Series AMER120C-Z

up to 1700mA | AC-DC LED driver

FEATURES:

- Accurate Constant Current Output ±3%
- High Efficiency: Up to 91%
- Active Power Factor Correction
- UVLO, Short Circuit, Over Voltage
- Adjustable output current: 50-100%
- IP65/IP67 design for indoor/outdoor
- Over Temperature Protection
- Dimmable output current: 10-100%
- Open circuit protection
- 5 Year Warranty

RoHS

Models

Single output

Model	Max Output Power (W)	Input Voltage (VAC/Hz)	Output Voltage Range (V)	Output Current (A)	Efficiency (%)
AMER120C-70170Z	119	90-305/47-63	35-70	1.7	91
AMER120C-70170Z-P	119	90-305/47-63	35-70	1.7	90.5
AMER120C-70170Z-PD	119	90-305/47-63	35-70	1.7	90
AMER120C-60200Z	120	90-305/47-63	42-60	2	90

Model Nomenclature functional differences:	
With Suffix "-PD"	With manually adjustable 50-100% & fully dimmable 10-100% (0-10V/10PWM/Resistive) output current
With Suffix "-P"	Only with manually adjustable output current: 50-100%
Without Suffix	Only with fully dimmable 10-100% (0-10V/10PWM/Resistive) output current

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		1.6	Arms
Inrush current <2ms	115 VAC, cold start		45	A
	305 VAC, cold start		75	
Leakage current			0.75	mA
Input dissipation	No Load		3.0	W
	Output Short		10.0	W
Power Factor	115 VAC, full load	0.98		
	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		±3		%
Line regulation	LL to HL	±1		%
Load regulation	Full Output Voltage Range	±1		%
Ripple & Noise			4.5	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.)			0.5	ms
Minimum Load Voltage	See Models Table Above			

Isolation Specifications

Parameters	Conditions	Typical	Rated	Units
I/O Isolation 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		75		V
Short circuit protection	Continuous, Hiccup mode, auto recovery			
Open circuit protection	Continuous			
Over Temperature Protection	Threshold – Shutdown Output	+106		ºC
	Hysteresis – Auto Recovery	+90		ºC
Operating temperature	With Derating over 60ºC	-40 to +70		ºC
Maximum case temperature		90		ºC
Warranty case temperature		-40 to 73		ºC
Storage temperature		-40 to +85		ºC
Temperature coefficient			0.03	% / ºC
Cooling	Free Air Convection			
Humidity			95	% RH
Case material	Metal (Aluminum)			
Potting material	Polysiloxane			
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

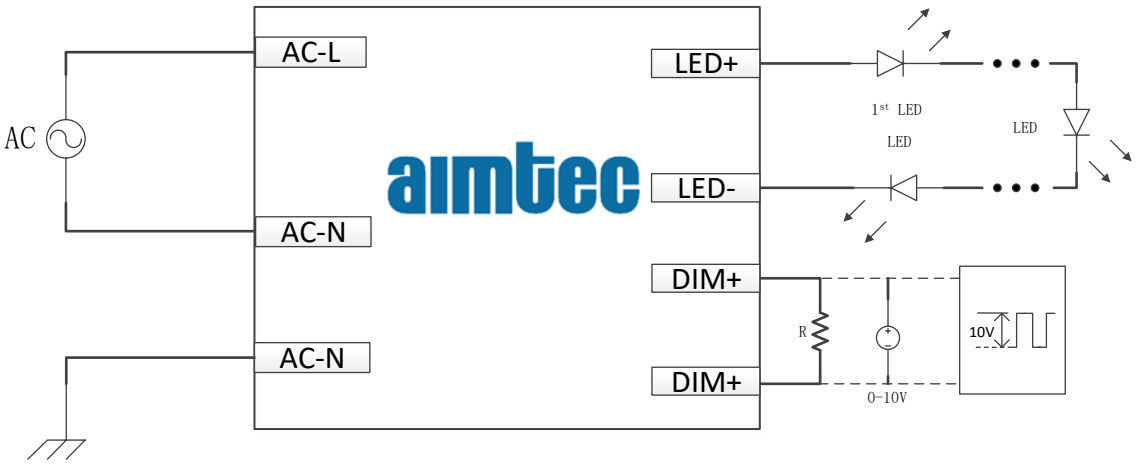
Parameters		
Standards	Electromagnetic Interference	EN55015 / FCC Part 15, Class B
	Harmonic Current Emissions	EN61000-3-2, Class B
	Voltage fluctuations and flicker	EN61000-3-3
	Electrostatic Discharge Immunity	EN61000-4-2, 8kV Air, 4kV Contact, Level 3, Criteria A
	RF, Electromagnetic Field Immunity	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	Pin
Blue	AC-N
Brown	AC-L
Yellow/Green	FG
Red LED+	+V Output
Black LED-	-V Output
Red	DIM+
Black	DIM-

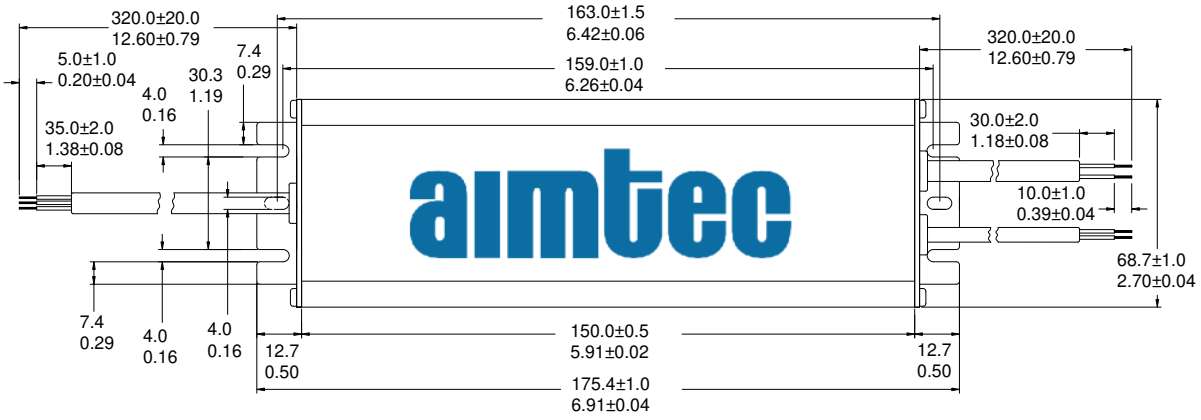
Input wire gauge #18
Output wire gauge #14

Block diagram

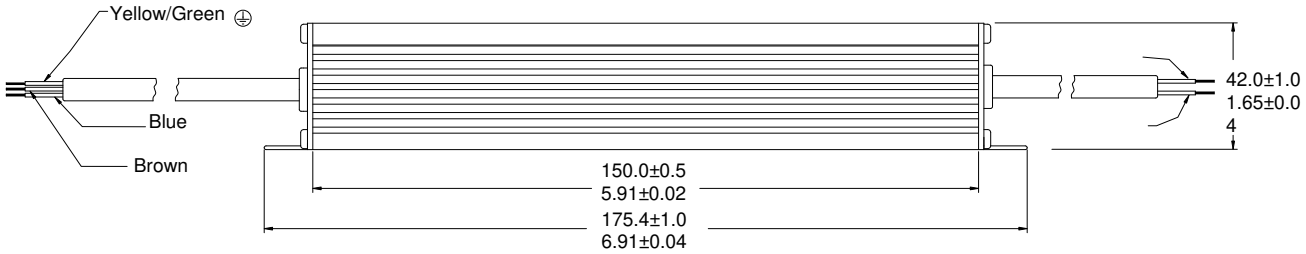


Dimensions

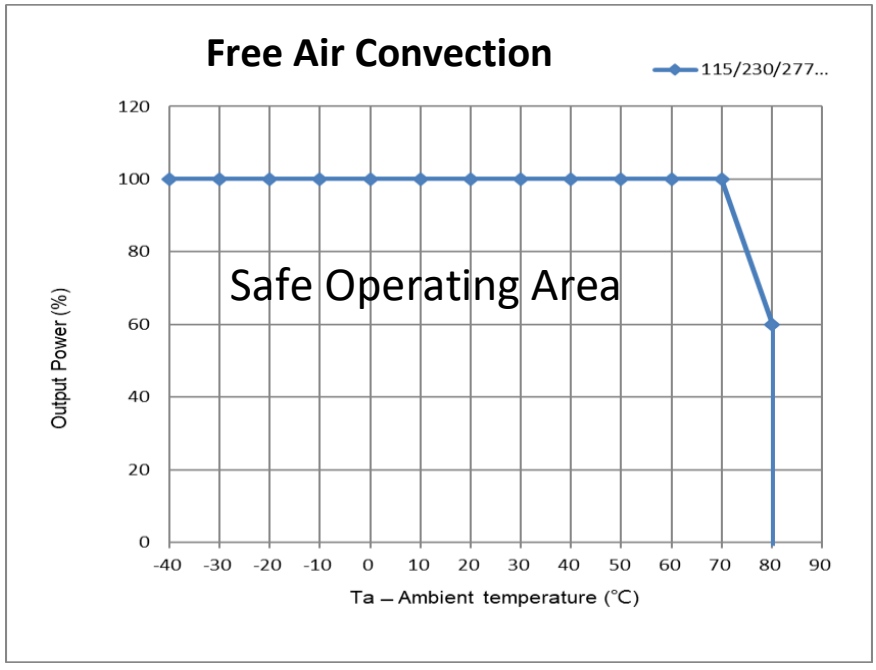
Top View



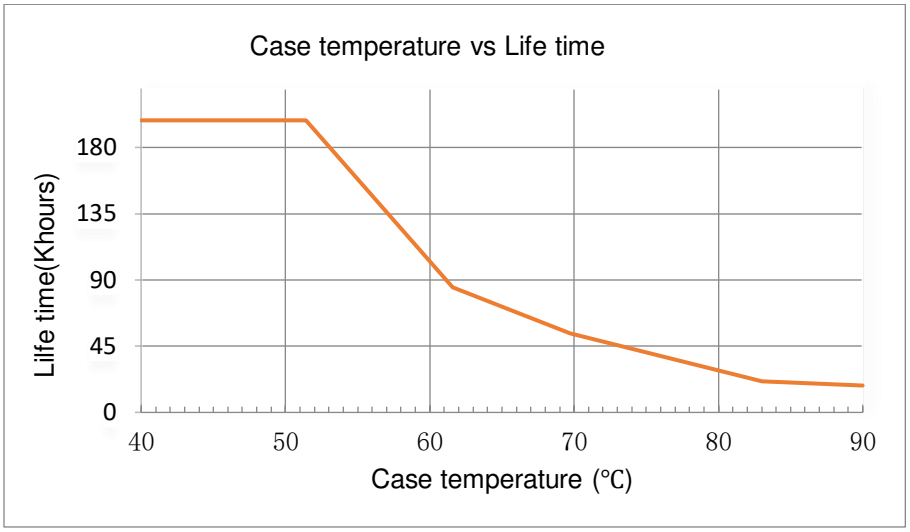
Side View



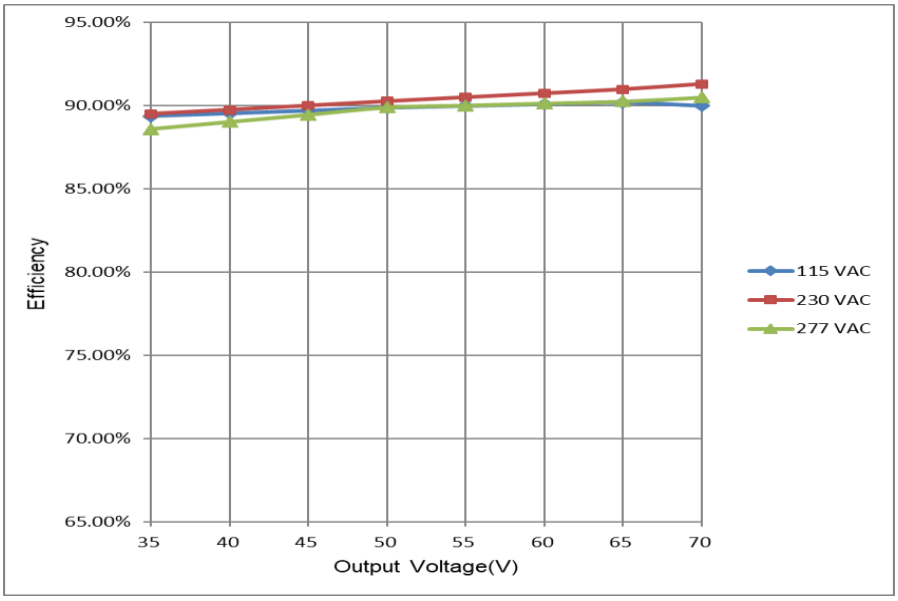
Derating Graph



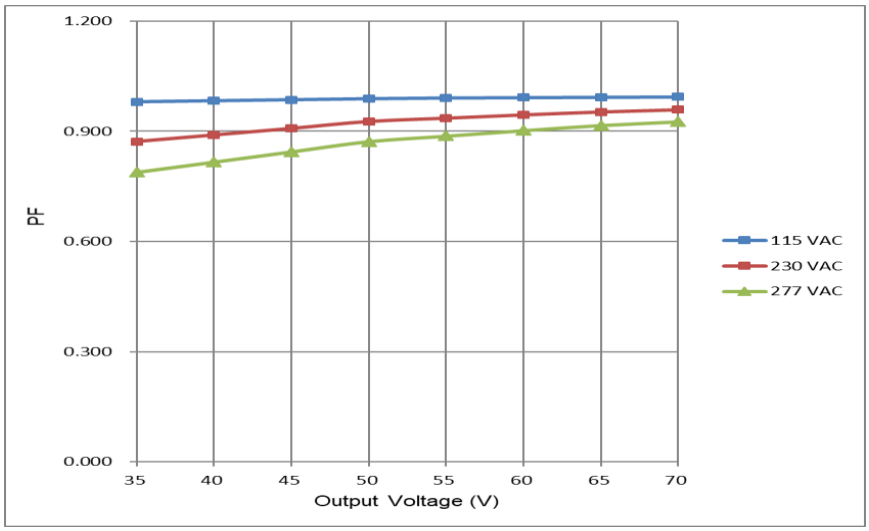
Case Temperature（T_c） vs. Life Time



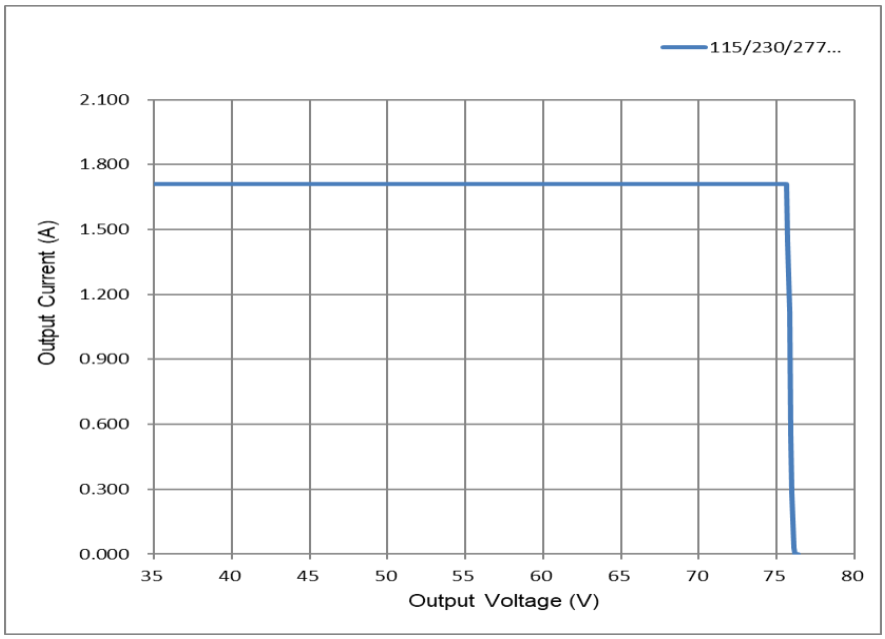
Efficiency Vs. Input Voltage & Output Voltage (Constant current mode)



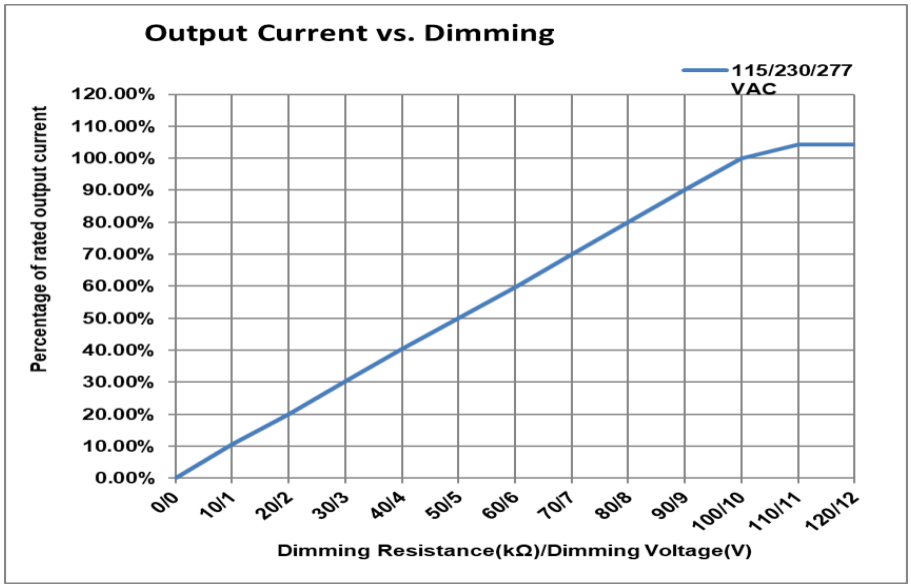
PF vs. Input Voltage & Output Voltage (constant current mode)



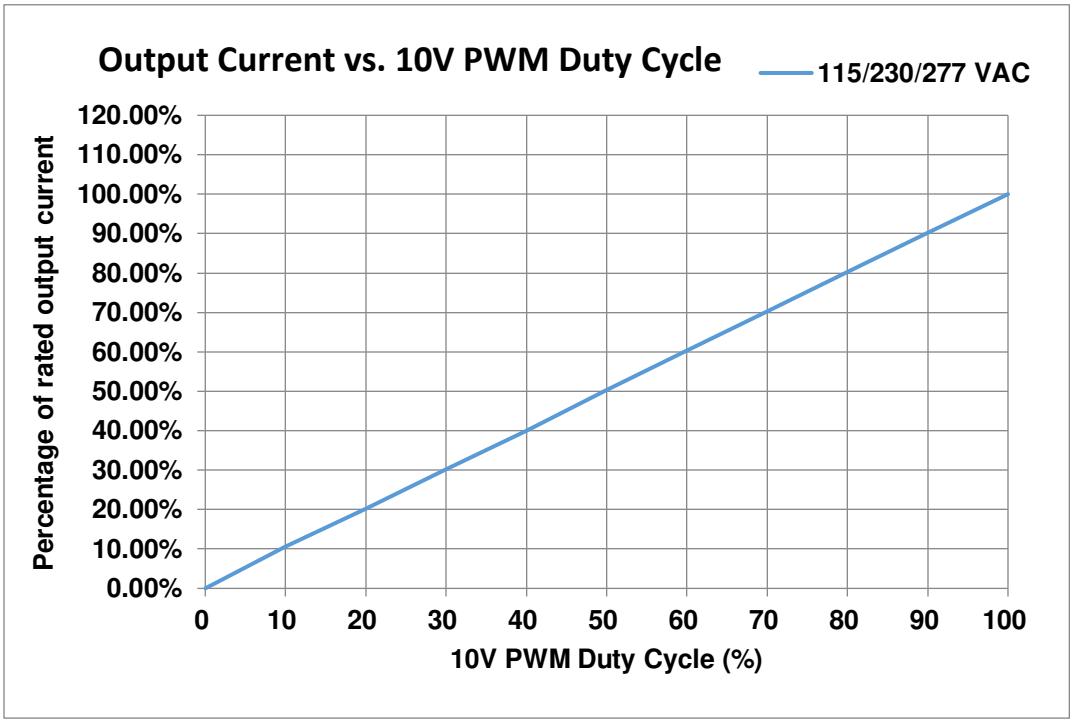
Output Current vs. Output Voltage



Output Current vs. Resistive / 0-10V Dimming



Output Current vs.10V PWM Dimming



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