I_{min}) / (I_{max} + I_{min})] * 100\%$ , (CEC-400-2016-018-FS, Title 24 part 6 JA8).

"4" The noise of LED driver is defined as test data when driver tested in noise room with 50~60dB environment, and been hang in 1ft

(305mm) inside chamber.

- "5" Rated voltage input, rated output current, maximum output current.
- "6" The typical efficiency is test data of output current at input @230Vac with 36V output voltage, maximum output current.
- "7" The inrush current is test data of 230Vac input, cold start, measured at input current peak.
- "8" The driver is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by the complete installation, the final equipment manufacturers must re-qualify EMC directive on the complete installation again.
- "9" For other than independent use, higher ta of the control gear possible as long as highest allowed tc point temperature is not exceeded.
- "10" The tc is defined as the highest permissible temperature which may occur on the outer surface of the power under normal operating conditions and at the rated voltage/current/power or the maximum of the rated voltage/current/power range, refer to "output power vs temperature" section.

**MECHANICAL**



| Dimension     | Gross Weight | Net Weight | Qty/Carton |
|---------------|--------------|------------|------------|
| 390x200x300mm | 9.3kg        | 8.0kg      | 50pcs      |