

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	100		mV p-p
	5V model	150		
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)		

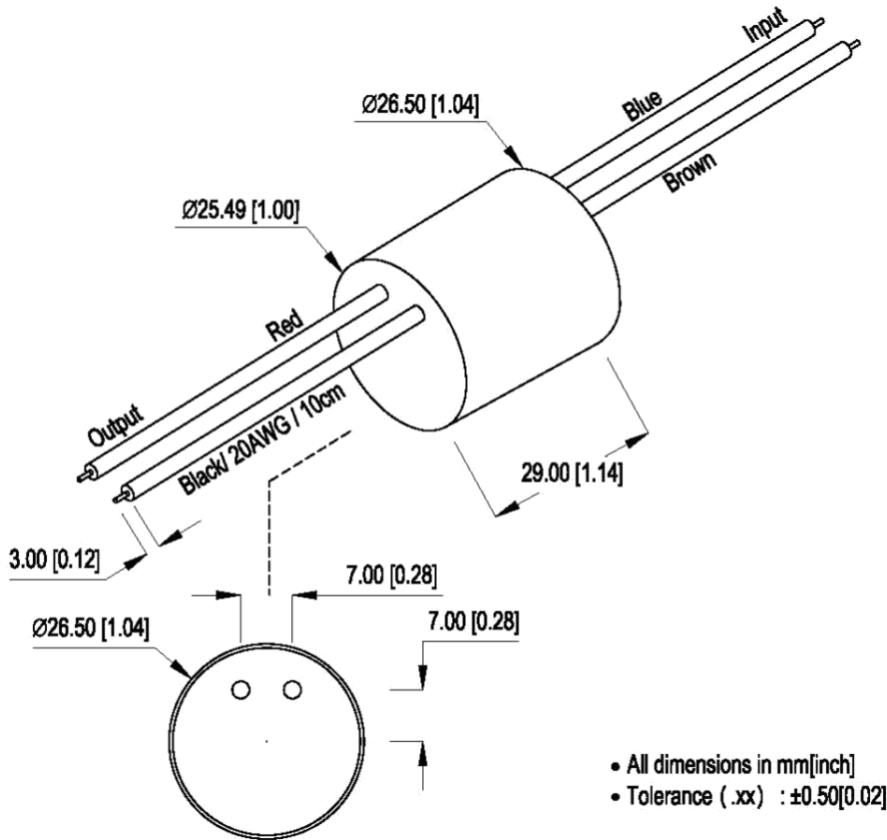
Environment Approval

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)

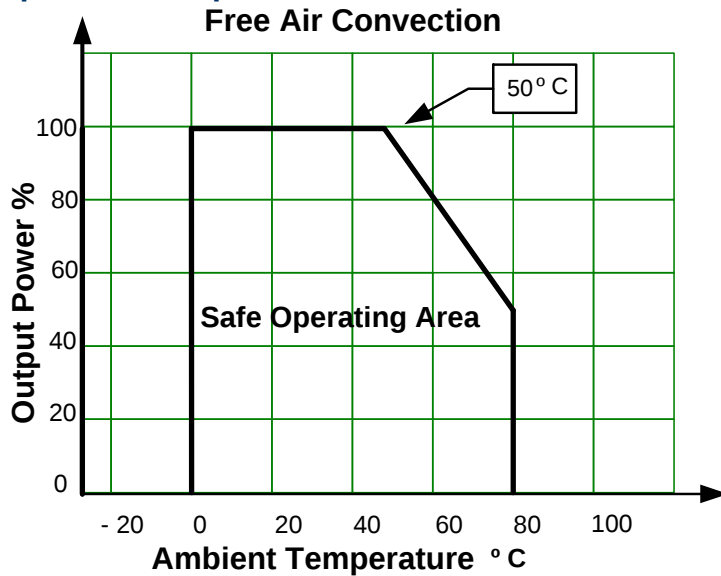
Safety Specifications

Parameters		
Agency approvals	CE, FCC	
Standards	EN61347-1, EN61347-2-13, IEC62384, EN55015, EN55024, FCC part 15 Subpart B, Class B, ANSI C63.4 :2003 Designed to meet UL8750, IEC/EN 60950-1 standards,	
	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 than the ones listed in this datasheet.