Series AMEPR10-Z

up to 290mA | AC-DC LED driver



FEATURES:

- Accurate Constant Current Output ±5%
- High Efficiency: Up to 86%
- Active Power Factor Correction
- Short Circuit / Open Circuit Protection
- Class 2 Power Unit
- Long Life, High reliability
- IP20, Suitable for Indoor LED Lighting
- 3 Years Limited Warranty

Models

Single output

Model	Max Output Power (W)	Output Voltage Range (V)	Output Current (mA)	Input Voltage (VAC/Hz)	Efficiency (%)
AMEPR10-2629Z	8	18-26	290	90-264/47-63	83
AMEPR10-3329Z	10	23-33	290	90-264/47-63	83
AMEPR10-4224Z	10	30-42	240	90-264/47-63	86

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.

Input Specifications

Parameters	Conditions	Typical	Maximum	Units
Input Current	90 VAC, full load		0.15	Arms
Inrush current <2ms	115 VAC, cold start		20	A
	230 VAC, cold start		40	
Leakage current			0.75	mA
Input dissipation	No Load		1	W
	Output Short		2	W
Power Factor	115 VAC, full load	0.90		
	230 VAC, full load	0.90		
Input Fuse	1A/250V			
Start-up Time	115 VAC, full load		2.0	Sec.
	230 VAC, full load		1.0	Sec.

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Current accuracy		±5		%
Line regulation	LL to HL	±3		%
Load regulation	Full Output Voltage Range	±3		%
Ripple & Noise			1150	mV p-p
Output Current Ripple	Full load, 16.7-20ms duration		550	mA p-p
Current Overshoot	LL to HL, full load at cold start, % of rated output current		10	%
Hold-up time (min)			0	ms
Minimum Load Voltage	See Models Table Above			

Isolation Specifications

Parameters	Conditions	Typical	Rated	Units
Tested I/O voltage	IEC61347		3750	VAC
Isolation Resistance	500Vdc	>100MΩ		VAC
Isolation Capacitance		100		pF

General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency			135	KHz

Over voltage protection	AMEPR10-2629Z		30	V
	AMEPR10-3329Z		36	V
	AMEPR10-4224Z		50	V
Short circuit protection	Continuous, Hiccup Mode			
Short circuit restart	Auto Recovery			
Open circuit protection	Continuous, Hiccup Mode			
Operating temperature	Without derating	-20 to +50		ºC
Maximum case temperature		80		ºC
Storage temperature		-30 to +90		ºC
Temperature coefficient			0.05	% / ºC
Cooling	Free Air Convection			
Humidity			90	% RH
Case material	Plastic			
Weight	AMEPR10-2629Z, AMEPR10-3329Z	60		g
	AMEPR10-4224Z	70		g
Dimensions (L X W X H)	AMEPR10-2629Z, AMEPR10-3329Z	3.46 x 1.54 x 0.91 inches	88.0 x 39.2 x 23.1 mm	
Dimensions (L X W X H)	AMEPR10-4224Z	3.68 x 1.76 x 1.08 inches	93.5 x 44.7 x 27.5 mm	
MTBF	>300,000 hrs (MIL-HDBK-217F at +25°C)			

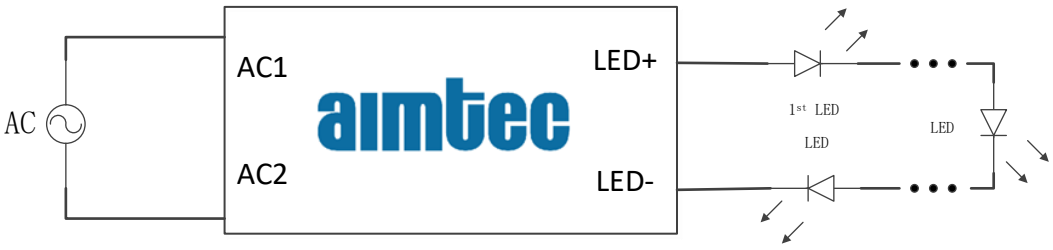
Safety Specifications

Parameters		
Standards	Electromagnetic Interference	EN55015 / FCC Part 15, Class B
	Harmonic Current Emissions	EN61000-3-2, Class B
	Voltage fluctuations and flicker	EN61000-3-3
	Electrostatic Discharge Immunity	EN61000-4-2, 8kV Air, 4kV Contact, Level 3, Criteria A
	RF, Electromagnetic Field Immunity	EN61000-4-3, Test-RS Level 3, Criteria A
	Electrical Fast Transient / Burst Immunity	EN61000-4-4, Burst EFT Level 3, Criteria A
	Surge Immunity	EN61000-4-5, Line to Neutral 2kV
	RF, Conducted Disturbance Immunity	EN61000-4-6. Test-CS Level 3, Criteria A
	Power frequency Magnetic Field Immunity	EN61000-4-8, Test 3A/m, Criteria A
	Voltage dips, Short Interruptions Immunity	EN61000-4-11, Criteria B
	Electromagnetic Immunity Requirements Applies to Lighting Equipment	EN61547

Pin Definition

Recommended Wire gauge	Connection
20-24	AC L
20-24	AC N
14-26	LED+
14-26	LED-

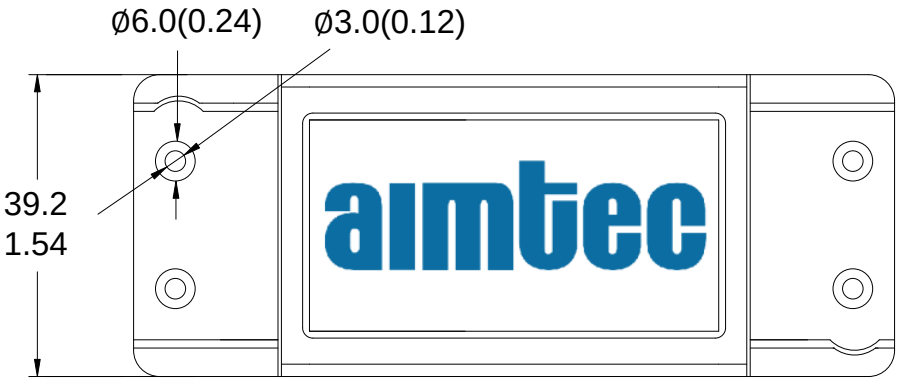
Application Block diagram



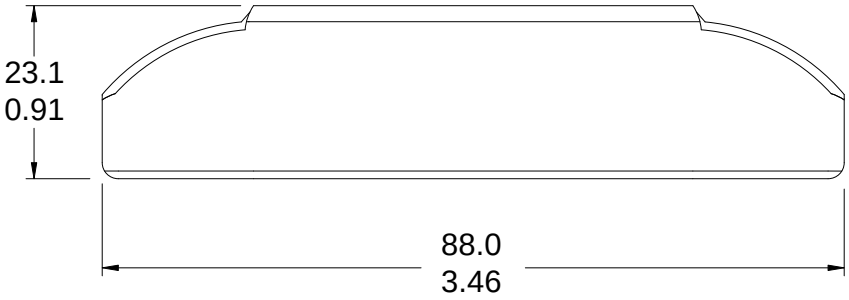
Dimensions

AMEPR10-2629Z & AMEPR10-3329Z

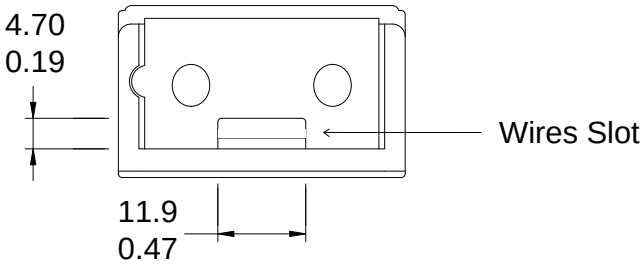
Top View



Side View1

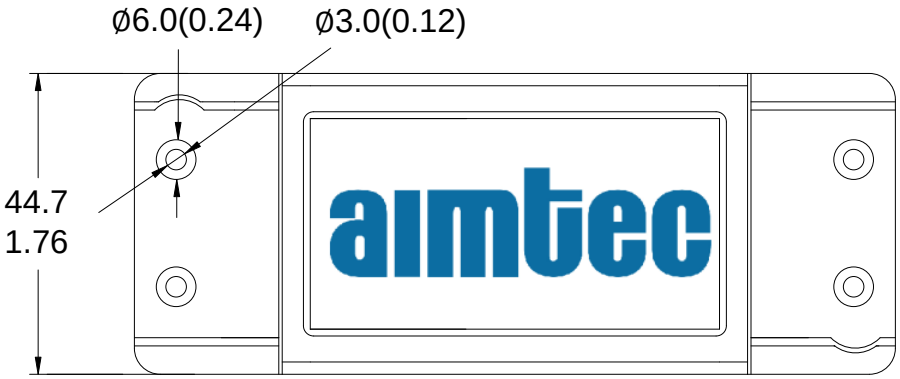


Side View2

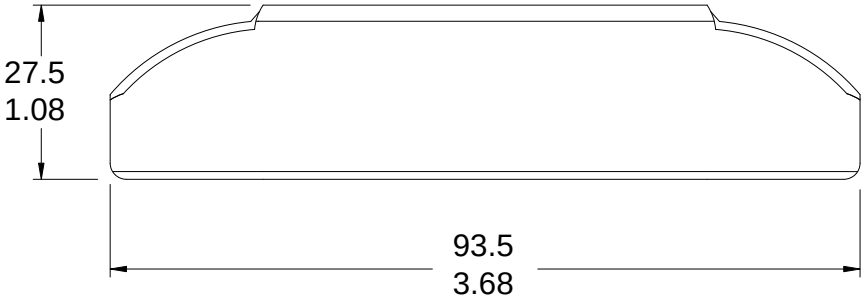


AMEPR10-4224Z

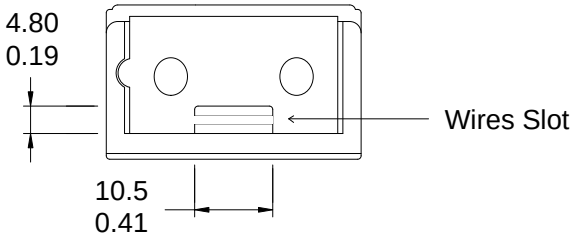
Top View



Side View1

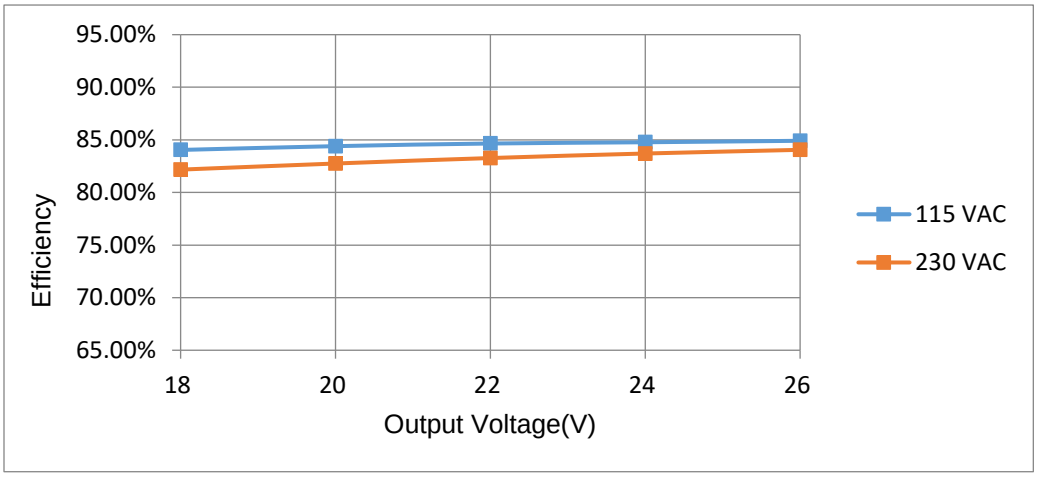


Side View2



Efficiency Vs. Input Voltage & Output Load Voltage

AMEPR10-2629Z



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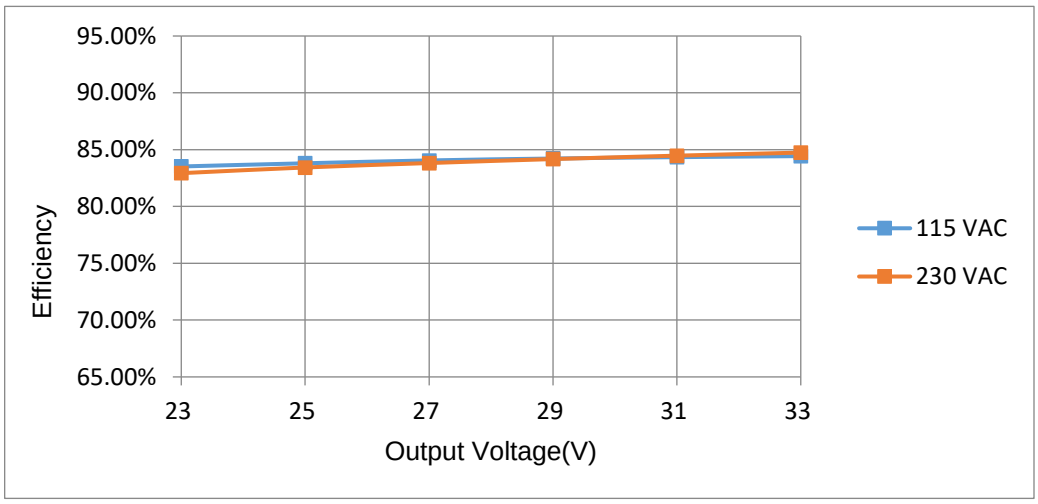
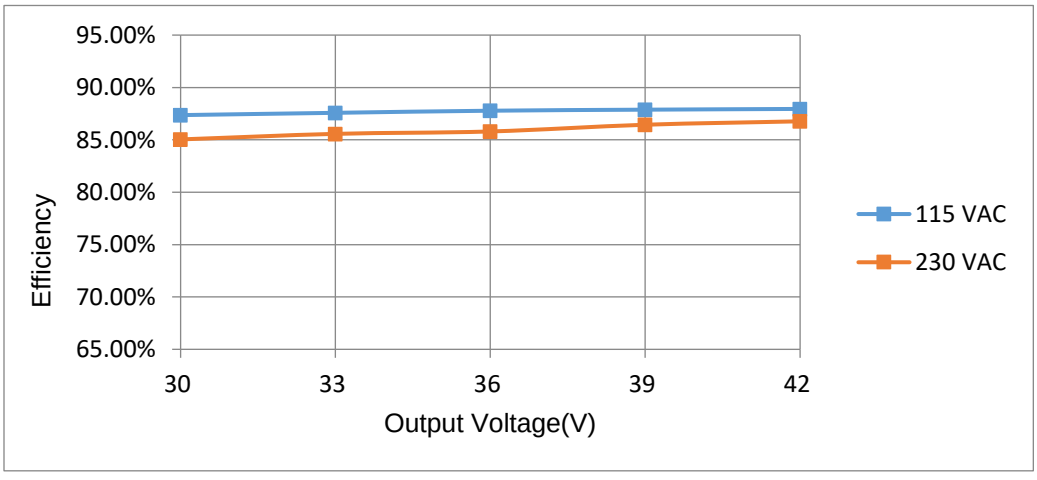
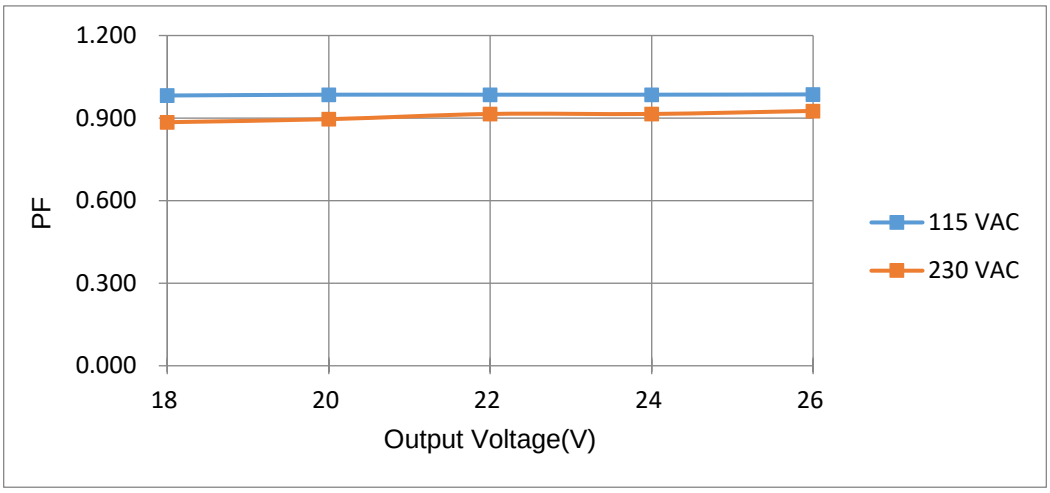


AMEPR10-4224Z

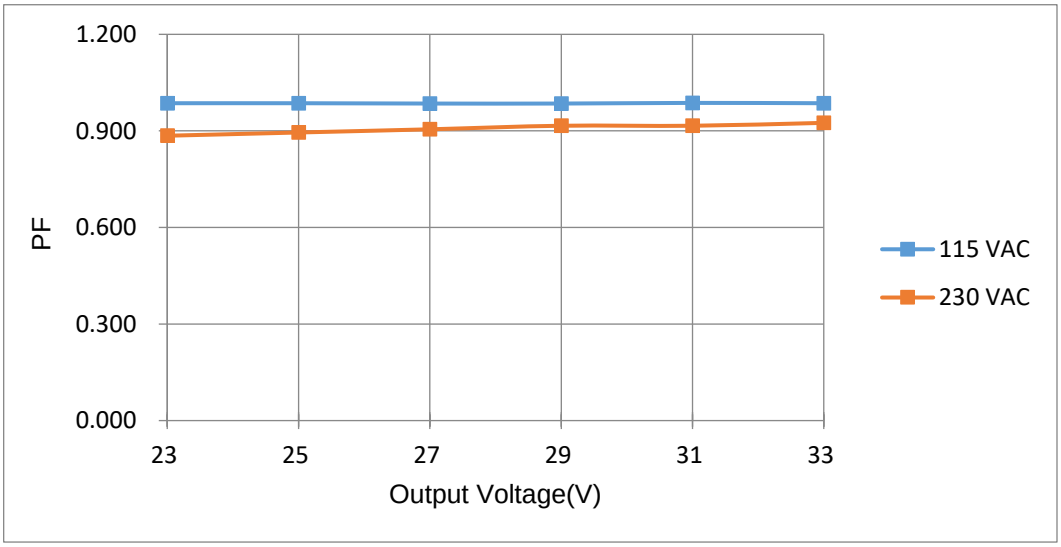


PF vs. Input Voltage & Output Load Voltage

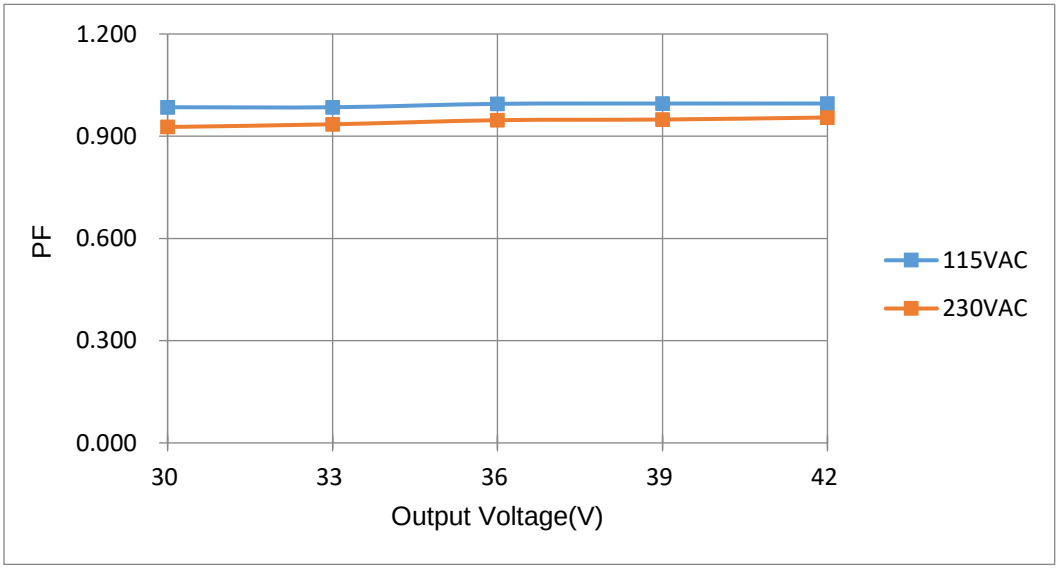
AMEPR10-2629Z



AMEPR10-3329Z



AMEPR10-4224Z



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