

Series AMER90C-CAZ

up to 3.75A | AC-DC / DC-DC | LED Driver / Converter

FEATURES:

- Constant current LED Driver or Converter
- Input range 90-305VAC/47-440Hz
- High Efficiency up to 91%
- 115VAC Operating temperature -50 to 85°C
- 230VAC Operating temperature -55 to 85°C
- Dimmable via resistive / 0-10Vdc / PWM
- 5 Years Limited Warranty
- Over Temperature Protection
- Waterproof Case rated IP68
- Power Factor Correction
- Short Circuit Protection
- Over Current 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 (%)		
							115 VAC	230 VAC	277 VAC
AMER90C-50180CAZ	90	36-50	1.8	90-305/47-440	130-430	Constant Current	87	86	86
						Constant Voltage ^②	88	87	87
AMER90C-36250CAZ	90	24-36	2.5	90-305/47-440	130-430	Constant Current	87	87	87
						Constant Voltage ^②	88	87	87
AMER90C-24375CAZ	90	12-24	3.75	90-305/47-440	130-430	Constant Current	86	86	86
						Constant Voltage ^②	87	86	86

^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.

^③ 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 (black (L), white (N), green (GND)). Add “-NA” to part number when ordering.

NOTE: Aimtec limited warranty of 5 years is valid based on product operation at datasheet specifications at ambient temperature of 25°C, humidity<75%, nominal input voltage (115/230/277VAC) and at rated output load unless otherwise specified.

See <http://www.aimtec.com/terms-sale>

AMER90C-CAZ's AC/DC LED drivers have electrical safeguards designed within to protect it from conventional electrical abnormalities with the levels listed in the safety table. Applications for use within rural agricultural, heavy industrial, and other areas or regions which are prone to 'dirty' electrical conditions which would subject any of the above models to excessive voltages surges or spikes, may damage or cause early life failure of product. In this case consideration should be made by the end user to ensure that adequate line or mains surge suppression is installed in front of Aimtec device to ensure the longevity of the products. Failure to identify excessive line surges violations prior to installation may damage sensitive equipment permanently.

Input Specifications

Parameters	Conditions	Typical	Maximum	Units
Current (full load)	115 VAC		1500	mA
	230 VAC		600	mA
	277 VAC		500	mA
Inrush current <2ms(cold start)	115 VAC		40	A
	230 VAC		50	A
	277 VAC		60	A
Leakage current	I/O		0.25	mA
	I/FG, O/FG		3.5	mA
Power factor	115 VAC	0.98		
	230 VAC	0.94		
	277 VAC	0.90		
External fuse	Recommended slow blow type	2.5		A
Start-up time		1000		ms

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Current accuracy		±3		%
Line regulation	(LL-HL)	±2		%
Load regulation	0-100% load	±3		%
Ripple & Noise*		150		mV p-p
Hold-up time		100		ms
Current adjustment range		100-10		%

*Ripple and Noise are measured at 20MHz bandwidth by using a 0.1μF (M/C) or (C/C) and 47μF (E/C) parallel capacitor.

Isolation Specifications

Parameters	Conditions	Typical	Rated	Units
Tested voltage	I/O	3sec	3750	VAC
	I/FG		2000	VAC
	O/FG		500	VAC
Isolation resistance	500VDC	>1000		MΩ

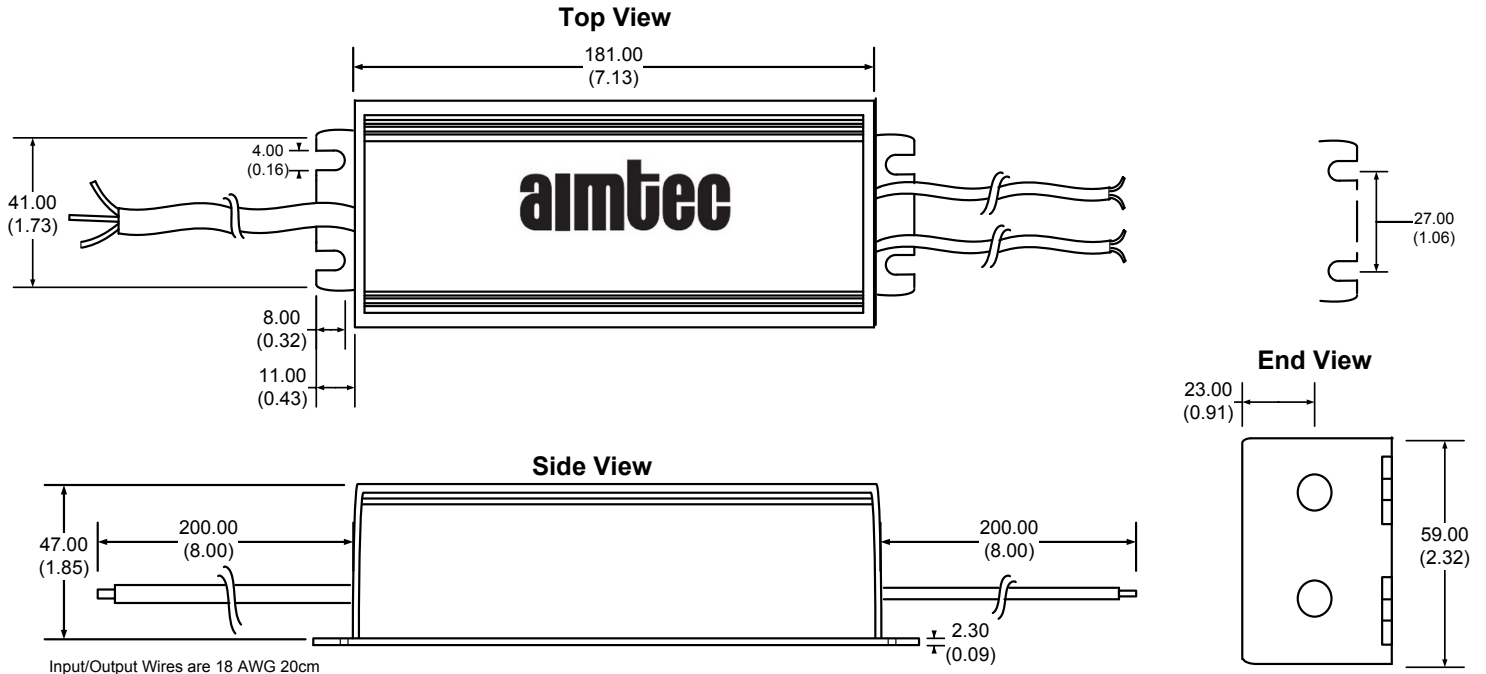
General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency			125	KHz
Over current protection		≥105		%
Over voltage protection		≥105		%
Short circuit protection	Continuous			
Short circuit restart	Auto recovery			
Over temperature protection	>105°C			
Operating temperature (See Derating Table)	(115VAC)	-50 to +85		°C
	(230VAC)	-55 to +85		°C
Cold Start-up Time	-55°C		35	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		900		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

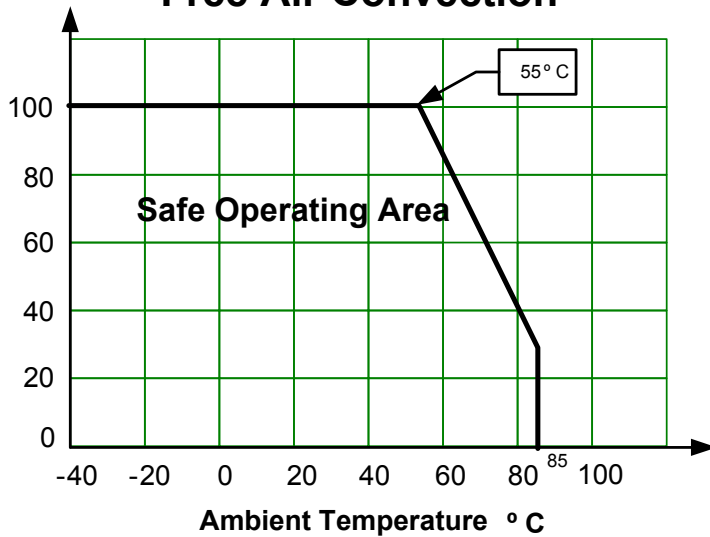
Dimensions



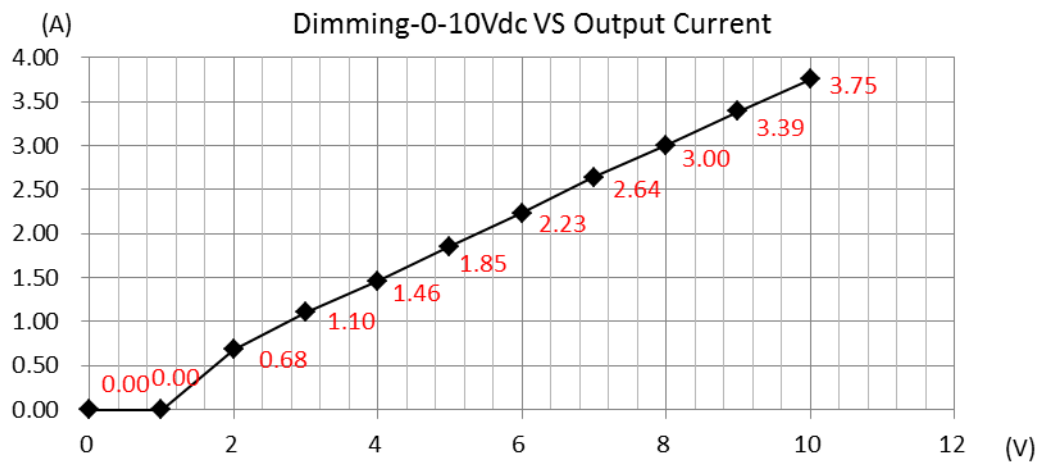
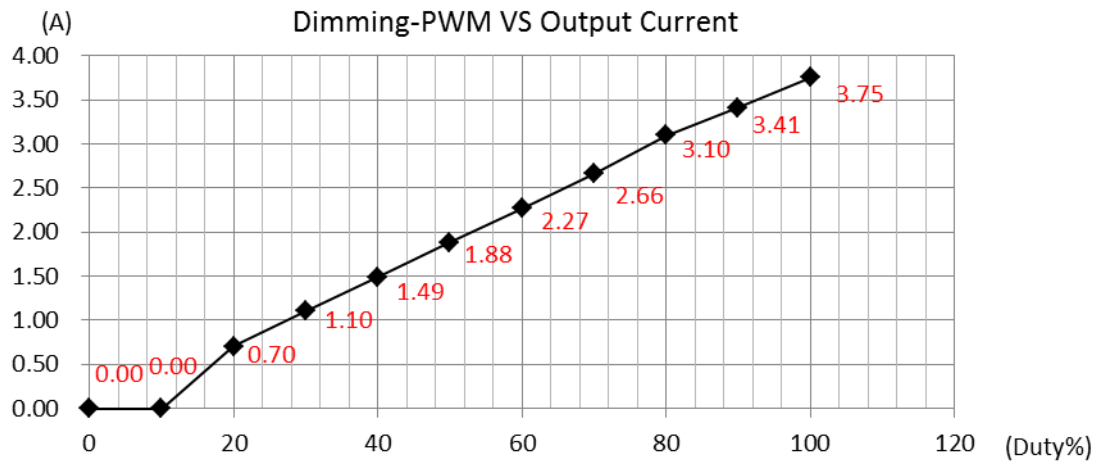
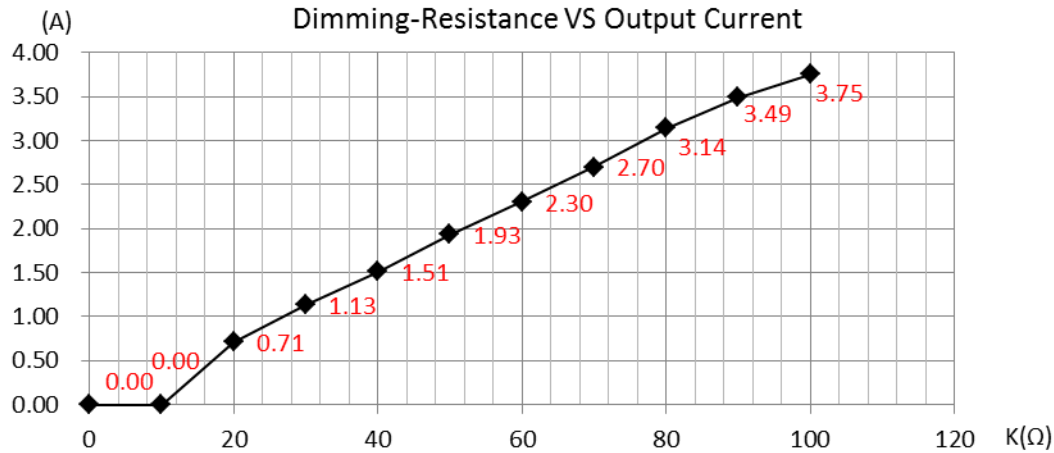
Measurements in Millimeters (inch)
Case Tolerance: ± 0.5 (± 0.02)

Temperature graph

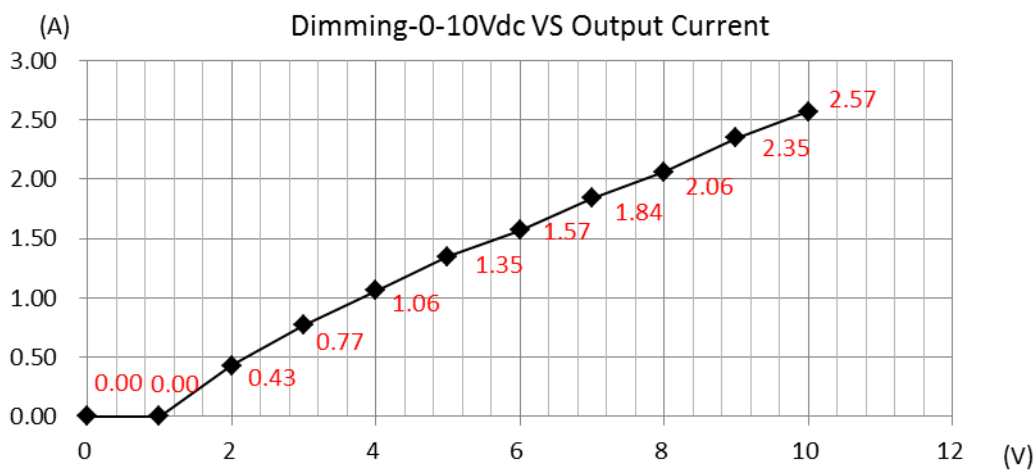
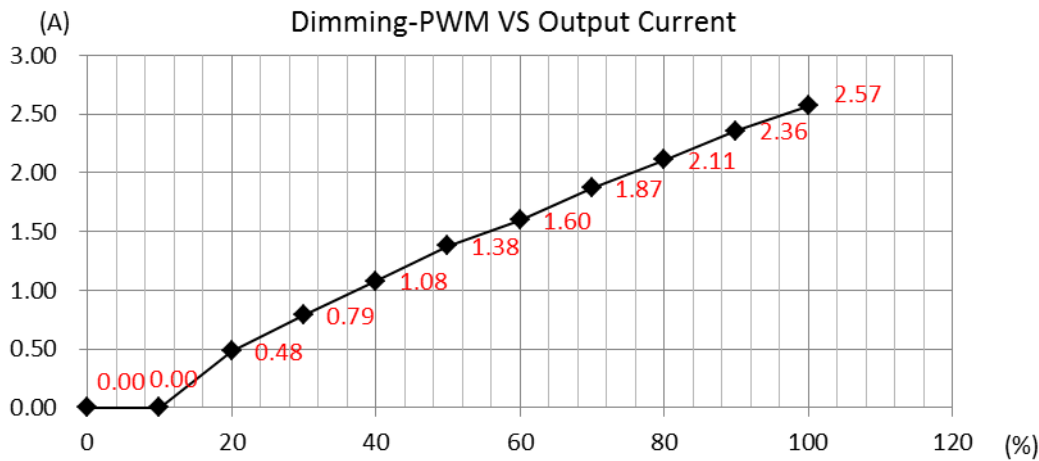
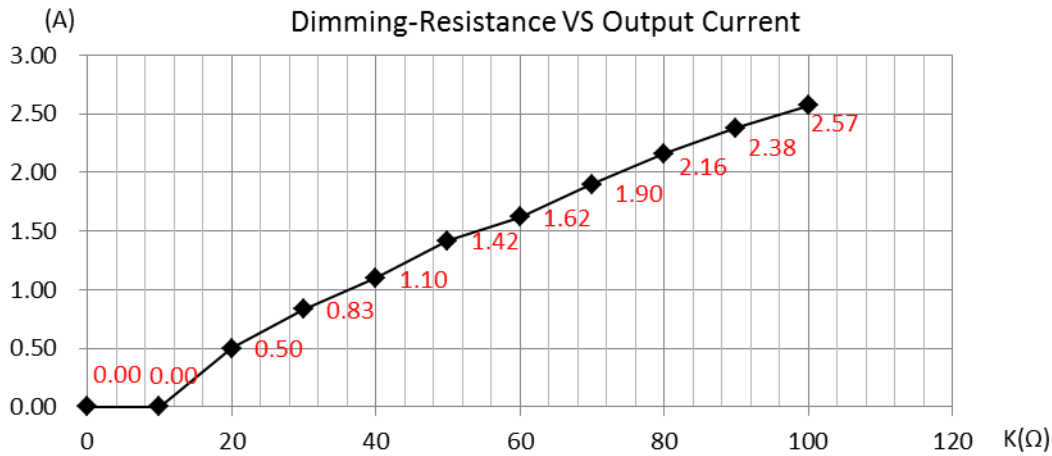
Free Air Convection



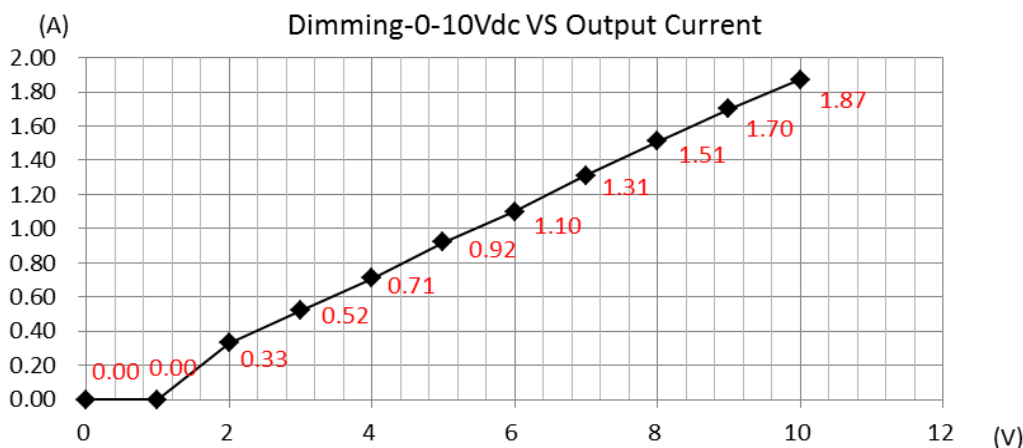
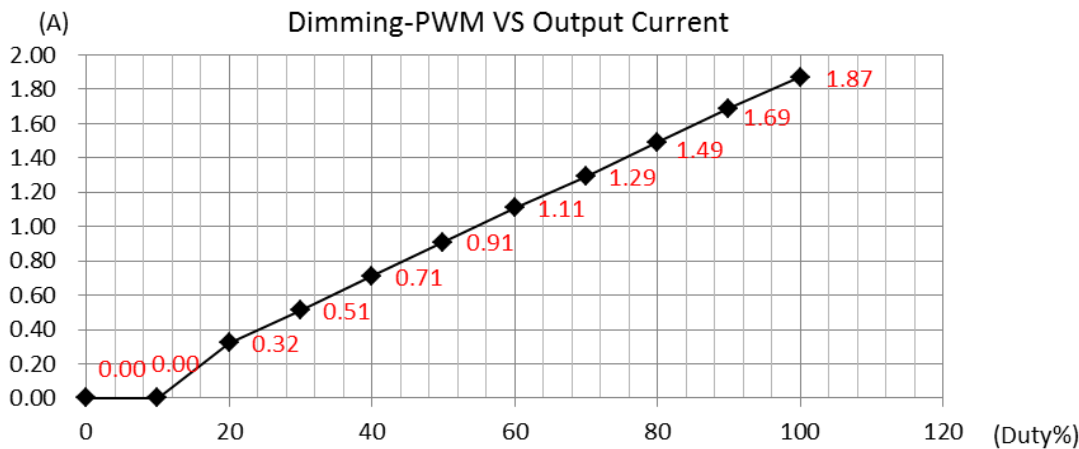
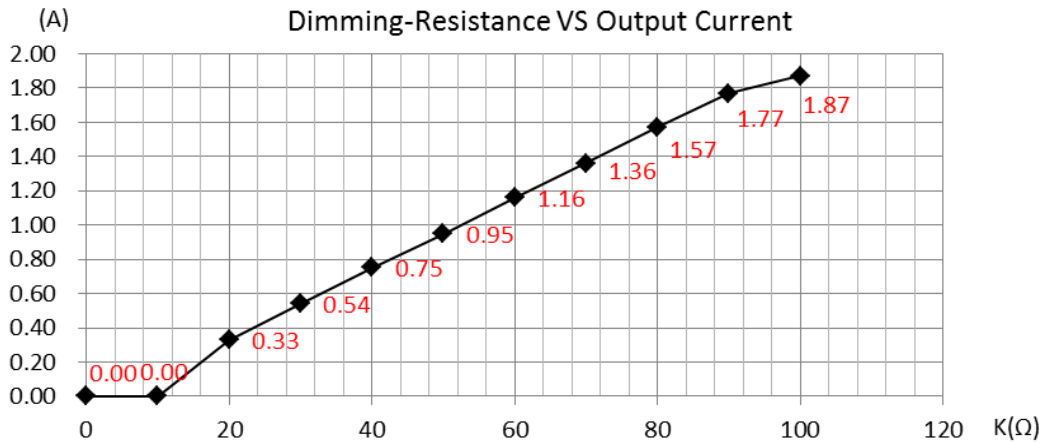
Dimming Performance
AMER90C-24375CAZ



AMER90C-36250CAZ



AMEPR90C-50180CAZ



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