Series AMER90-Z

up to 2000mA | AC-DC LED driver



FEATURES:

- Constant Current LED Driver
- High Efficiency: Up to 90%
- Active Power Factor Correction
- UVLO, Short Circuit, Open Circuit, Over Temperature Protection
- IP67 design for indoor/outdoor
- Long Life, High reliability
- Meet UL, CE Safety Requirement
- 5 Year Warranty

Models
Single output

RoHS

Model	Max Output Power (W)	Output Voltage Range (V)	Output Current (A)	Input Voltage (VAC/Hz)	Efficiency (%)
AMER90-42200Z	84.0	24-42	2	90-305/47-63	90
AMER90-56160Z	89.6	40-56	1.6	90-305/47-63	90

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		1.3	A rms
Inrush current <2ms	115 VAC, cold start		40	A
	305 VAC, cold start		65	
Leakage current			0.75	mA
Input dissipation	No Load		1.5	W
	Output Short		2.5	W
Power Factor	115 VAC, full load	0.98		
	230 VAC, full load	0.95		
	277 VAC, full load	0.92		
Input Fuse	3.15A / 300V			
Start-up Time	115 VAC, full load		1.5	Sec.
	277 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	±5		%
Ripple & Noise			8	% of Vout
Output Current Ripple	Full load, 16.7-20ms duration		1	A p-p
Current Overshoot	LL to HL, full load at cold start, % of rated output current		10	%
Hold-up time (min.)			0.5	ms
Minimum Load Voltage	See Models Table Above			

Isolation Specifications

Parameters	Conditions	Typical	Rated	Units
Tested I/O Voltage	I/P – O/P		3750	VAC
	I/P – FG		2000	VAC
	O/P – FG		500	VAC
Isolation Resistance	I/P – O/P, 500VDC	>100MΩ		VAC
Isolation Capacitance			3800	pF

General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency			130	KHz
Over voltage protection	AMER90-42200Z		50	V
	AMER90-56160Z		63	V
Short circuit protection	Continuous, Current limiting			
Short circuit restart	Auto Recovery			
Open circuit protection	Continuous, Hiccup mode			
Over Temperature Protection	Threshold – Shutdown Output	+100		°C
	Hysteresis – Auto Recovery	+85		°C
Operating temperature	Without Derating	-40 to +60		°C
Maximum case temperature		+95		°C
Storage temperature		-40 to +85		°C
Temperature coefficient			0.03	% / °C
Cooling	Free Air Convection			
Humidity			90	% RH
Case material	Metal (Aluminum)			
IP Rating	IP67			
Weight	850			g
Dimensions (L X W X H)	6.93 x 2.70 x 1.65 inches 176.0 x 68.7 x 42.0 mm			
MTBF	400,000 hrs (MIL-HDBK-217F at +25°C)			

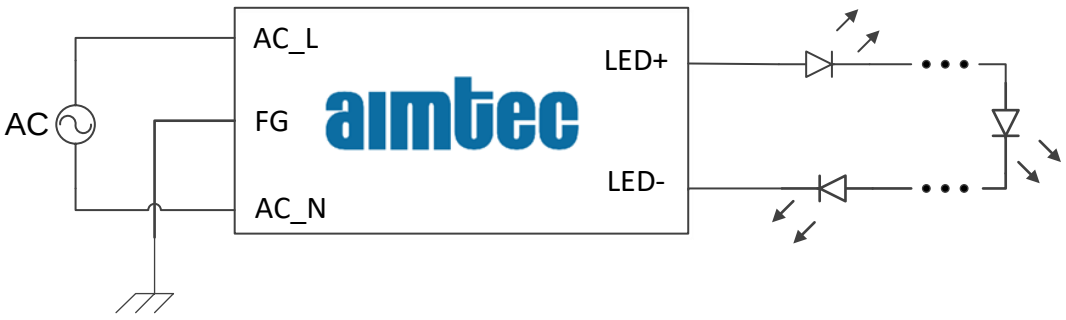
Safety Specifications

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 4kV, Line/Neutral to FG 6kV
	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

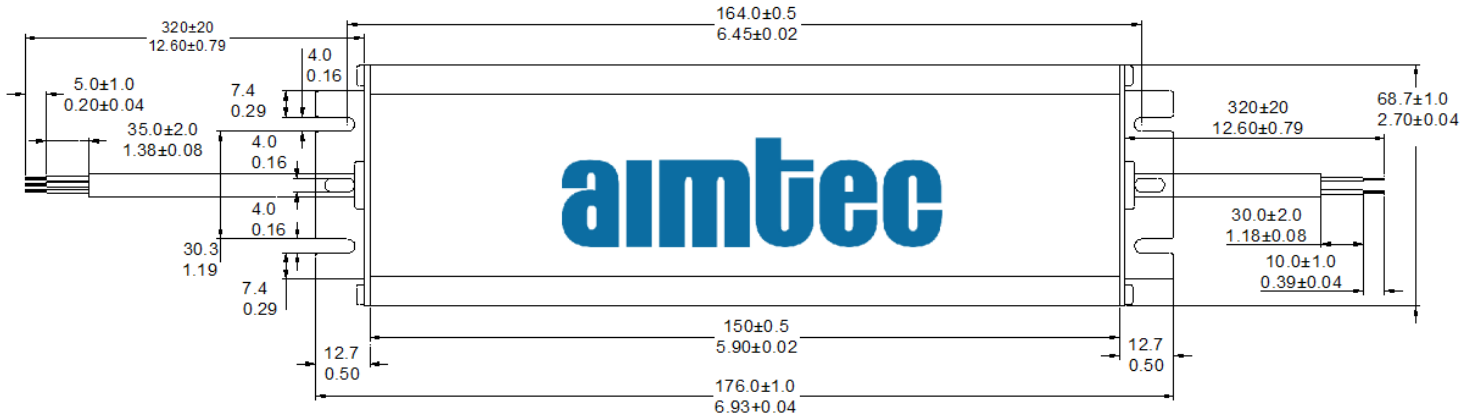
Wire	Connection
Brown	AC L
Blue	AC N
Yellow/Green	FG
Red	+V Output
Black	-V OUtput

Block diagram

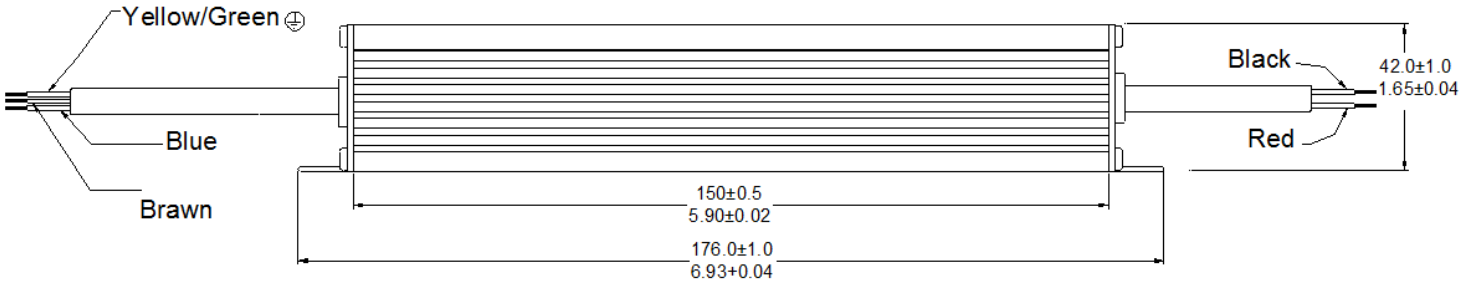


Dimensions

Top View

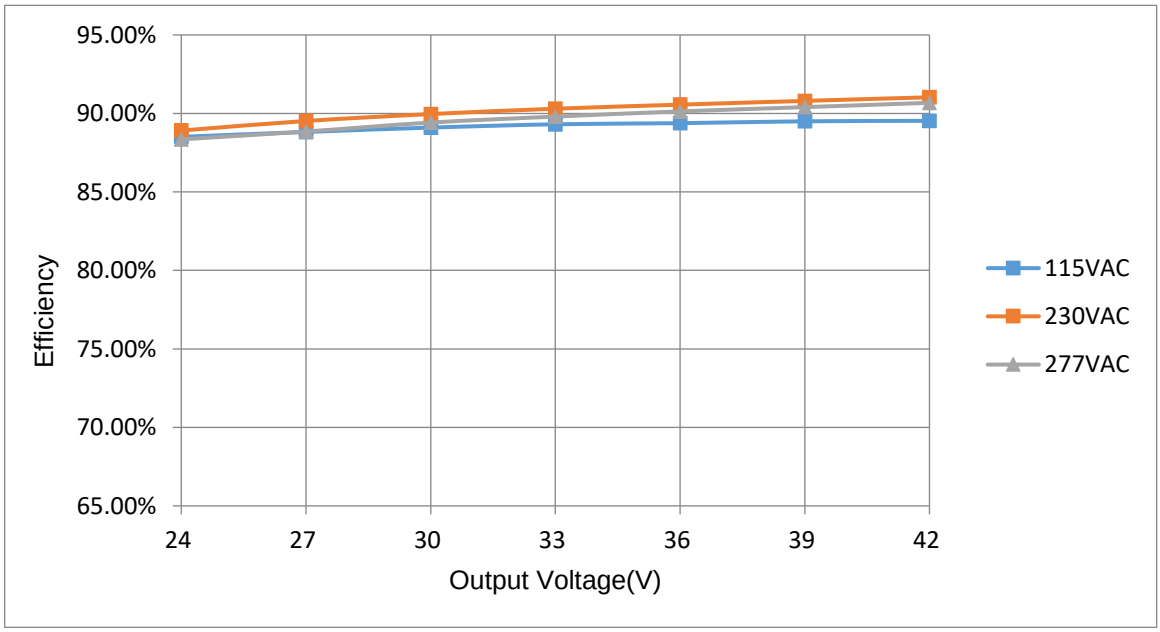


Side View

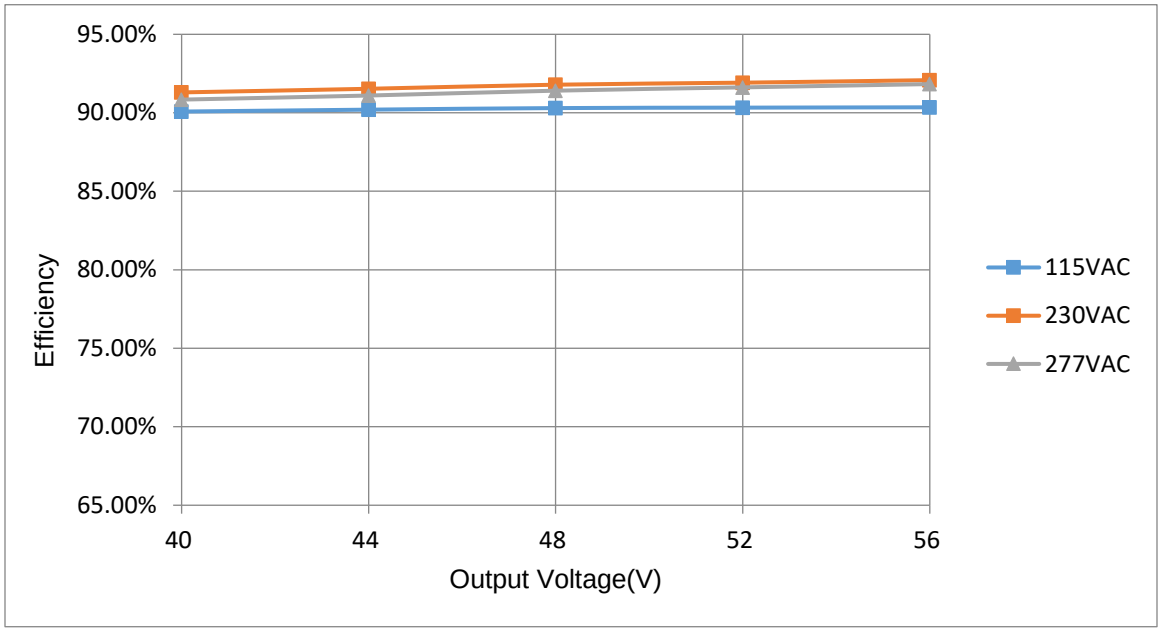


Efficiency Vs. Input Voltage & Output Voltage (Constant current load)

AMER90-42200Z

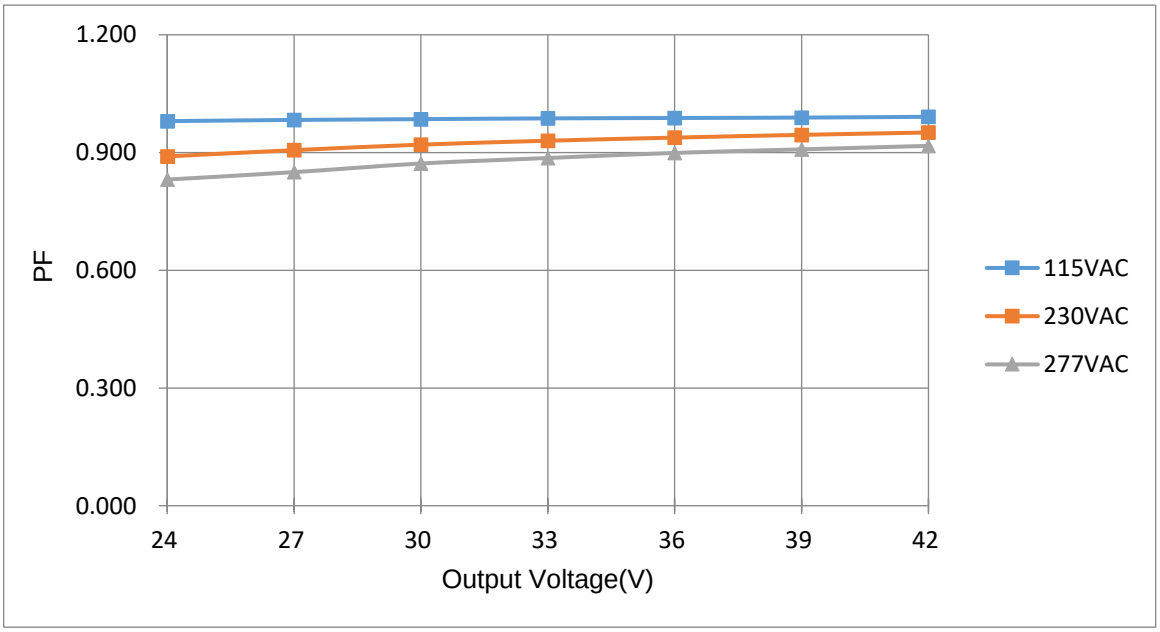


AMER90-56160Z

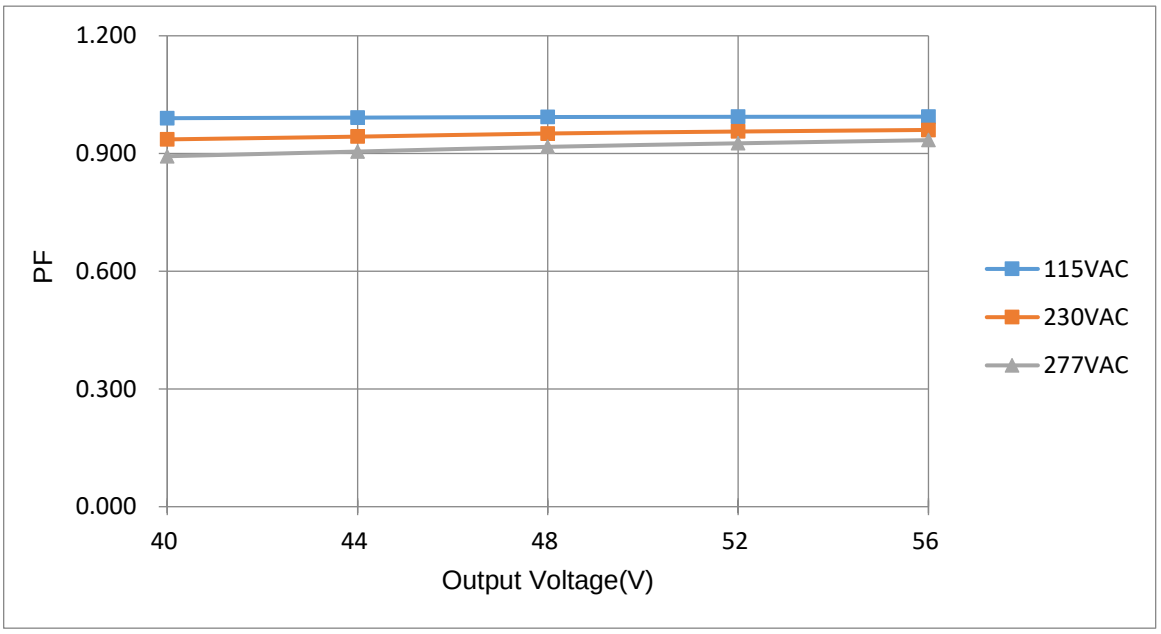


PF vs. Input Voltage & Output Voltage (CC mode)

AMER90-42200Z



AMER90-56160Z



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