



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 80°C
- Dimming via analog/0-10V dimming
- 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 (%)
AMER150-50300AZ	150	36-50	0-3	90-305/47-440	120-430	Constant Current	91
						Constant Voltage ②	90
AMER150-36420AZ	150	24-36	0-4.16	90-305/47-440	120-430	Constant Current	90
						Constant Voltage ②	88
AMER150-24630AZ	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		500		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 (min)		45		ms
Current adjustment range		100-0		%

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/O voltage	3sec		3000	VAC
Isolation Resistance	500VDC	>1000		MΩ
Isolation Capacitance			1000	pF

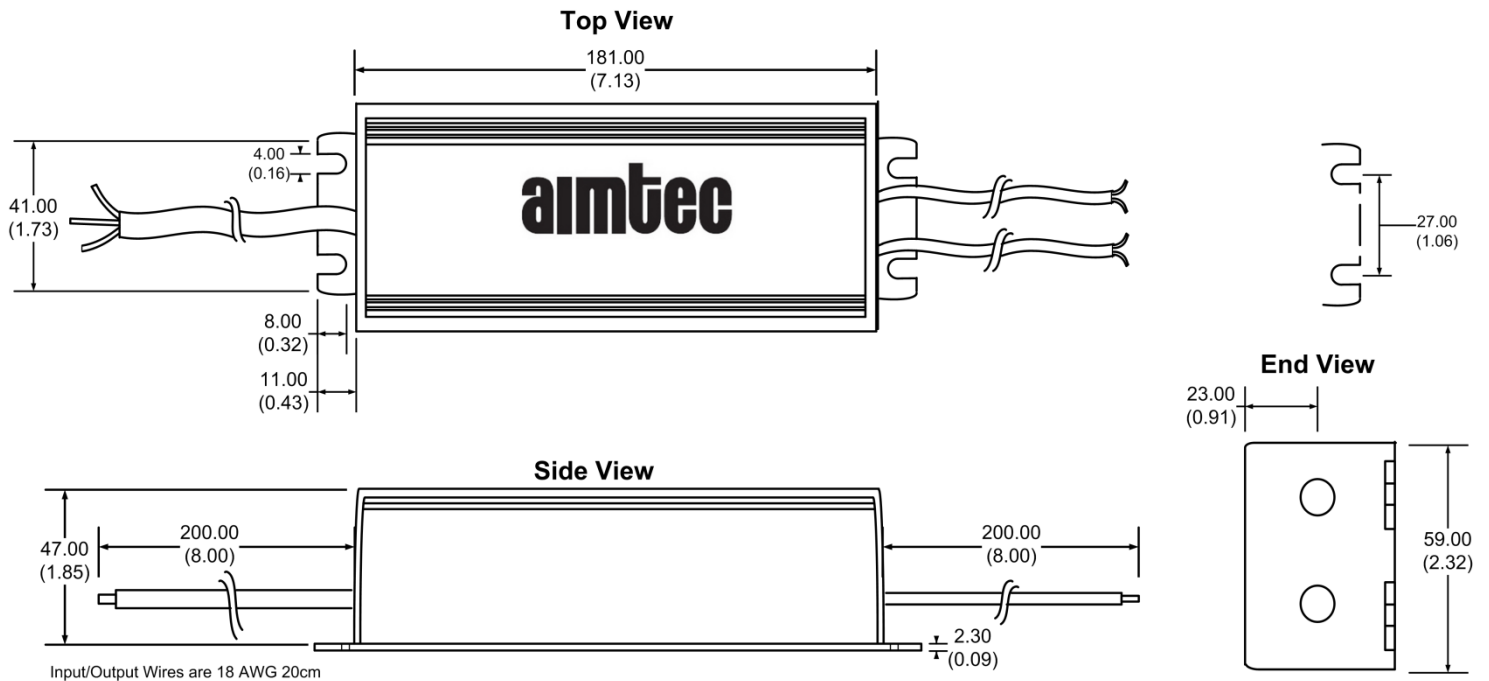
General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency		100		KHz
Over current protection		95-110% 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 +80		°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

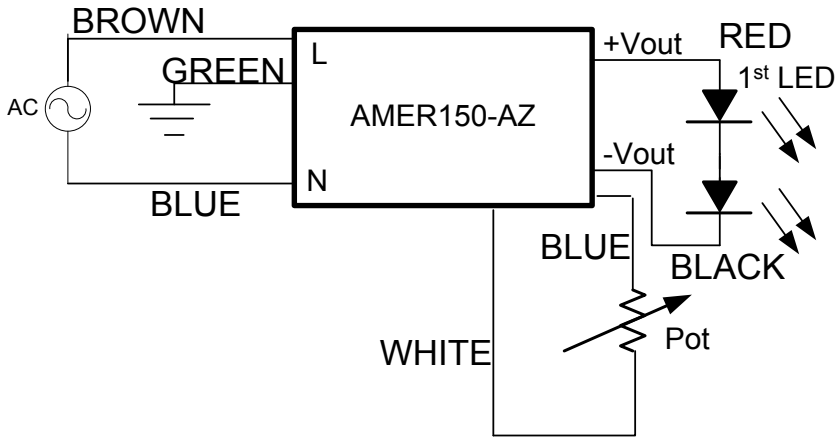
Parameters		
Agency approvals	cULus, CE	
Standards	UL8750, UL60950-1, EN55022, class B, EN60529(IP68), EN61347-1, EN61347-2-13	
	Information Technology Equipment	EN55022 Class B
	Harmonic Current Emissions	IEC/EN 61000-3-2, Class C
	Voltage fluctuations and flicker	IEC/EN 61000-3-3, (EN60555-3)
	Electrostatic 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



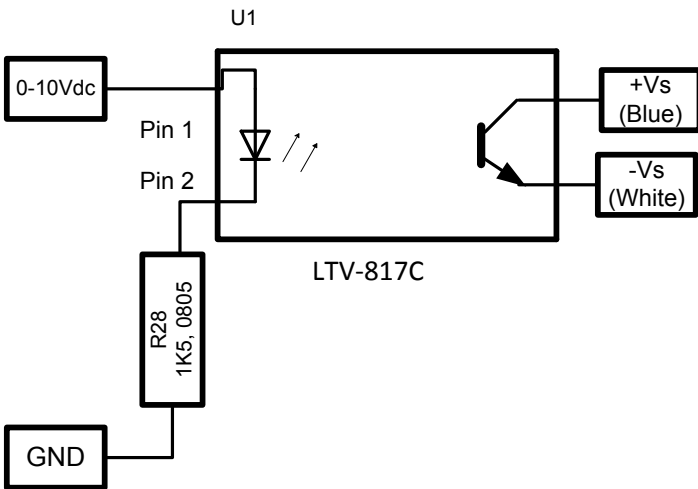
Measurements in Millimeters (inch)
Case Tolerance: ±0.5 (±0.02)

Analog (resistive) Dimming Application Circuit



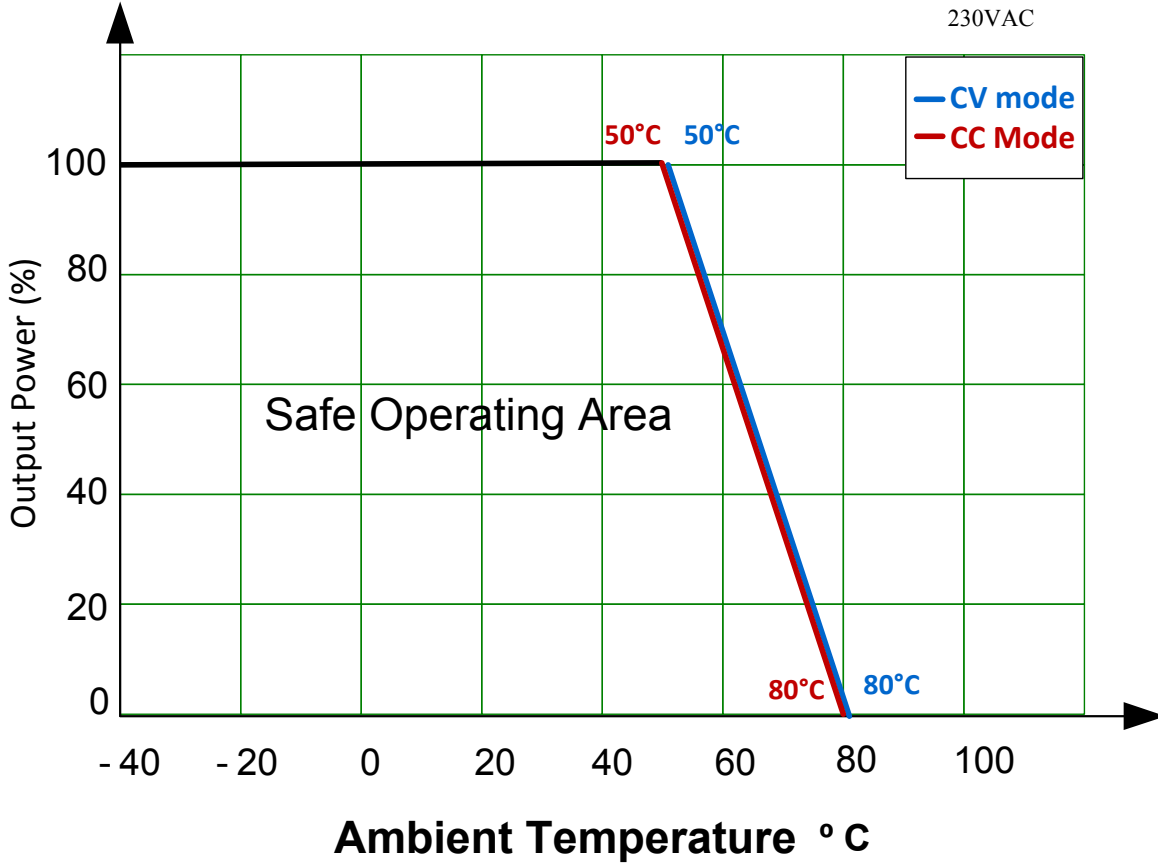
Model Number	Maximum Pot Value (kΩ)
AMER150-50300AZ	19.00
AMER150-36420AZ	28.00
AMER150-24630AZ	27.00

0-10V Dimming Application Circuit



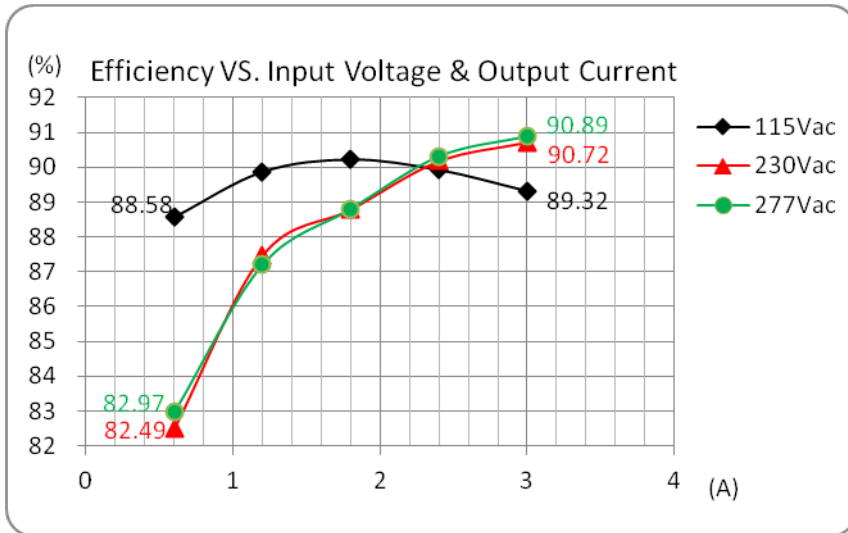
Derating

Free Air Convection

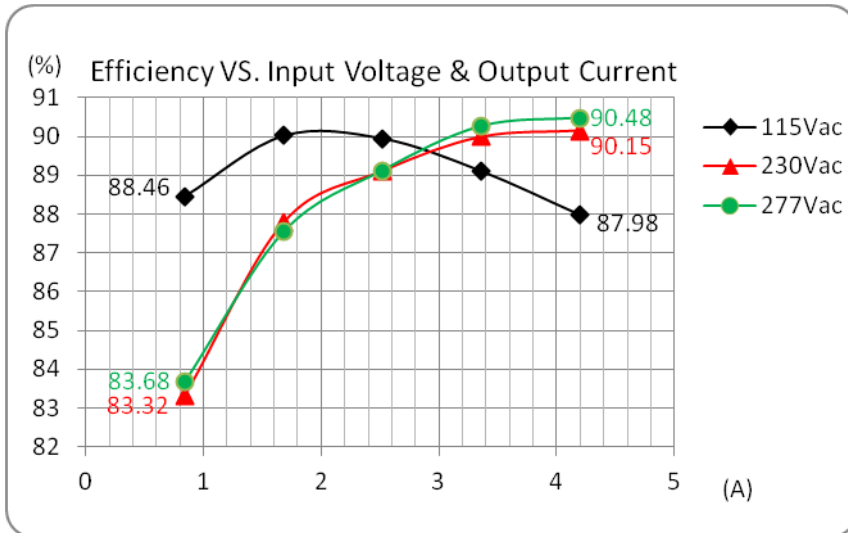


Efficiency vs. Input Voltage & Output Current (CC mode)

AMER150-50300AZ

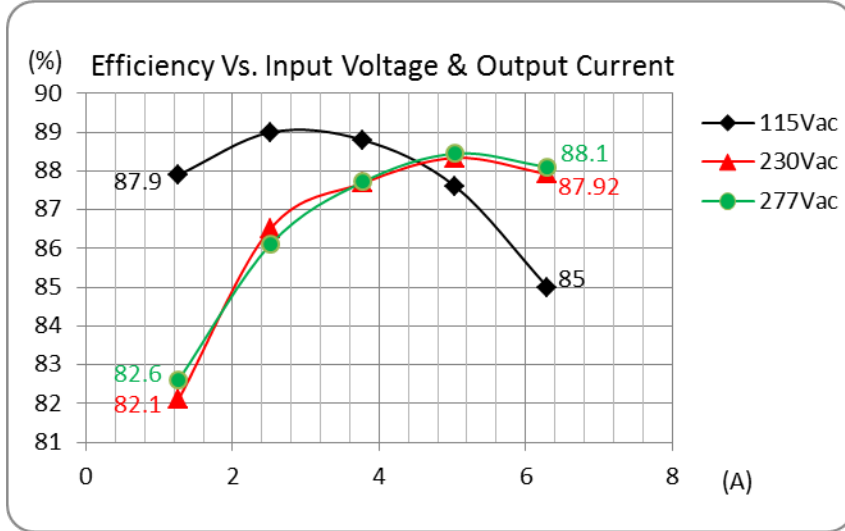


AMER150-36420AZ



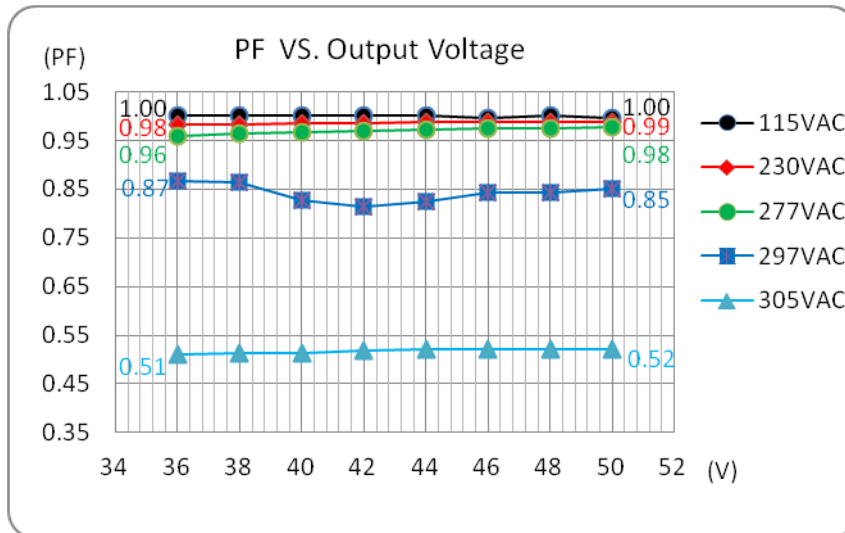
**Efficiency vs. Input Voltage & Output Current (CC mode)
Continued**

AMER150-24630AZ



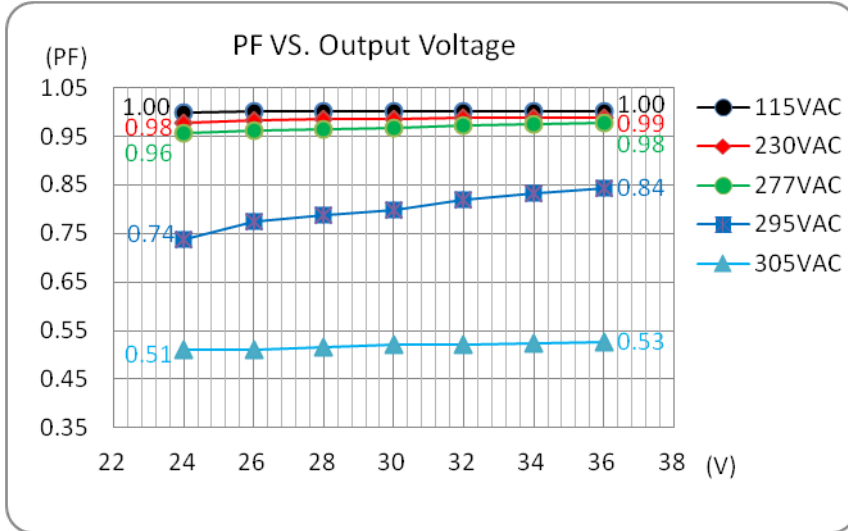
PFC value vs. Output Load Current (CC mode)

AMER150-50300AZ

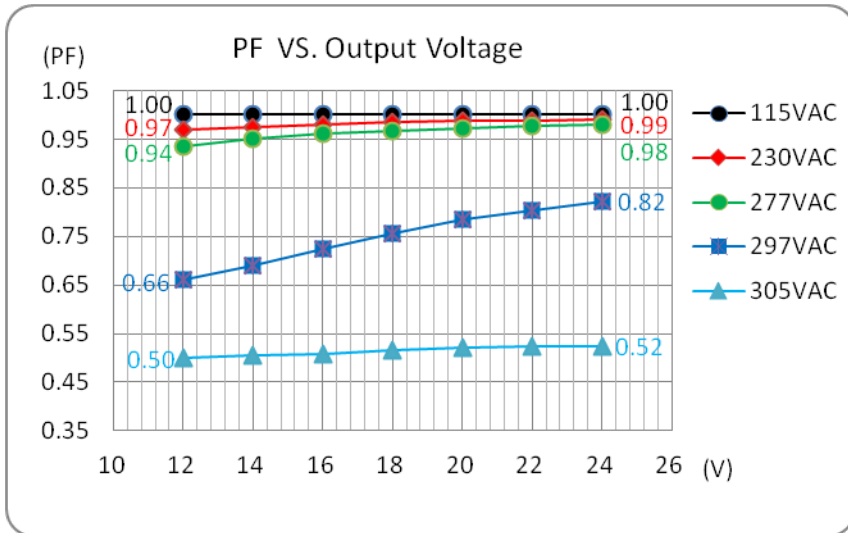


PFC value vs. Output Load Current (CC mode)
Continued

AMER150-36420AZ

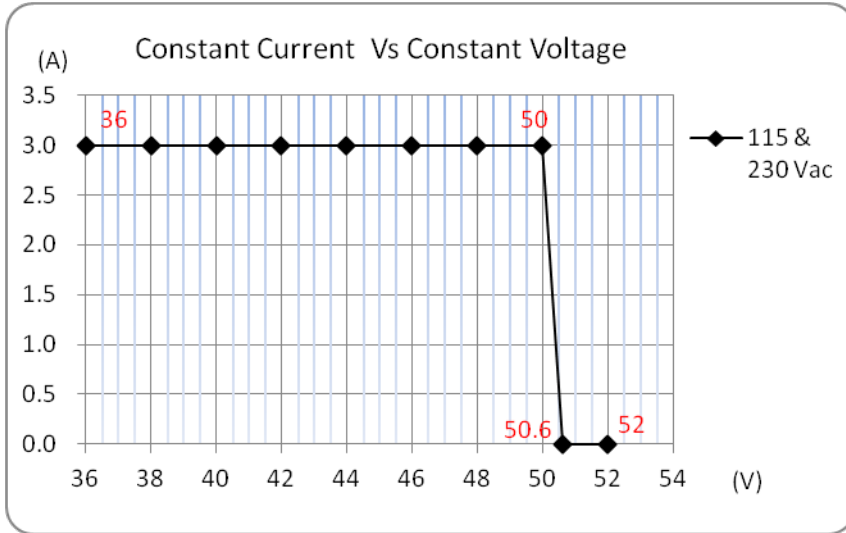


AMER150-24630AZ

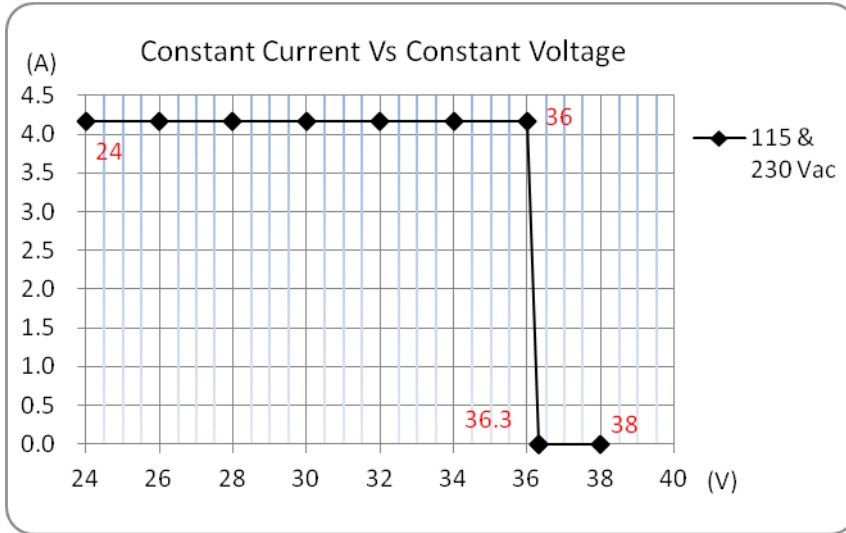


Constant Current vs. Constant Voltage Mode

AMER150-50300AZ

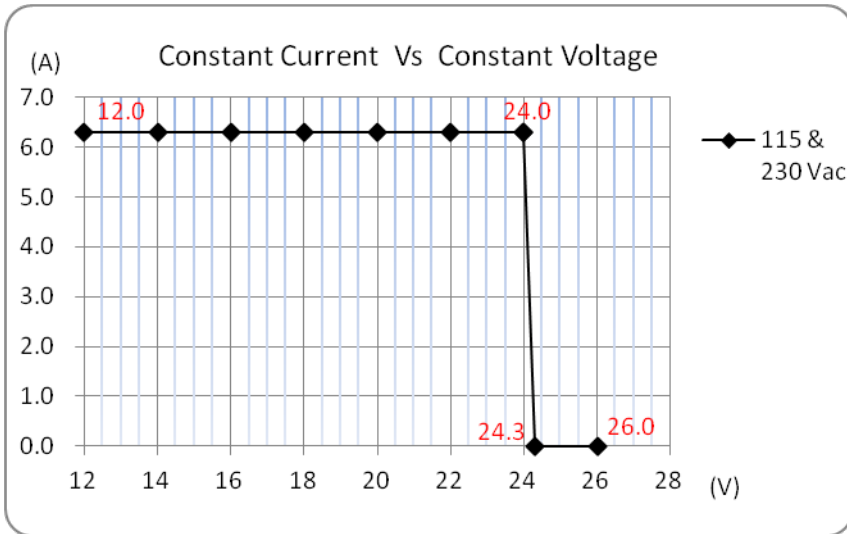


AMER150-36420AZ



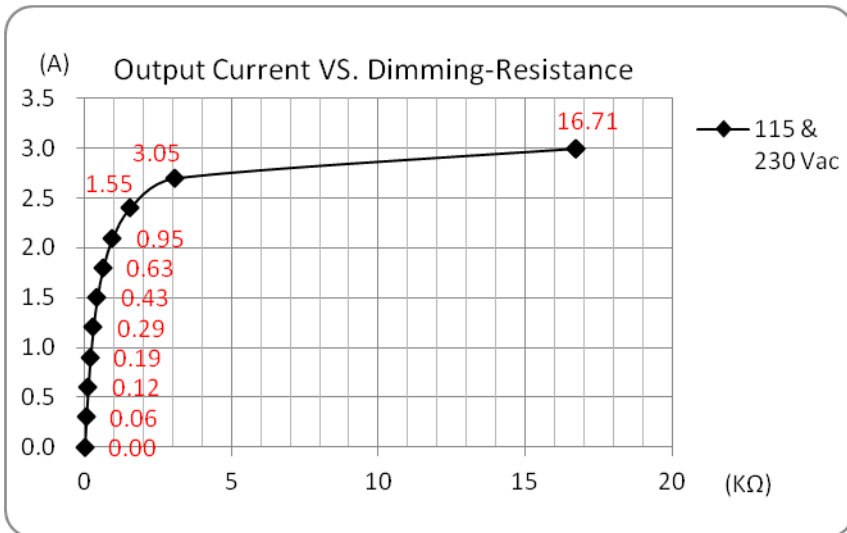
Constant Current vs. Constant Voltage Mode Continued

AMER150-24630AZ



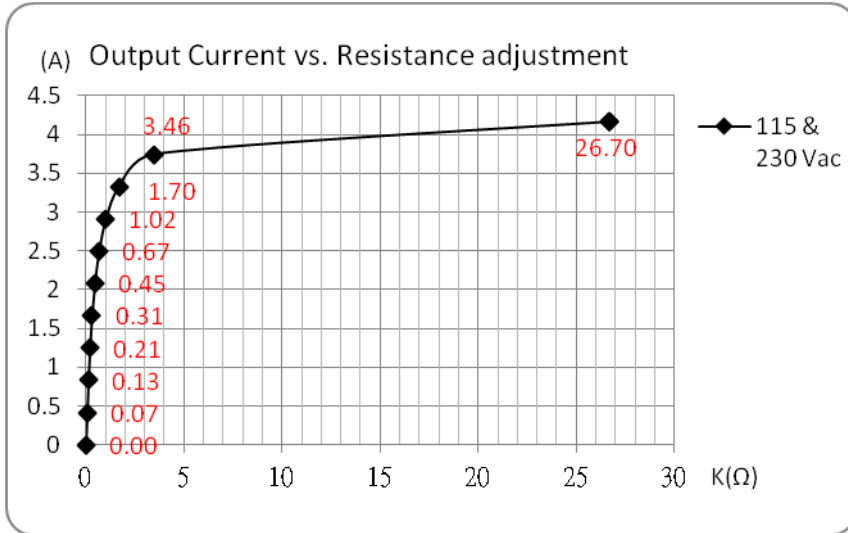
Output Current vs. Radj

AMER150-50300AZ

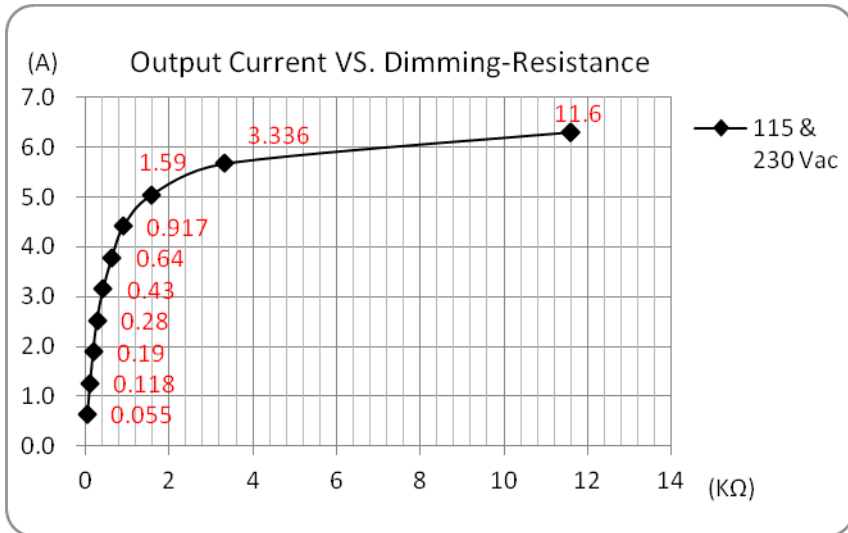


Output Current vs. Radj
Continued

AMER150-36420AZ



AMER150-24630AZ



NOTE: 1. Datasheets are updated as needed and as such, specifications are subject to change without notice. Once printed or downloaded, datasheets are no longer controlled by Aimtec; refer to www.aimtec.com for the most current product specifications. 2. Product labels shown, including safety agency certifications on labels, may vary based on the date manufactured. 3. Mechanical drawings and specifications are for reference only. 4. All specifications are measured at an ambient temperature of 25°C, humidity<75%, nominal input voltage and at rated output load unless otherwise specified. 5. Aimtec may not have conducted destructive testing or chemical analysis on all internal components and chemicals at the time of publishing this document. CAS numbers and other limited information are considered proprietary and may not be available for release. 6. This product is not designed for use in critical life support systems, equipment used in hazardous environments, nuclear control systems or other such applications which necessitate specific safety and regulatory standards other the ones listed in this datasheet. 7. Warranty is in accordance with Aimtec's standard Terms of Sale available at www.aimtec.com.