Series AMER150-CAZ

up to 6.3A | AC-DC / DC-DC | LED Driver / Converter

FEATURES:

- Constant Current or Constant Voltage LED Driver or Converter
- Input range 90-305VAC/47-440Hz
- High Efficiency up to 91%
- 115VAC Operating temperature -50 to 80°C
- 230VAC Operating temperature -55 to 80°C
- Dimmable via analog / 0-10V dimming ②
- Over Voltage 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 (%)
AMER150-50300CAZ	150	36-50	0-3	90-305/47-440	120-430	Constant Current	91
						Constant Voltage ②	90
AMER150-36420CAZ	150	24-36	0-4.16	90-305/47-440	120-430	Constant Current	90
						Constant Voltage ②	88
AMER150-24630CAZ	151.2	12-24	0-6.3	90-305/47-440	120-430	Constant Current	89
						Constant Voltage ②	87

Add Suffix "-F" No dimming option

① Exceeding the maximum output power will permanently damage the converter.
② 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.
③ In constant current mode output current is maximum shown, in constant voltage mode output voltage is the maximum shown.
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	50		A
	230VAC	75		
Leakage current	115VAC	0.75		mA
	230VAC	1		
AC current	115VAC	2.2		A
	230VAC	0.7		
Power Factor	115VAC	0.98		
	230VAC	0.94		
External fuse			250V/3.5A	
Start up time		900		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	100		mV p-p
Hold-up time (min)		45		ms
Current adjustment range		100-0		%
Minimum Load Voltage	See the models table			

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

Isolation Specifications

Parameters	Conditions	Typical	Maximum	Units
Tested I/P-O/P voltage	3sec		3750	VAC
Tested I/P-FG voltage	3sec		1880	VAC
Tested O/P-FG voltage	3sec		500	VAC
Isolation Resistance	500VDC	>1000		MΩ
Isolation Capacitance			1000	pF

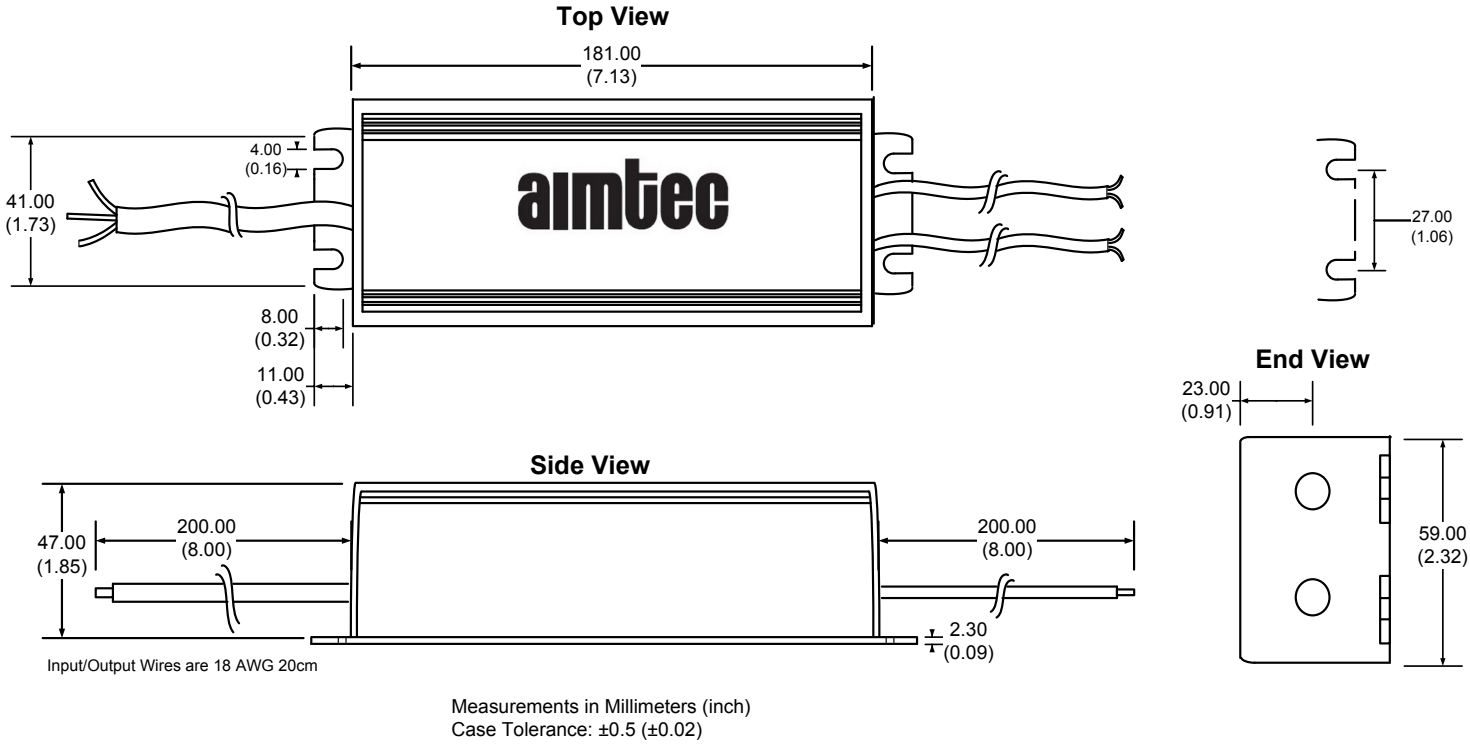
General Specifications

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)	(115VAC)	-50 to +80		°C
	(230VAC)	-55 to +80		°C
Cold Start-up Time	-55°C		20	Sec
Maximum case temperature			100	°C
Storage temperature		-55 to +95		°C
Temperature coefficient		±0.02		% / °C
Cooling	Free air convection			
Humidity			95	% RH
Case material	Aluminum			
Potting	Epoxy (IP68 rated)			
Wires	UL1015 18AWG Input & 14AWG Output *20CM			
Weight	750			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

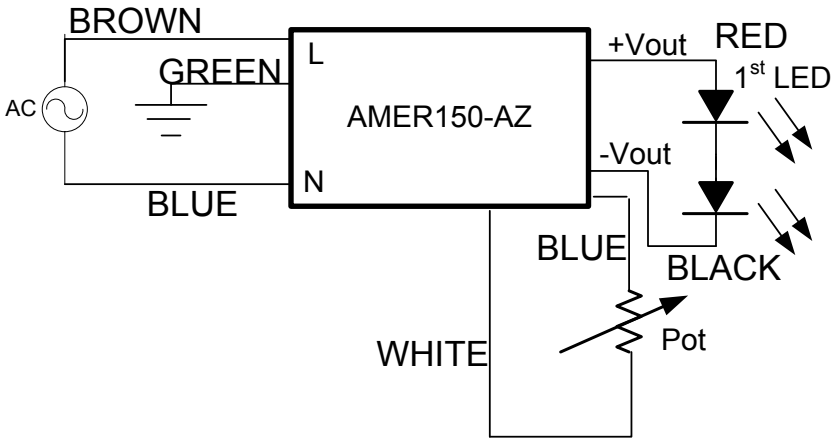
Parameters	
Agency approvals	CE
Standards	EN55022, class B, EN60529(IP68), EN61347-1, EN61347-2-13
	NOTE: Also designed to Meet cULus, UL8750, UL60950-1

Dimensions



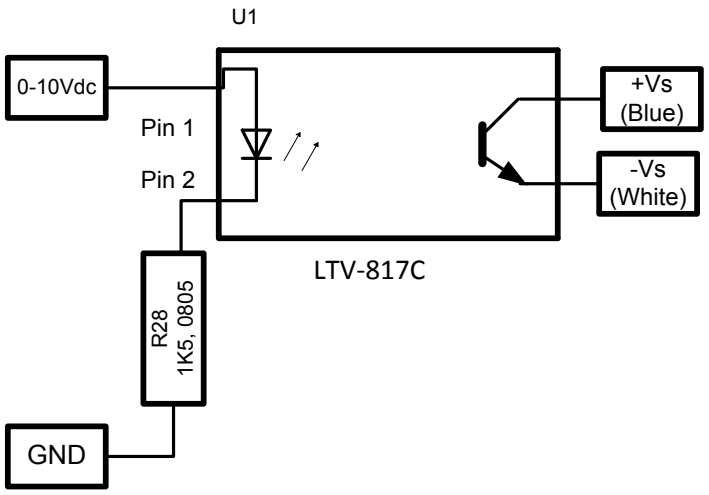
Measurements in Millimeters (inch)
Case Tolerance: ±0.5 (±0.02)

Analog (resistive) Dimming Application Circuit

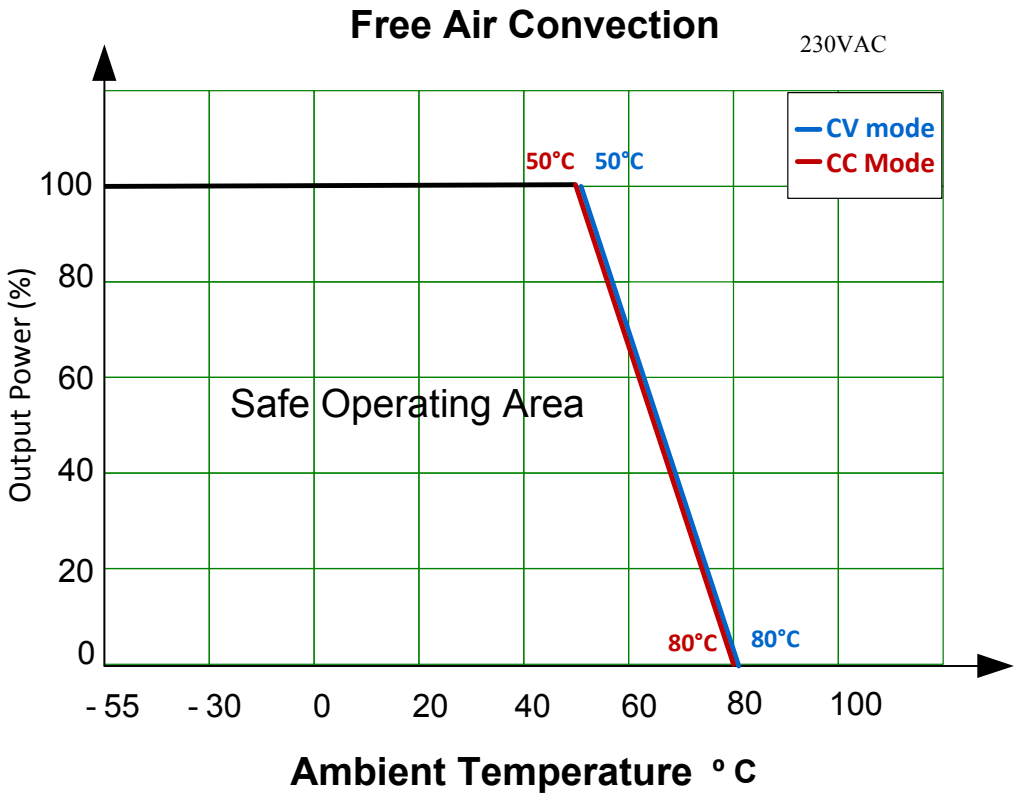


Model Number	Maximum Pot Value (kΩ)
AMER150-50300CAZ	16.71
AMER150-36420CAZ	26.70
AMER150-24630CAZ	11.47

0-10V Dimming Application Circuit

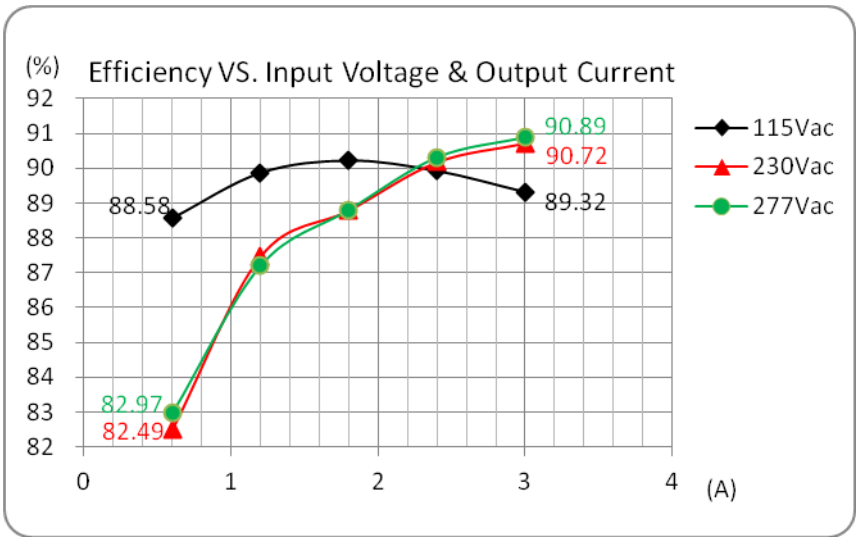


Derating

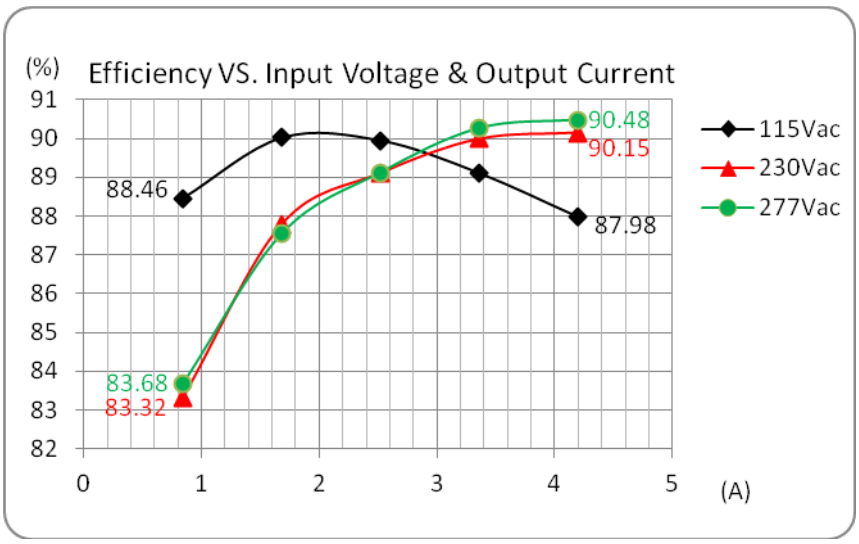


Efficiency vs. Input Voltage & Output Current (CC mode)

AMER150-50300CAZ

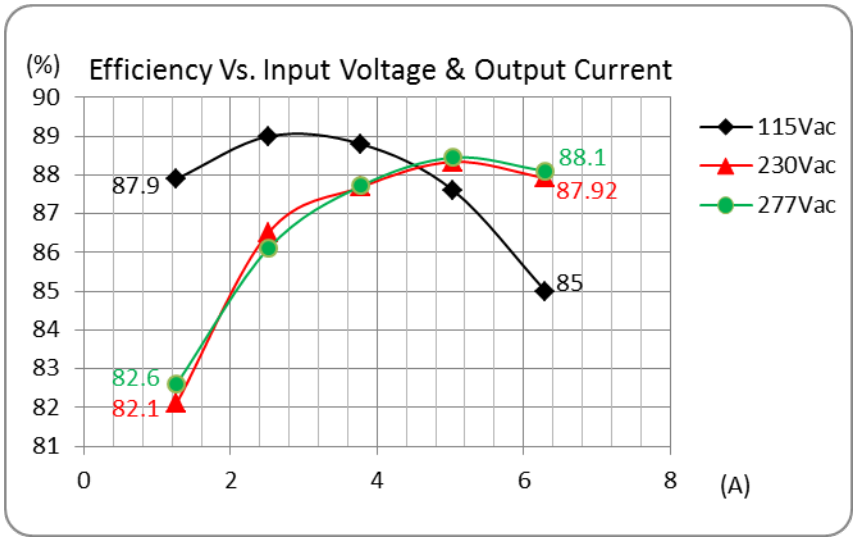


AMER150-36420CAZ



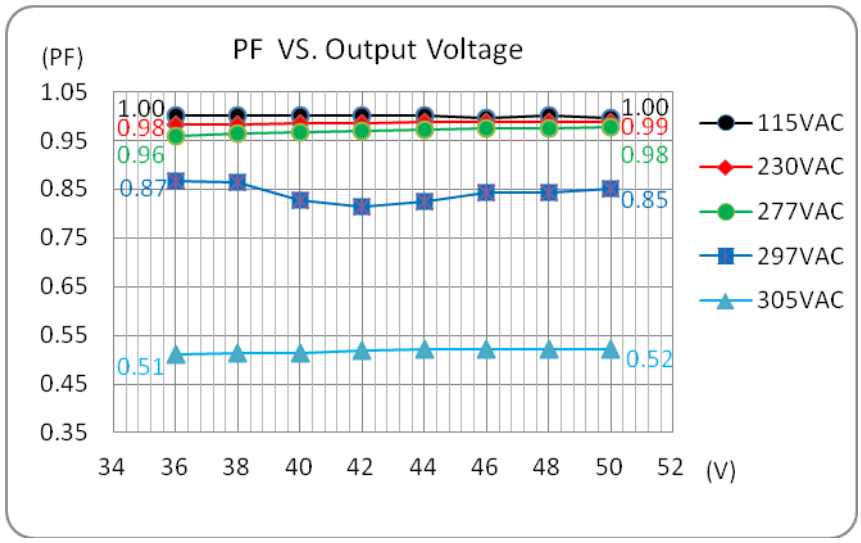
Efficiency vs. Input Voltage & Output Current (CC mode) Continued

AMER150-24630CAZ



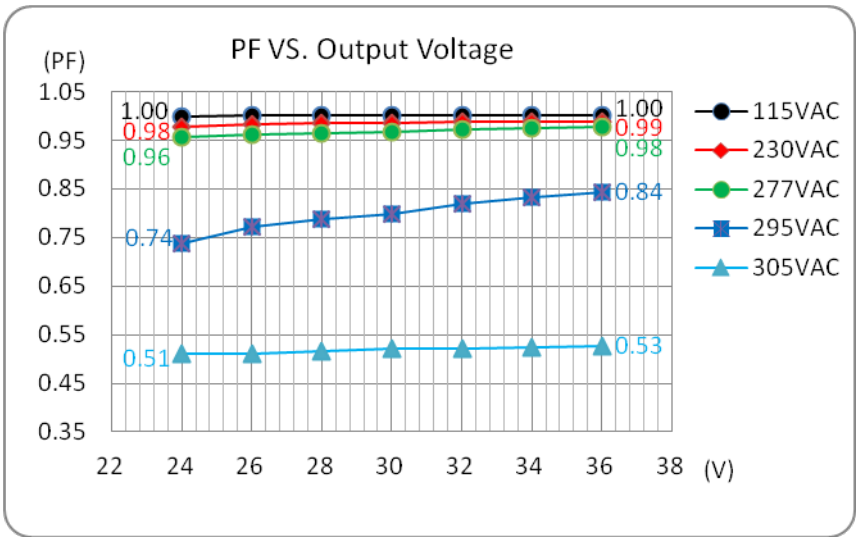
PFC value vs. Output Load Current (CC mode)

AMER150-50300CAZ

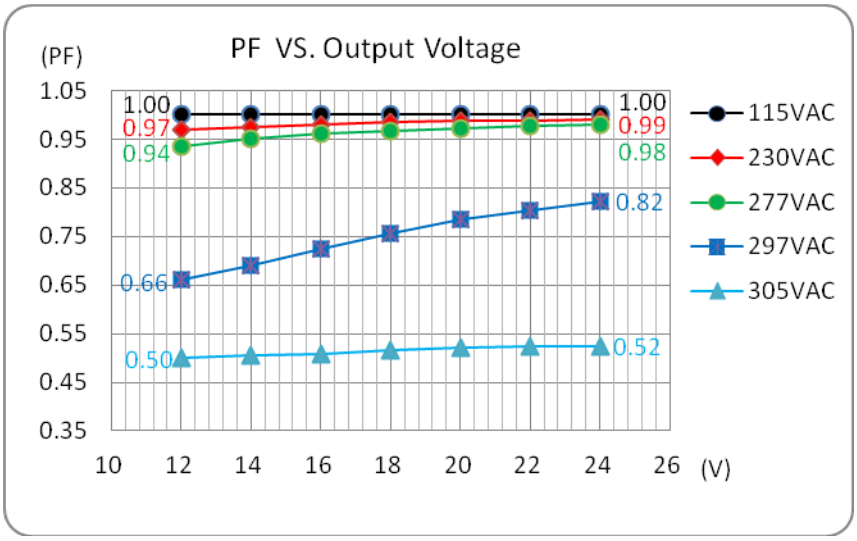


PFC value vs. Output Load Current (CC mode) Continued

AMER150-36420CAZ

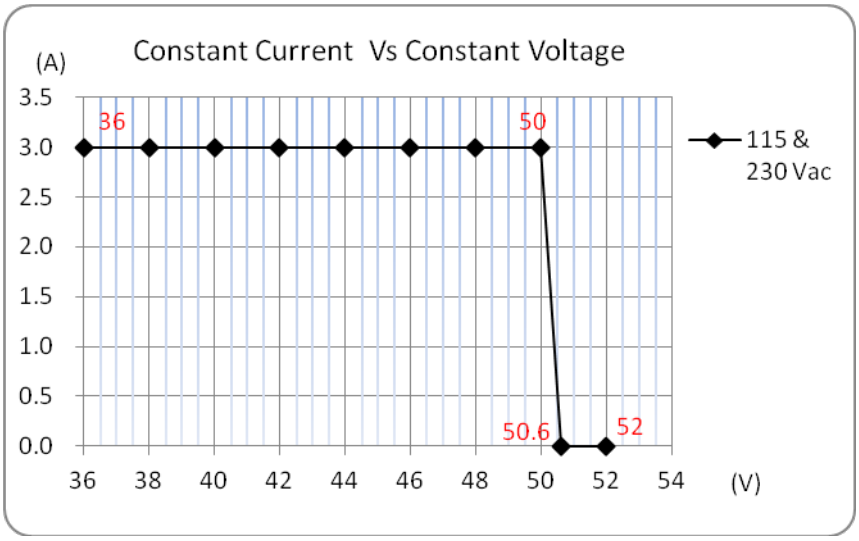


AMER150-24630CAZ

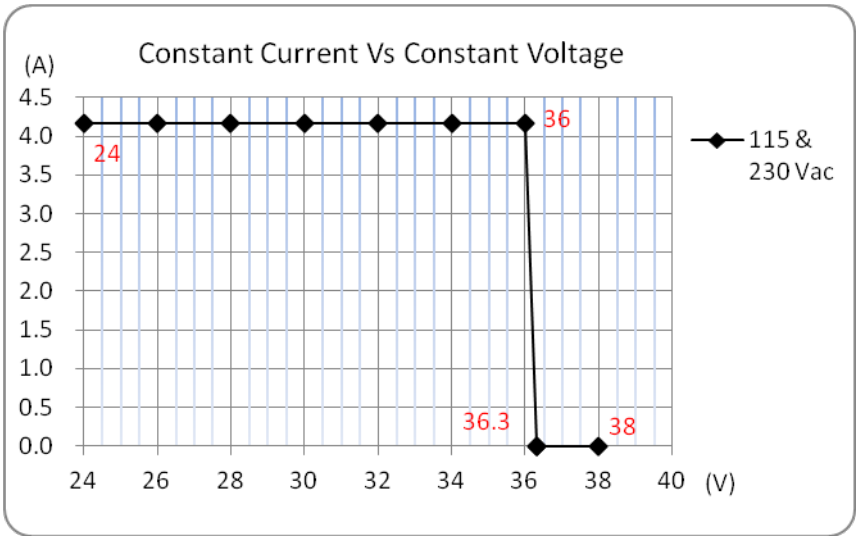


Constant Current vs. Constant Voltage Mode

AMER150-50300CAZ

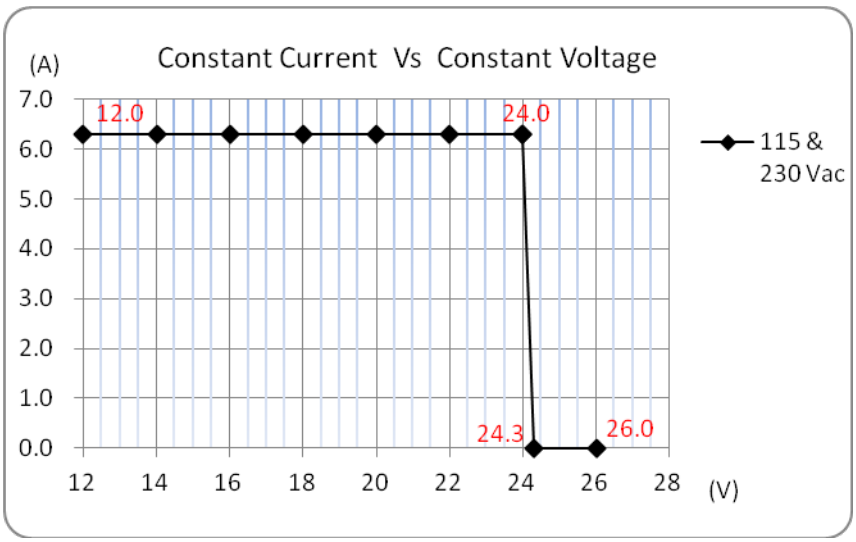


AMER150-36420CAZ



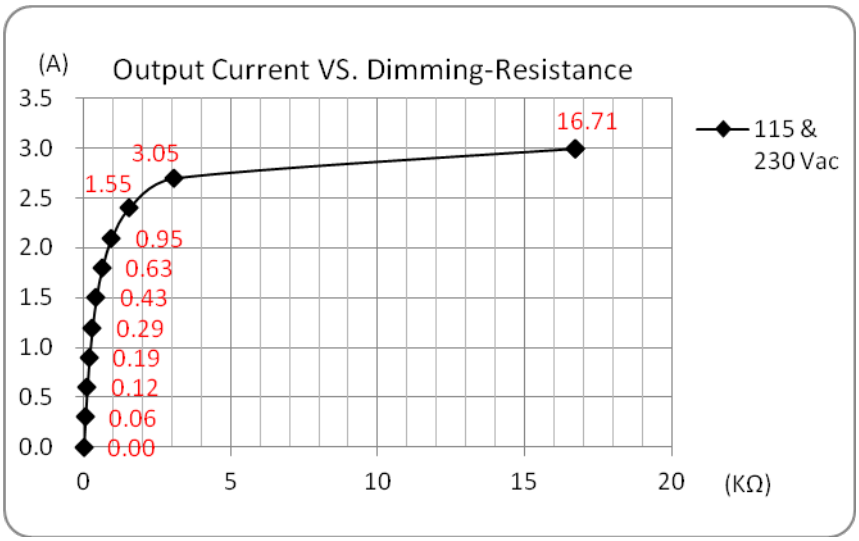
Constant Current vs. Constant Voltage Mode
Continued

AMER150-24630CAZ



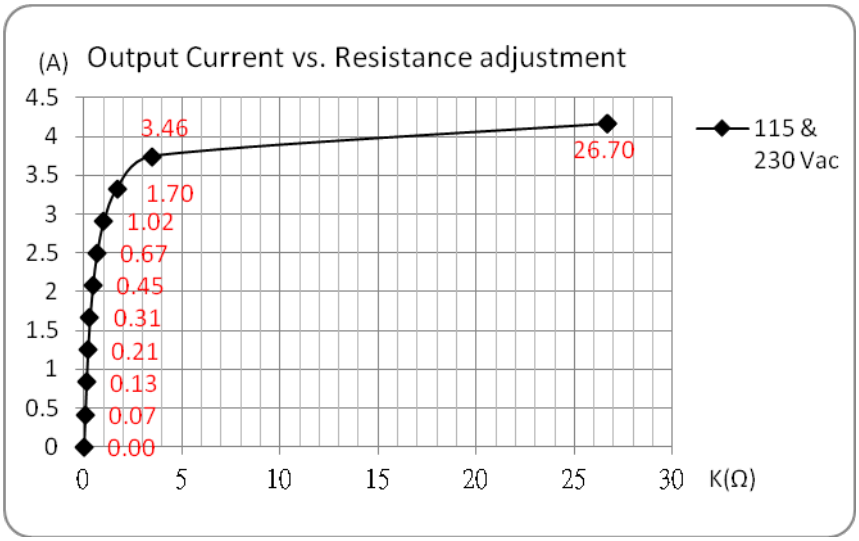
Output Current vs. Radj

AMER150-50300CAZ

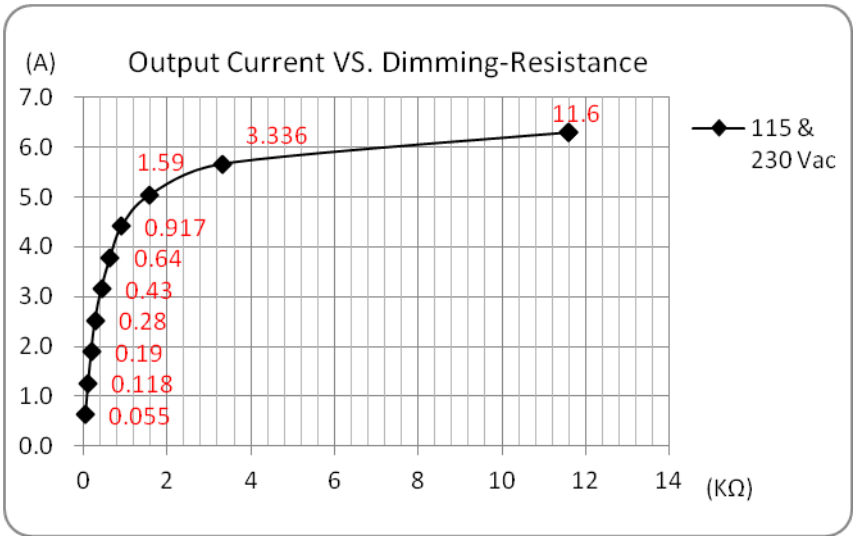


Output Current vs. Radj
Continued

AMER150-36420CAZ



AMER150-24630CAZ



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