

FEATURES:



- Constant Current LED Driver
- High Efficiency: Up to 90%
- 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 (%)
AMER50-42105Z	44.1	30-42	1050	90-305/47-63	89
AMER50-42120Z	50.4	30-42	1200	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		0.76	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	2A / 300VAC			
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	Full load		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
Over current protection	Constant Current Mode			
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 +85	°C
Maximum case temperature		90	°C
Temperature coefficient		0.03	% / °C
Cooling	Free Air Convection		
Humidity		90	% RH
Case material	Metal (Aluminum)		
Potting material	polysiloxane		
IP Rating	IP67		
Weight		460	g
Dimensions (L X W+ X H)	6.89 X 1.91 X 1.31 inches	175.0 X 48.6 X 33.3 mm	
MTBF	400,000 hrs (MIL-HDBK-217F at +25°C)		

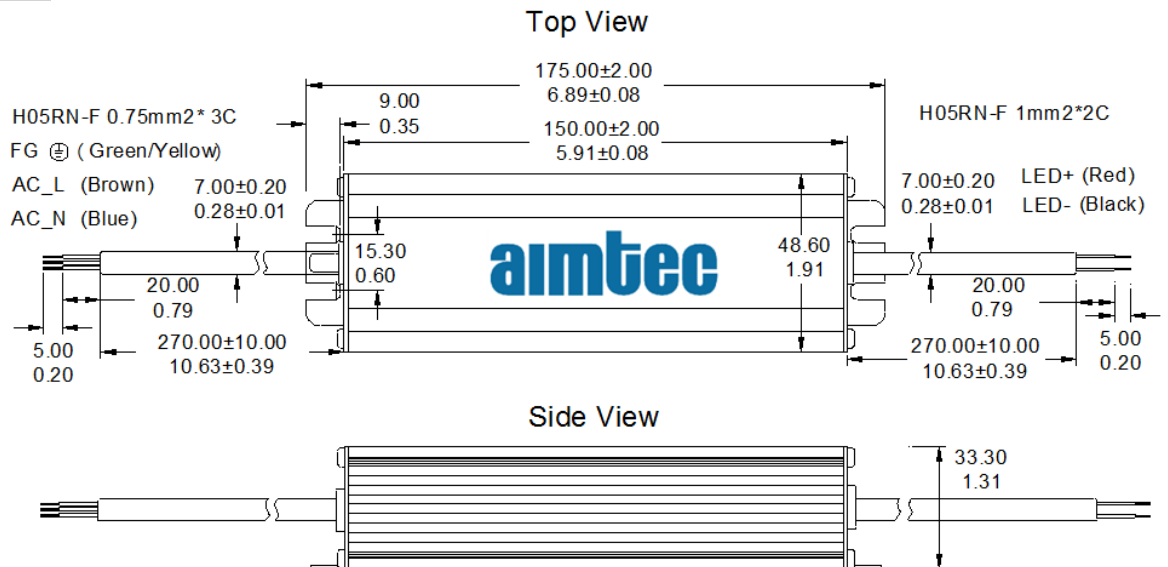
Safety Specifications

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

Dimensions

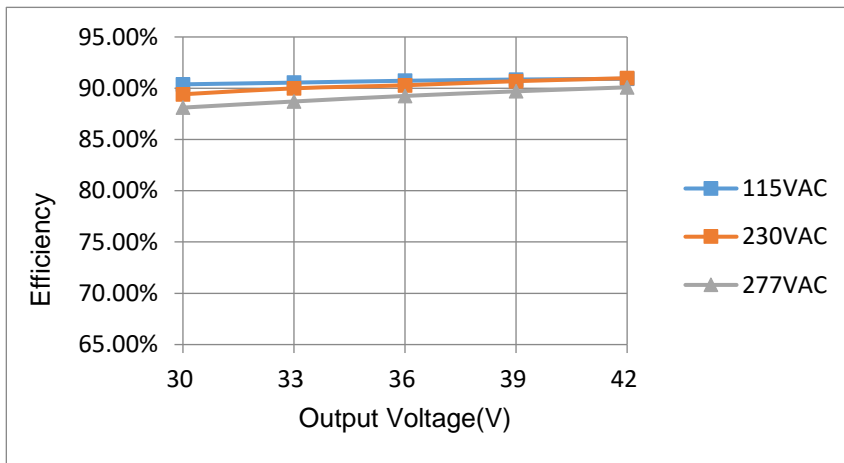


Application Block diagram

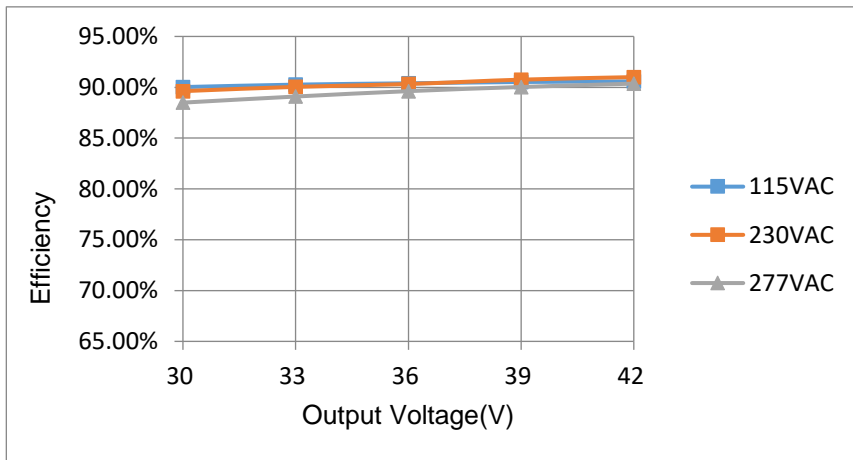


Efficiency Vs. Input Voltage & Output Voltage

AMER50-42105Z

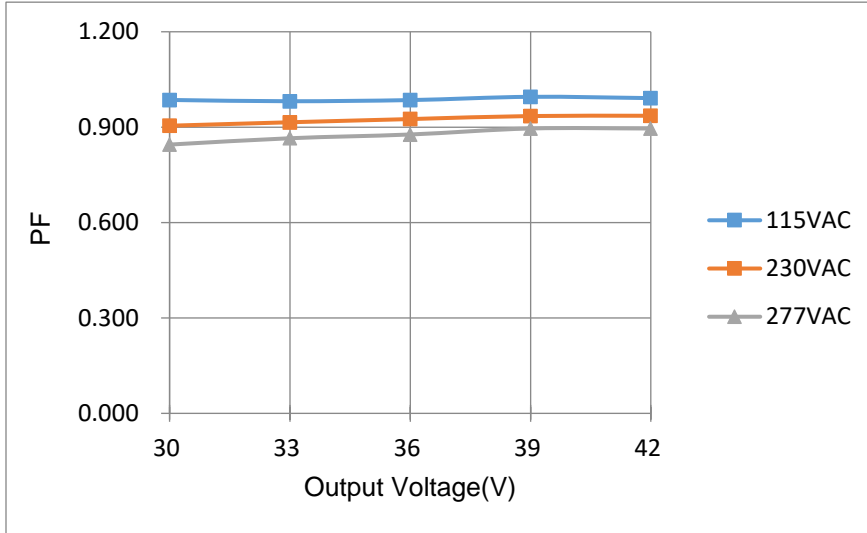


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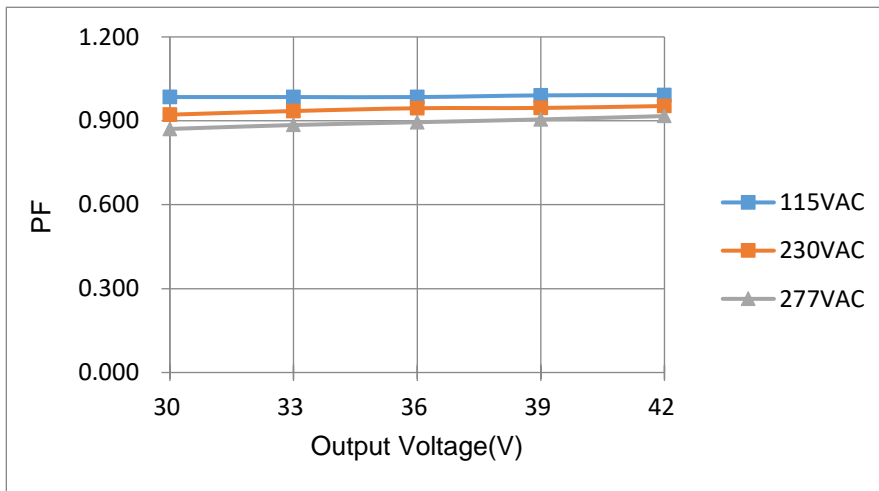


PF vs. Input Voltage & Output Voltage

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AMER50-42120Z



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