Series AMER40-Z

up to 900mA | AC-DC LED driver

FEATURES:

- Constant Current LED Driver
- High Efficiency: Up to 89%
- Active Power Factor Correction
- Short Circuit / Open Circuit Protection
- Meet UL, CE Safety Requirement
- Long Life, High reliability
- IP65/IP67 design for indoor/outdoor
- 5 Years Limited Warranty

Models

Single output

Model	Max Output Power (W)	Output Voltage Range (V)	Output Current (mA)	Input Voltage (VAC/Hz)	Efficiency (%)
AMER40-4275Z	31.5	30-42	750	90-305/47-63	89
AMER40-4290Z*	37.8	30-42	900	90-305/47-63	89

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		0.58	Arms
Inrush current <2ms	115 VAC, cold start		40	A
	277 VAC, cold start		60	
Leakage current			0.75	mA
Input dissipation	No Load		1.0	W
	Output Short		4.5	W
Power Factor	115 VAC, full load	0.98		
	277 VAC, full load	0.92		
Input Fuse	2 A / 300 VAC			
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			2.5	V p-p
Output Current Ripple	Full load, 16.7-20ms duration		1.5	A 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	I/P – O/P		3750	VAC
	I/P – FG		2000	
	O/P – FG		500	
Isolation Resistance	I/P – O/P, 500Vdc	>100MΩ		VAC
Isolation Capacitance			2500	pF

General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency		150		KHz
Over voltage protection			50	VDC
Short circuit protection	Hiccup Mode			
Short circuit restart	Auto Recovery			

Open circuit protection	Hiccup Mode			
Operating temperature	With Derating over °C	-40 to +60		°C
Storage temperature		-40 to +90		
Maximum case temperature			90	°C
Temperature coefficient			0.03	% / °C
Cooling	Free Air Convection			
Humidity			90	% RH
Case material	Metal (Aluminum)			
Potting material	Epoxy (IP67 rated)			
IP Rating	IP67			
Weight	430			g
Dimensions (L X W+ X H)	6.50 X 1.91 X 1.31 inches 165 X 48.6 X 33.3 mm			
MTBF	400,000 hrs (MIL-HDBK-217F at +25°C)			

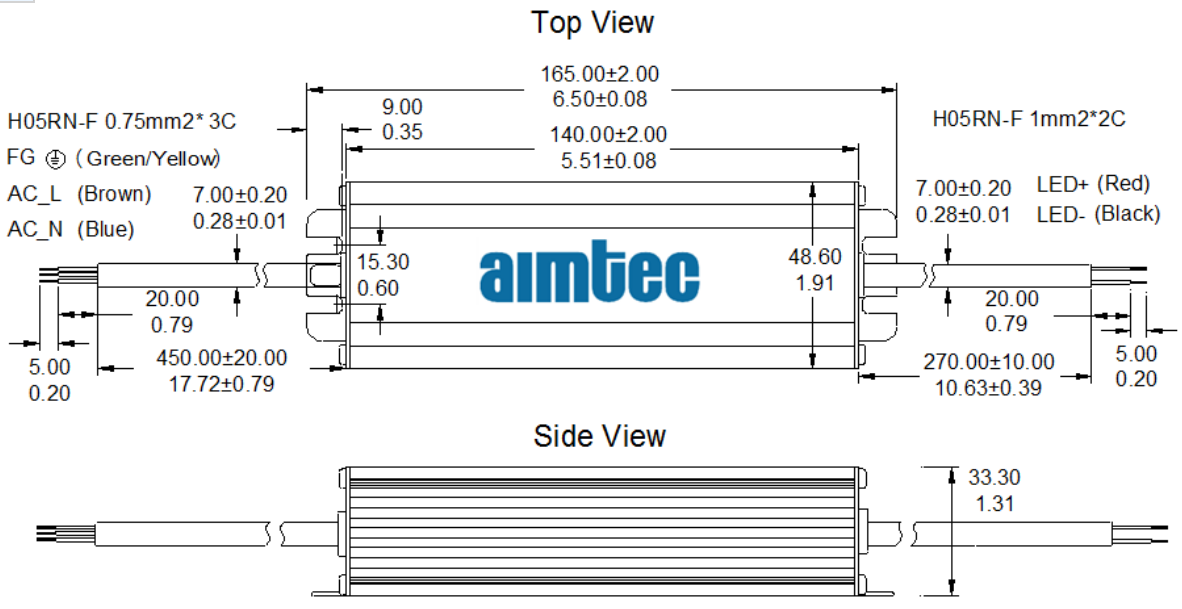
Safety Specifications

Parameters		
Agency Approvals	NOM (for all part numbers with *)	
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

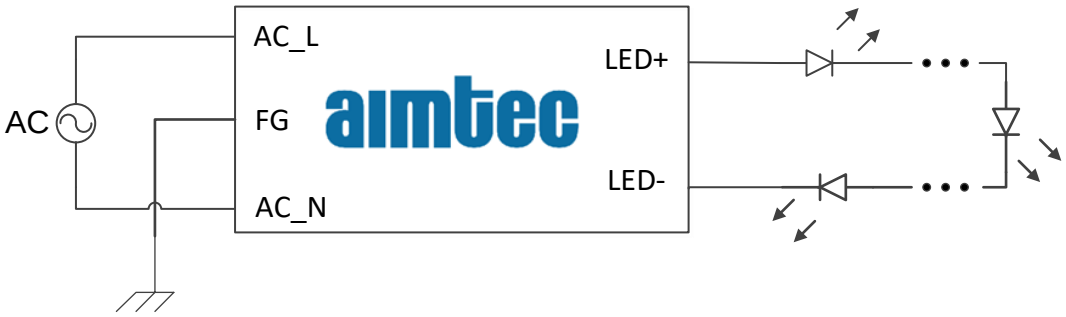
Pin Definition

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

Dimensions

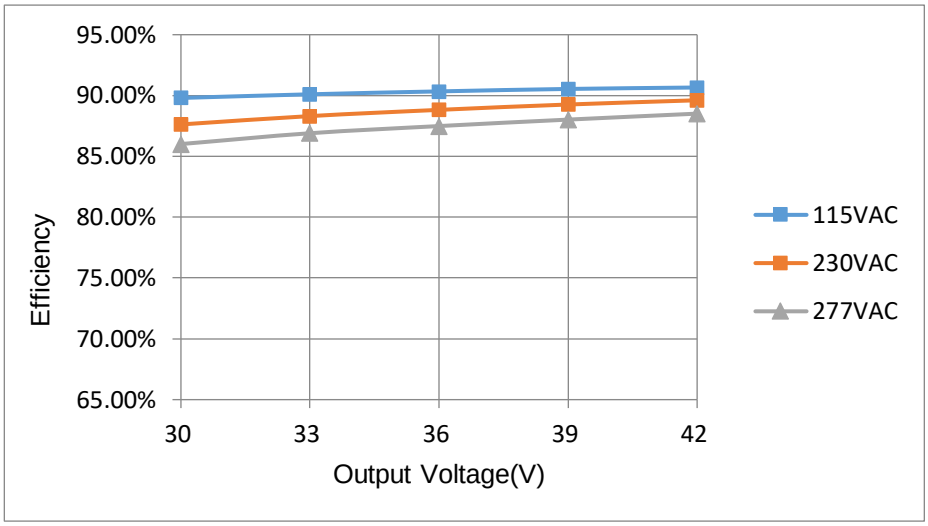


Application Block diagram



Efficiency Vs. Input Voltage & Output Voltage

AMER40-4275Z



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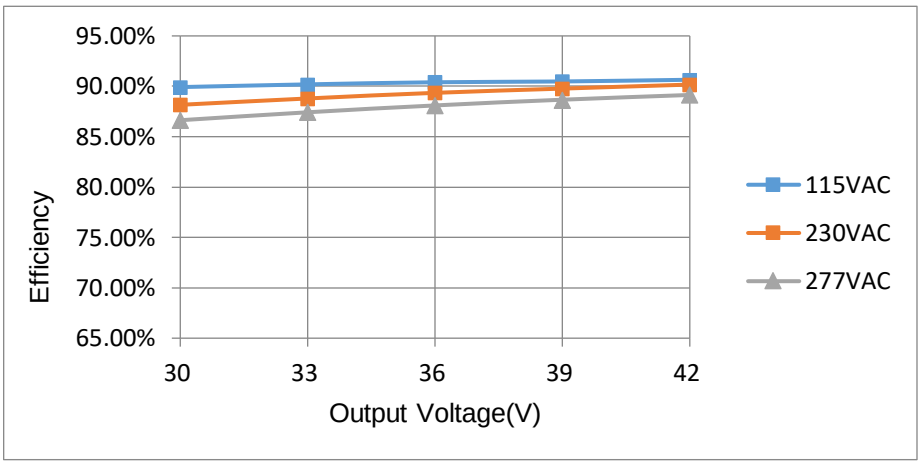
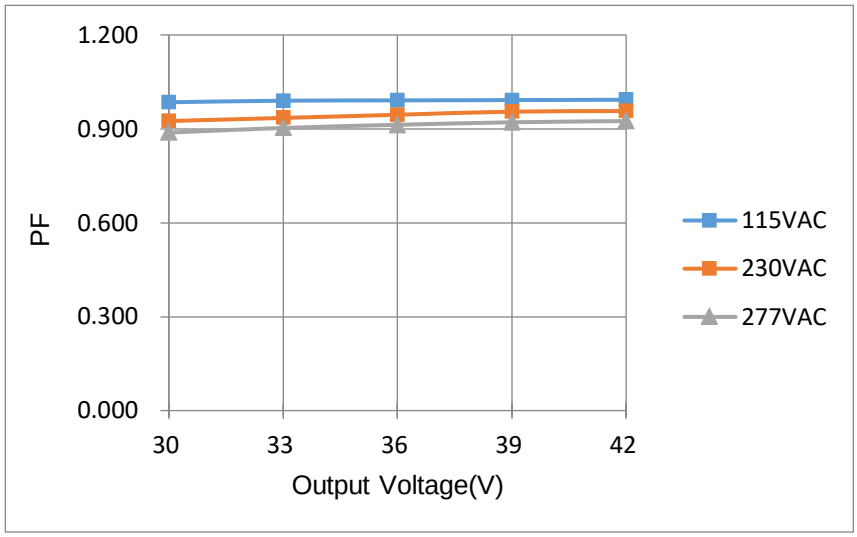
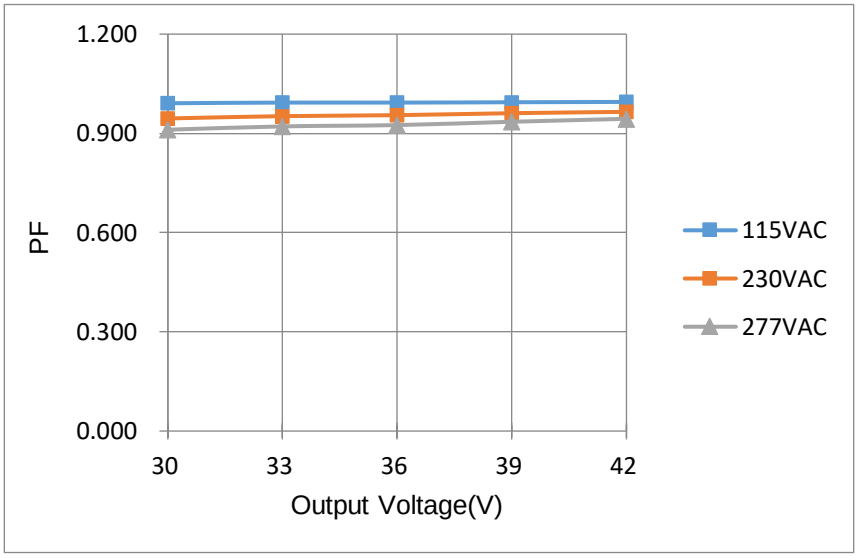


PF vs. Input Voltage & Output Voltage

AMER40-4275Z



AMER40-4290Z



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