



### FEATURES:

- AC-DC Constant Current or Constant Voltage LED Driver
- Input range 90-305VAC/47-440Hz
- High Efficiency up to 91%
- Operating temperature -40 to 85°C
- Dimmable via resistive / 0-10Vdc / PWM (C version see table)<sup>②</sup>
- Over Temperature Protection
- Over Current Protection
- Waterproof Case rated IP68
- Power Factor Correction
- Short Circuit Protection



### Models Single output

Model	Max Output Power (W) ①	Output Voltage Range (V) ③	Output Current (A) ③	Input Voltage (VAC/Hz)	Input Voltage (VDC)	Mode of Operation	Efficiency (%)
AMER120-50250AZ	125	36-50	0-2.5	90-305/47-440	120-430	Constant Current	91
						Constant Voltage ②	90
AMER120-36340AZ	122.4	24-36	0-3.4	90-305/47-440	120-430	Constant Current	90
						Constant Voltage ②	89
AMER120-24500AZ	120	12-24	0-5	90-305/47-440	120-430	Constant Current	89
						Constant Voltage ②	87
Add Suffix “-F” No dimming option							
“C” version supports fully integrated Analog Resistive, PWM, & 0-10Vdc Dimming feature							
AMER120C-50250AZ	125	36-50	0-2.5	90-305/47-440	120-430	Constant Current	91
						Constant Voltage ②	90
AMER120C-36340AZ	122.4	24-36	0-3.4	90-305/47-440	120-430	Constant Current	90
						Constant Voltage ②	89
AMER120C-24500AZ	120	12-24	0-5	90-305/47-440	120-430	Constant Current	89
						Constant Voltage ②	87

<sup>①</sup> Exceeding the maximum output power will permanently damage the converter

<sup>②</sup> The dimming feature is not supported when units are used in Constant Voltage mode only, Aimtec suggests to order "-F" No dimming option in this case.

<sup>③</sup> In constant current mode output current is maximum shown, in constant voltage mode output voltage is the maximum shown.

All models can be ordered with optional North American colour input wires (add "-NA" to part number when ordering)

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
Inrush current <2ms	115VAC	45		A
	230VAC	60		
Leakage current	115VAC	0.5		mA
	230VAC	0.75		
AC current	115VAC	1.8		A
	230VAC	0.7		
Power Factor	115VAC		0.98	
	240VAC		0.94	
External fuse			250V/3A	
Start up time		400		ms
Surge voltage	2sec		440	V

## Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Current accuracy		±3		%
Line regulation	LL-HL	±1		%
Load regulation	0-100% load	±3		%
Ripple & Noise ④	20MHz Bandwidth	75		mV p-p
Hold-up time		80		ms
Current adjustment range		100-0		%
Minimum Load Voltage	See the models table			

④ Tested with 0.1μF (M/C) or (C/C) and 47μF (E/C) parallel capacitors at the end.

## Isolation Specifications

Parameters	Conditions	Typical	Rated	Units
Tested I/O voltage	3sec/3.2mA		3000	VAC
Isolation Resistance	500VDC	>1000		MΩ
Isolation Capacitance			1000	pF

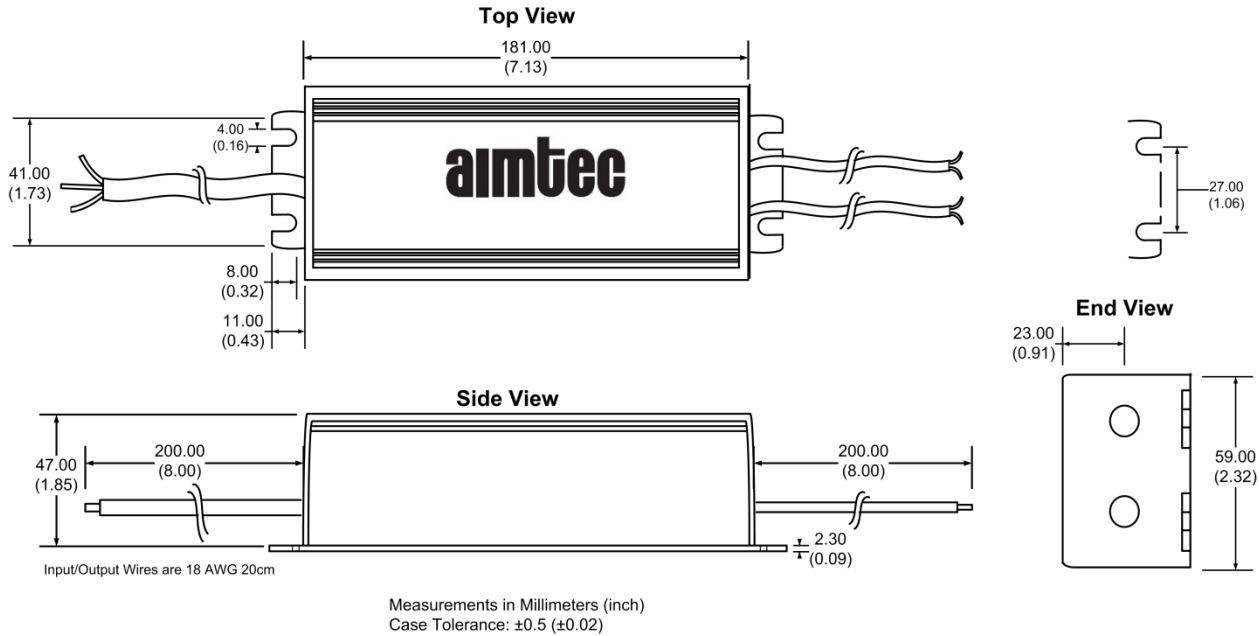
## General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency		100		KHz
Over current protection		110% of Iout		
Over voltage protection		110% of Vout		
Short circuit protection		Continuous		
Short circuit restart		Auto recovery		
Over temperature protection		>105°C		
Operating temperature	See derating table	-40 to +85		°C
Maximum case temperature			100	°C
Storage temperature		-40 to +95		°C
Temperature coefficient		±0.02		% / °C
Cooling		Free air convection		
Humidity			95	% RH
Case material		Aluminum		
Potting		Epoxy (IP67 rated)		
Wires		UL1015 18AWG Input & 14AWG output *20CM		
Weight		960		g
Dimensions (L x H x W)		7.13 x 2.32 x 1.85 inches    181.00 x 59.00 x 47.00 mm		
MTBF		>400,000 hrs (MIL-HDBK-217F at +25°C)		

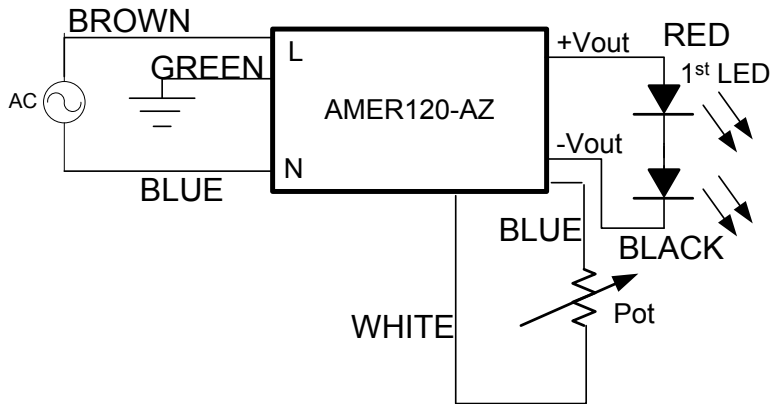
## Safety Specifications

Parameters	
Agency approvals	cULus, CE
Standards	UL8750, UL60950-1, EN55022, class B, EN60529(IP68), EN61347-1, EN61347-2-13
	Information Technology Equipment    EN55022 Class B
	Harmonic Current Emissions    IEC/EN 61000-3-2, Class C
	Voltage fluctuations and flicker    IEC/EN 61000-3-3, (EN60555-3)
	Electrostatic Discharge Immunity    IEC 61000-4-2
	RF, Electromagnetic Field Immunity    IEC 61000-4-3
	Electrical Fast Transient / Burst Immunity    IEC 61000-4-4
	Surge Immunity    IEC 61000-4-5
	RF, Conducted Disturbance Immunity    IEC 61000-4-6
	Power frequency Magnetic Field Immunity    IEC 61000-4-8
	Voltage dips, Short Interruptions Immunity    IEC 61000-4-11

## Dimensions

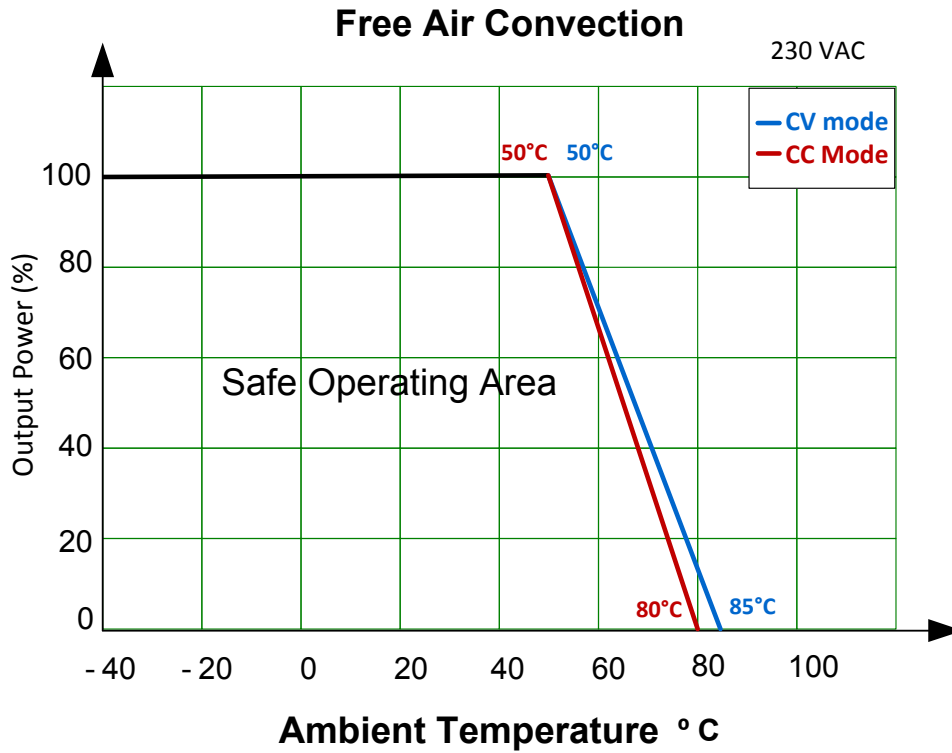


## Analog (resistive) Dimming Application Circuit



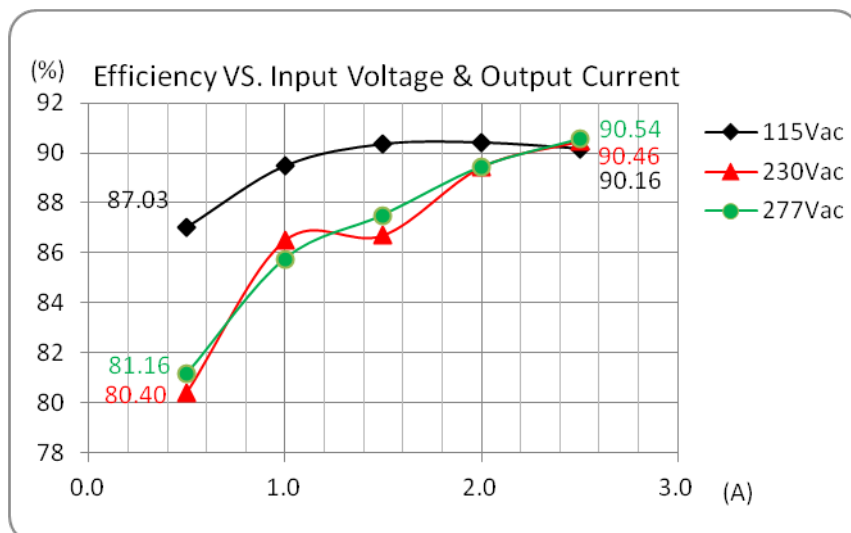
Model Number	Maximum Pot Value (k $\Omega$ )
AMER120-50250AZ	31.75
AMER120-36340AZ	25.00
AMER120-24500AZ	26.00

## Derating

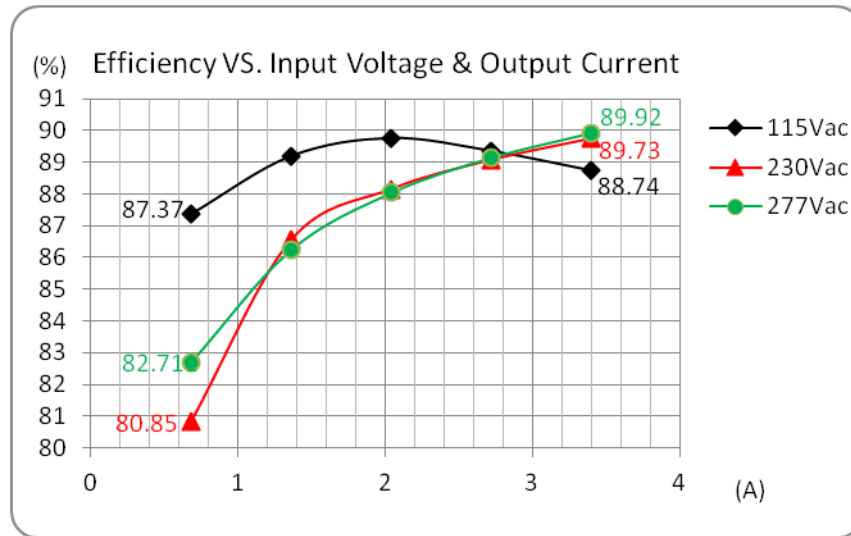


## Efficiency vs. Input Voltage and Output Current (CC Load)

AMER120-50250AZ

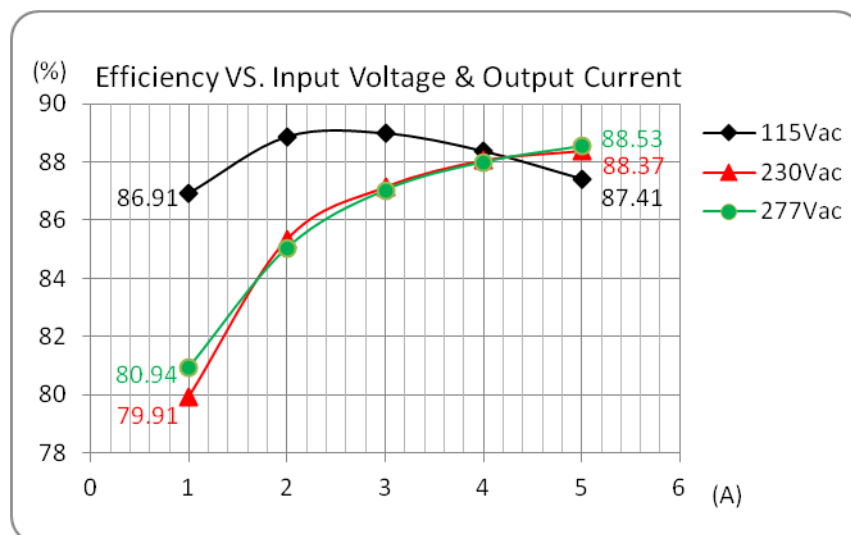


AMER120-36340AZ



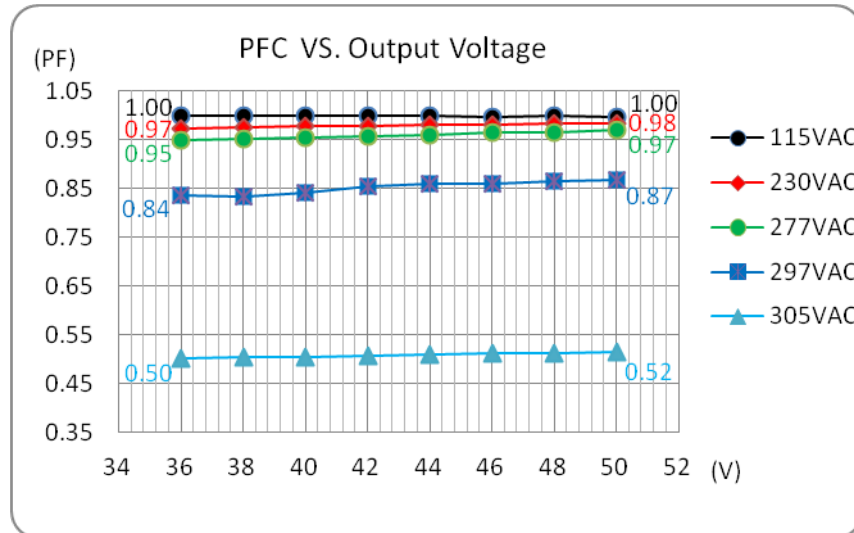
**Efficiency vs. Input Voltage and Output Current (CC Load)**  
Continued

AMER120-24500AZ



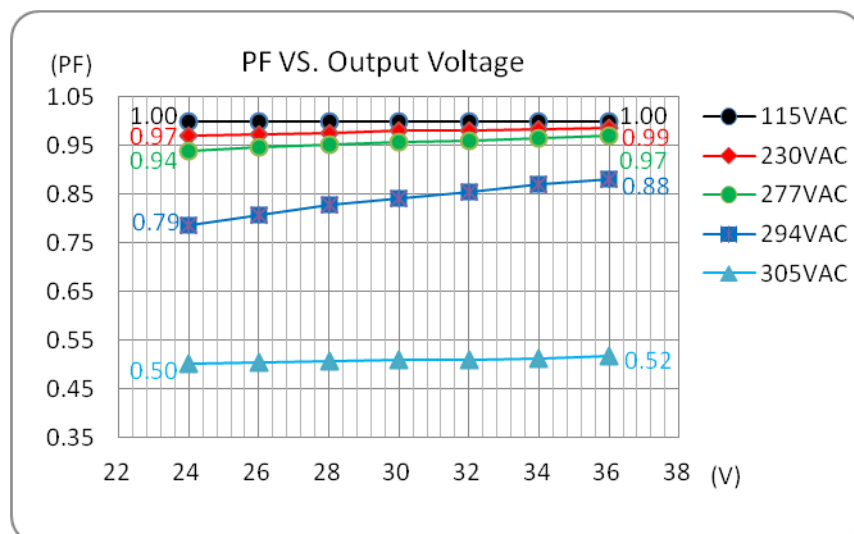
## PFC Value vs. Output Load Current (CC Load)

AMER120-50250AZ

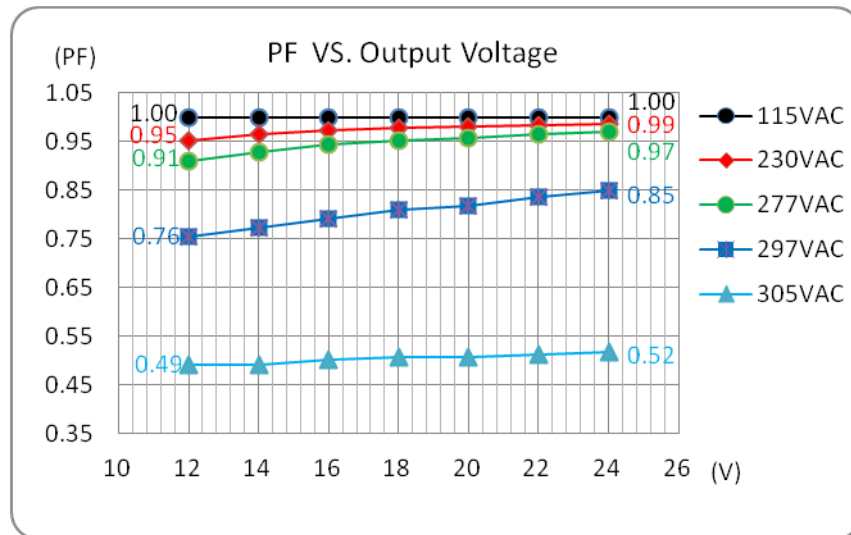


## PFC Value vs. Output Load Current (CC Load) Continued

AMER120-36340AZ

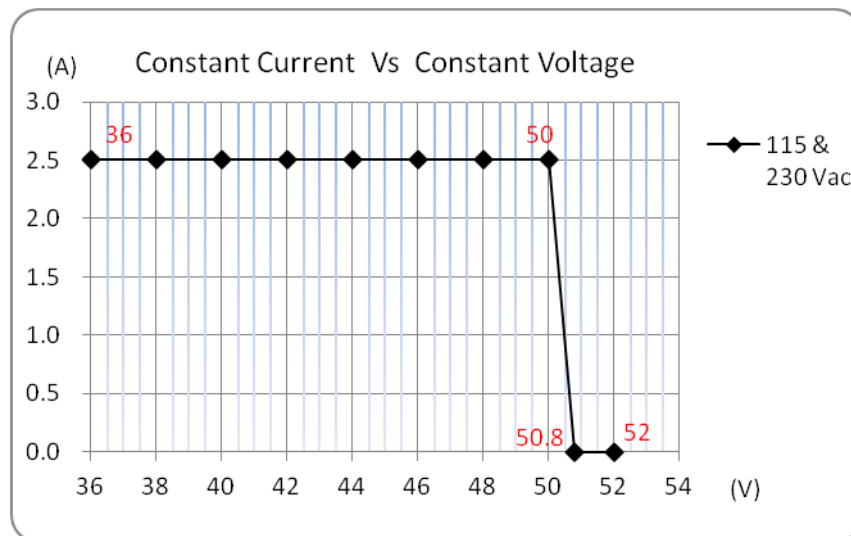


### AMER120-24500AZ

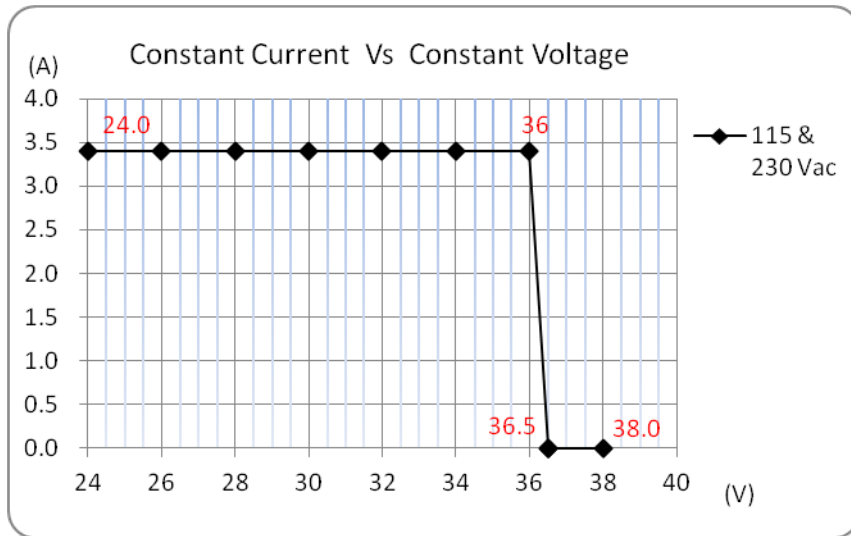


### Constant Current Mode vs. Constant Voltage Mode

#### AMER120-50250AZ

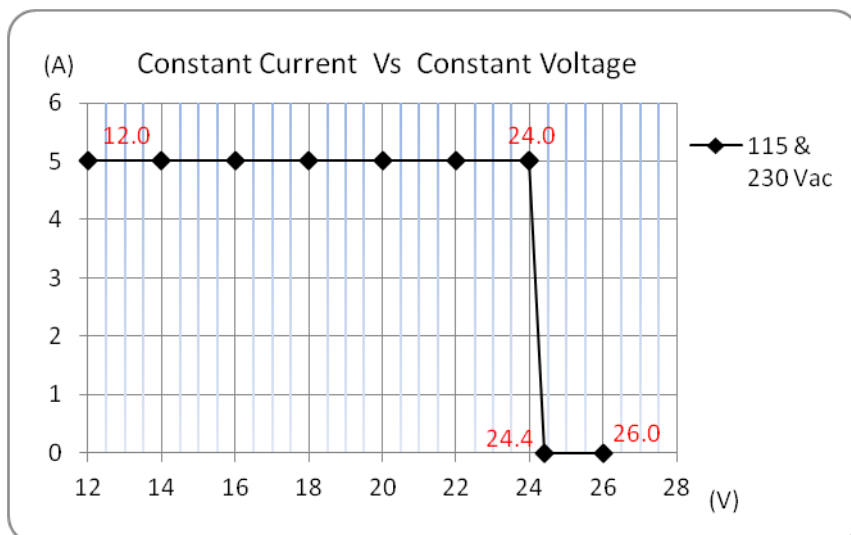


AMER120-36340AZ



**Constant Current Mode vs. Constant Voltage Mode**  
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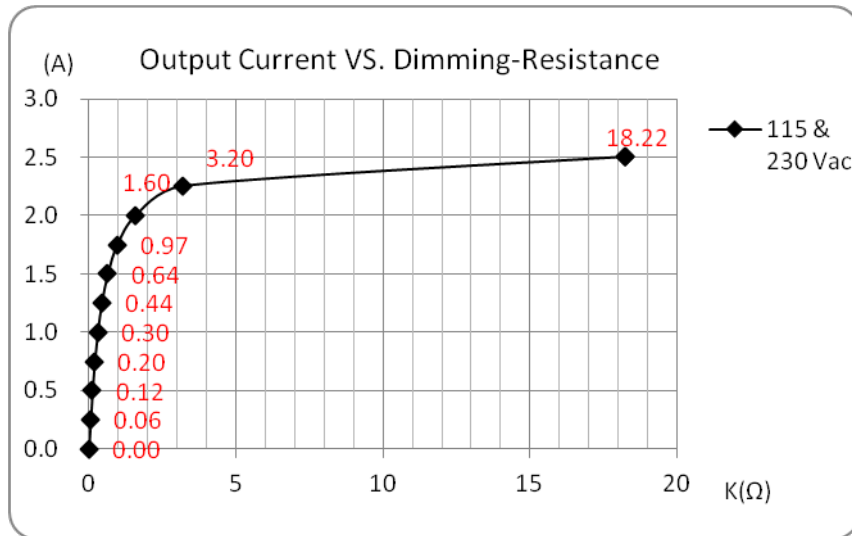
AMER120-24500AZ





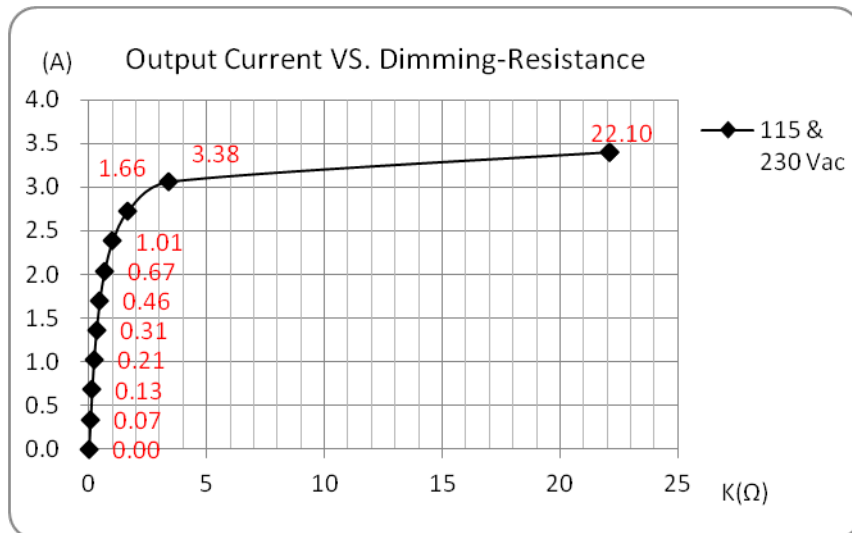
## Output Current vs. R<sub>adj</sub>

AMER120-50250AZ

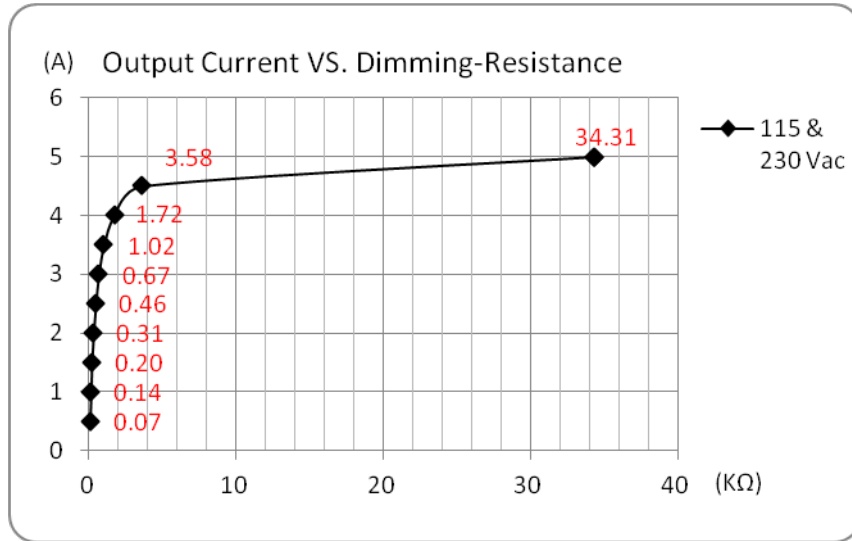


## Output Current vs. R<sub>adj</sub> Continued

AMER120-36340AZ



## AMER120-24500AZ



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