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# Series AMEPR8D-AZ up to 0.7A | AC-DC LED Driver

### FEATURES:

- AC-DC Constant Current LED Driver
- Input Range 90-264VAC/47-440Hz
- High Efficiency up to 80%
- Operating Temperature -20 to 85°C
- Total Harmonic Distortion < 20%

## Models Single output

- Class 2 Power Supply
- Active PFC
- SCP, Over Load Protection
- Leading or Trailing Edge Triac
- IP67 Case



Model	Max Output Power	Output Voltage	No Load Output	Output Current	Input Voltage (VAC/Hz)	Efficiency (%)	
	(W) <sup>①</sup>	Range (V)	Voltage (V max.)	(A)		115 VAC	230 VAC
AMEPR8D-2435AZ	8.4	12-24	34	0.35	90-264/47-440	79	80
AMEPR8D-1840AZ	7.2	9-18	20	0.4	90-264/47-440	77	79
AMEPR8D-1270AZ	8.4	6-12	15	0.7	90-264/47-440	75	78

\*Exceeding the maximum output power will permanently damage the converter.

NOTE: All specifications in this datasheet are measured at an ambient temperature of 25°C, humidity<75%, nominal input voltage and at rated output load unless otherwise specified.

AMEPR8D-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
Current (full load)	115 VAC		85	mA
Current (full load)	230 VAC		50	mA
Inrush current <2ms (cold start)	115 VAC		10	A
	230 VAC		5	A
Leakage current 230 VAC			0.02	mA
Power factor	115 VAC (full load)	0.98		
Fower lactor	230 VAC (full load)	0.95		
External fuse	Recommended slow blow type	1		A
Start-up time	Start-up time			ms

## **Output Specifications**

Parameters	Conditions	Typical	Maximum	Units
Current accuracy		±15		%
Line regulation	(LL-HL)	±0.5		%
Load regulation	minmax. load	±5		%
Ripple & Noise*		1.6		V р-р
Hold-up time		28		ms
Minimum load voltage	See the models table			
Maximum Capacitive Load			200	μF

\*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	66			KHz	
Over load protection		≥110		%	
Over voltage protection		≧110		%	
Short circuit protection		Auto recovery			
Operating temperature	With derating over 75°C	Refer to model application		°C	
Storage temperature		-40 to +95		°C	
Maximum case temperature			100	°C	
Temperature coefficient	±0.02		% / °C		
Cooling	Free air convection				
Humidity	Non condensing 20~95 % R			% RH	
Case material	Plastic				
Potting	Epoxy (IP67 rated)				
Wires	UL1015 Input 18AW G*10CM / Output 20 AWG*10CM				
Weight	55 g				
Dimensions (D X L)	27.4 x 70.3 mm (1.08 x 2.77 inches)				
MTBF	>400,000 hrs (MIL-HDBK-217F at +25°C)				

### **Environment Approval**

Test	Parameters	Conditions
	Wave form	Half sine wave
	Acceleration amplitude	5gn
Shock	Bump duration	30ms
	Converter operation	Before and after test, body mounted (on chassis)
	Number of bumps	18 (3 in each direction for every axis)
	Test mode	Sweep sine, 10-100Hz, speed 0.05Hz/s
Vibration	Displacement 1mm	1mm
VIDIATION	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, FCC
Standards	UL8750, UL60950-1, class 2 power supply per UL1310, FCC15,

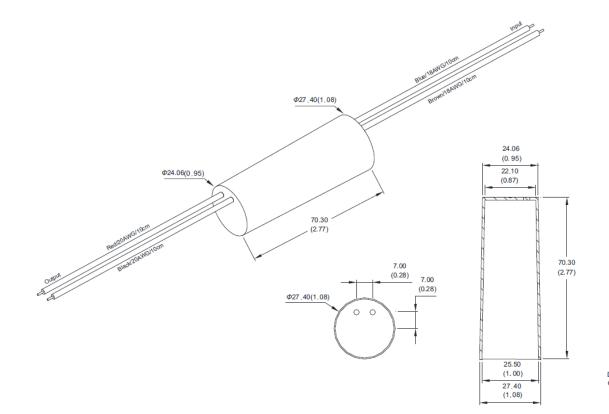
## **Wire Specifications**

Wire	Parameters	Color
Innut	ACN	Blue
Input	ACL	Brown
Output	+V Output	Red
	-V Output	Black

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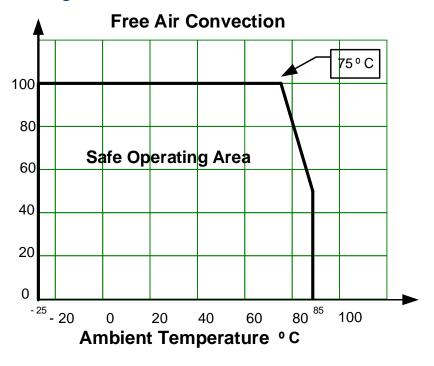


# Dimensions



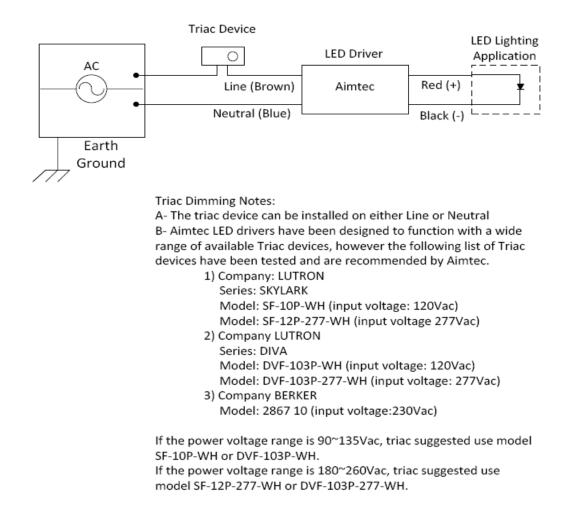
Dimensions mm (inch) Case Tolerance ±0.50 (±0.02)

## Derating





# **Triac Dimming Feature**



**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.