# Series AMEPR5-AZ

## up to 1A | AC-DC / DC-DC LED driver




### FEATURES:

- AC-DC or DC-DC Constant current LED Driver
- Input range 90-264VAC/47-440Hz
- Operating temperature 0 to 80°C
- High Efficiency up to 79%
- 5 Years Limited Warranty
- SCP, Over Voltage Protection
- Waterproof Case rated IP67
- No load consumption <0.3W

## Models
## Single output

| Model | Max Output Power (W) ① | Output Voltage Range (V) | Output Current (A) | Input Voltage (VAC/Hz) | Input Voltage (VDC) | Efficiency (%) | |
|---|---|---|---|---|---|---|---|
| | | | | | | 115 VAC | 230 VAC |
| AMEPR5-1630AZ | 4.8 | 8-16 | 0.3 | 90-264/47-440 | 130-370 | 79 | 75 |
| AMEPR5-1435AZ | 4.9 | 6-14 | 0.35 | 90-264/47-440 | 130-370 | 77 | 74 |
| AMEPR5-1236AZ | 4.32 | 5-12 | 0.36 | 90-264/47-440 | 130-370 | 77 | 74 |
| AMEPR5-0670AZ | 4.2 | 2-6 | 0.7 | 90-264/47-440 | 130-370 | 76 | 73 |
| AMEPR5-05100AZ | 5 | 3-5 | 1 | 90-264/47-440 | 130-370 | 74 | 72 |

① Exceeding the maximum output power will permanently damage the converter

NOTE: Aimtec limited warranty of 5 years is valid based on product operation at datasheet specifications at ambient temperature of 25°C, humidity<75%, nominal input voltage (115/230VAC) and at rated output load unless otherwise specified. See http://www.aimtec.com/terms-sale

AMEPR5-AZ's AC/DC LED drivers have electrical safeguards designed within to protect it from conventional electrical abnormalities with the levels listed in the safety table. Applications for use within rural agricultural, heavy industrial, and other areas or regions which are prone to 'dirty' electrical conditions which would subject any of the above models to excessive voltages surges or spikes, may damage or cause early life failure of product. In this case consideration should be made by the end user to ensure that adequate line or mains surge suppression is installed in front of Aimtec device to ensure the longevity of the products. Failure to identify excessive line surges violations prior to installation may damage sensitive equipment permanently.

## Input Specifications

| Parameters | Conditions | Typical | Maximum | Units |
|---|---|---|---|---|
| Inrush current <2ms | 115VAC | 15 | | A |
| | 230VAC | 30 | | |
| Leakage current | 115VAC | 0.2 | | mA |
| | 230VAC | 0.25 | | |
| AC current | 115VAC | 0.09 | | A |
| | 230VAC | 0.06 | | |
| No load consumption | 115VAC | 0.1 | | W |
| | 230VAC | 0.2 | | |
| External fuse | | | 250V/0.5A | |
| Start up time | | 140 | | ms |

## Output Specifications

| Parameters | Conditions | Typical | Maximum | Units |
|---|---|---|---|---|
| Current accuracy | | ±10 | | % |
| Line regulation | LL-HL | ±5 | | % |
| Load regulation | 0-100% load | ±10 | | % |
| Ripple & Noise ② | 6/12/14/16V models<br>5V model | 100<br>150 | | mV p-p |
| Hold-up time | | 2 | | ms |
| Minimum Load Voltage | See the models table | | | |

② Ripple and Noise are measured at 20MHz bandwidth by using a 0.1μF (M/C) or (C/C) and 220μF (E/C) parallel capacitor.

## Isolation Specifications

| Parameters | Conditions | Typical | Maximum | Units |
|---|---|---|---|---|
| Tested I/O voltage | 3sec | | 3000 | VAC |
| Isolation Resistance | | >1000 | | MΩ |

## General Specifications

| Parameters | Conditions | Typical | Maximum | Units |
|---|---|---|---|---|
| Switching frequency | | 65 | | KHz |
| Over Load protection | | ≥103 | | % |
| Over voltage protection | | ≥103 | | % |
| Short circuit protection | | Auto recovery | | |
| Operating temperature | With derating over 50°C | 0 to +80 | | °C |
| Maximum case temperature | | | 100 | °C |
| Storage temperature | | -40 to +95 | | °C |
| Temperature coefficient | | ±0.02 | | % / °C |
| Cooling | | Free air convection | | |
| Humidity | | | 95 | % RH |
| Case material | | Plastic | | |
| Potting | | Epoxy (IP67 rated) | | |
| Wires | | UL1015 22AWG * 10CM | | |
| Weight | | 25 | | g |
| Dimensions (L X Diameter) | | 29 x 26.5 mm (1.14x1.04 inch) | | |
| MTBF | | >400,000 hrs (MIL-HDBK-217F at +25°C) | | |

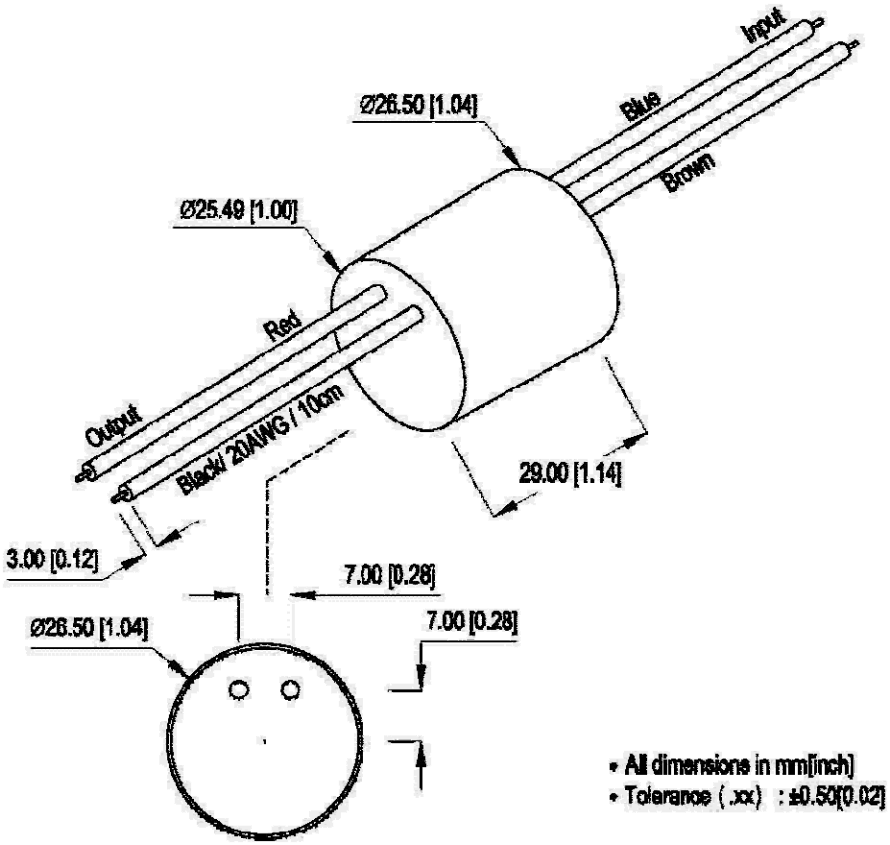
## Environment Approval

| Test | Parameters | Conditions |
|---|---|---|
| Shock | Wave form | Half sine wave |
| | Acceleration amplitude | 5gn |
| | Bump duration | 30ms |
| | Converter operation | Before and after test, body mounted (on chassis) |
| | Number of bumps | 18 (3 in each direction for every axis) |
| Vibration | Test mode | Sweep sine, 10-100Hz, speed 0.05Hz/s |
| | Displacement | 1 mm |
| | Acceleration | 3g, 3 loops 30min one cycle, 3h total, every axis tested |
| | Converter operation | Before and after test, body mounted (on chassis) |

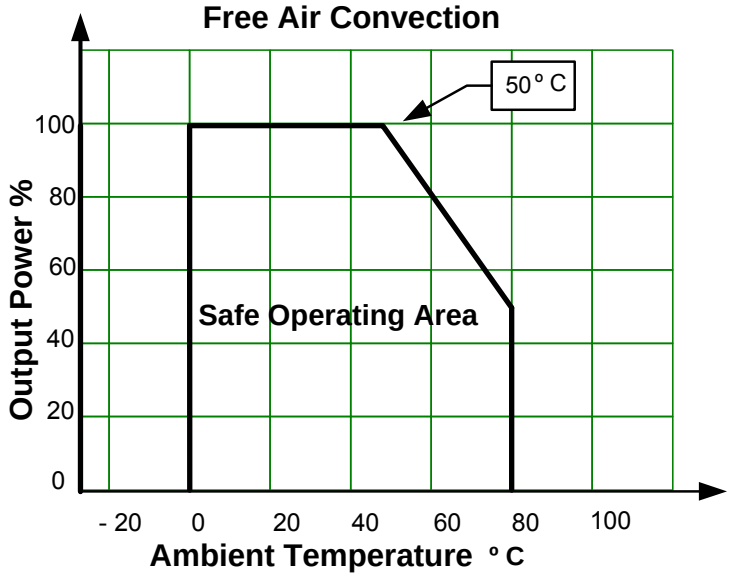
## Safety Specifications

| Parameters | | |
|---|---|---|
| Agency approvals | cULus, CE, FCC | |
| Standards | EN61347-1, EN61347-2-13, IEC62384, UL8750, UL60950-1, EN55015, EN55024, FCC part 15 Subpart B, Class B, ANSI C63.4 :2003 | |
| | Harmonic Current Emissions | IEC/EN 61000-3-2, (EN60555-2) |
| | Voltage fluctuations and flicker | IEC/EN 61000-3-3, (EN60555-3) |
| | Electrostatic Discharge Immunity | IEC 61000-4-2 Level 3 |
| | RF, Electromagnetic Field Immunity | IEC 61000-4-3 Level 2 |
| | Electrical Fast Transient/Burst Immunity | IEC 61000-4-4 Level 2 |
| | Surge Immunity | IEC 61000-4-5 Level 1 |
| | RF, Conducted Disturbance Immunity | IEC 61000-4-6 Level 2 |
| | Power frequency Magnetic Field Immunity | IEC 61000-4-8 Level 2 |
| | Voltage dips, Short Interruptions Immunity | IEC 61000-4-11 |

## Dimensions




## Temperature Graph




**NOTE: 1.** Datasheets are updated as needed and as such, specifications are subject to change without notice. Once printed or downloaded, datasheets are no longer controlled by Aimtec; refer to www.aimtec.com for the most current product specifications. **2.** Product labels shown, including safety agency certifications on labels, may vary based on the date manufactured. **3.** Mechanical drawings and specifications are for reference only. **4**. All specifications are measured at an ambient temperature of 25°C, humidity<75%, nominal input voltage and at rated output load unless otherwise specified.**5.**.Aimtec may not have conducted destructive testing or chemical analysis on all internal components and chemicals at the time of publishing this document. CAS numbers and other limited information are considered proprietary and may not be available for release. **5.** This product is not designed for use in critical life support systems, equipment used in hazardous environments, nuclear control systems or other such applications which necessitate specific safety and regulatory standards other the ones listed in this datasheet.