



FEATURES:

- AC-DC Constant current LED Driver
- Input range 90-305VAC/47-440Hz
- High Efficiency up to 89%
- Operating temperature -40 to 85°C
- Over Temperature Protection
- Waterproof Case rated IP68
- Power Factor Correction
- SCP, Over Current Protection



Models
Single output

Model	Max Output Power (W) *	Output Voltage Range (V)	Output Current (A)	Input Voltage (VAC/Hz)	Input Voltage (VDC)	Efficiency (%)
AMEPR60-50120AZ	60	36-50	1.2	90-305/47-440	120-430	89
AMEPR60-36170AZ	59.8	24-36	1.66	90-305/47-440	120-430	88
AMEPR60-24250AZ	60	12-24	2.5	90-305/47-440	120-430	87
AMEPR60-12500AZ	60	5-12	5	90-305/47-440	120-430	85

*Exceeding the maximum output power will permanently damage the converter

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	30		A
	230VAC	50		
Leakage current	115VAC	0.5		mA
	230VAC	0.7		
AC current	115VAC	0.73		A
	230VAC	0.33		
Power Factor	115VAC		0.97	
	230VAC		0.93	
External fuse			250V/1.5A	
Start up time		250		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 *	20MHz Bandwidth	75		mV p-p
Hold-up time		90		ms
Current adjustment range		100-0		%
Minimum Load Voltage	See the models table			

* Tested with 0.1µF (M/C) or (C/C) and 10µF (E/C) parallel capacitors at the end.

Isolation Specifications

Parameters	Conditions	Typical	Rated	Units
Tested I/O voltage	3 sec/3.5mA		3000	VAC
Isolation Resistance	500VDC	>1000		MΩ
Isolation Capacitance		1000		pF

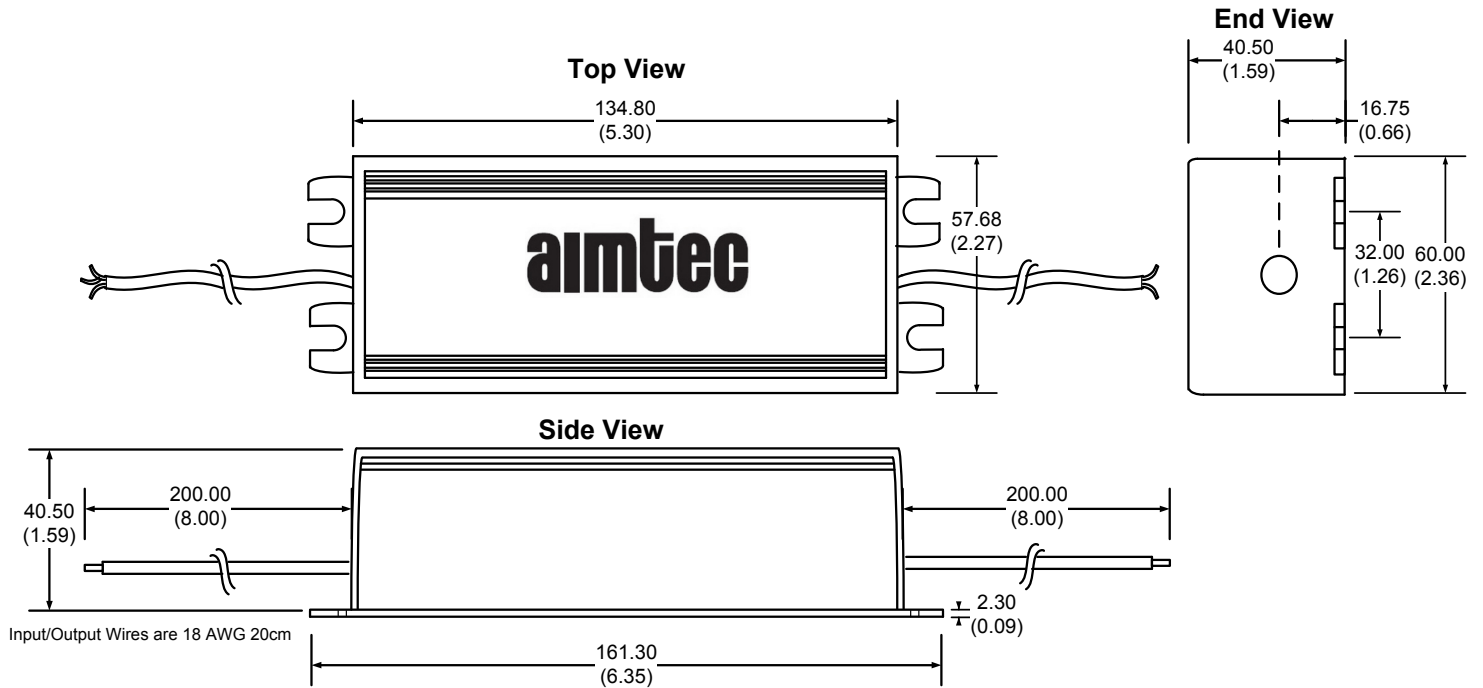
General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency		130		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	With derating over 55°C	-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		Plastic		
Potting		Epoxy (IP67 rated)		
Wires		UL1015 18AWG *20CM		
Weight		350		g
Dimensions (L x H x W)		5.30 x 2.27 x 1.59 inches	134.80 x 57.68 x 40.50 mm	
MTBF		>400,000 hrs (MIL-HDBK-217F at +25°C)		

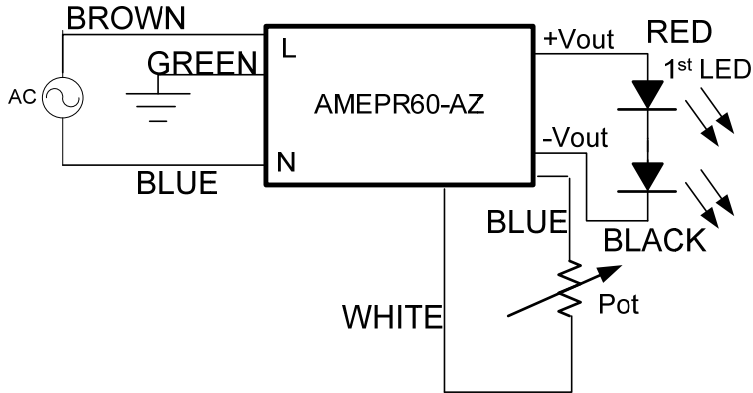
Safety Specifications

Parameters	
Agency approvals	cULus CE
Standards	UL8750, UL60950-1, EN55022, class B, EN60529(IP68), EN61347-1, EN61347-2-13

Dimensions



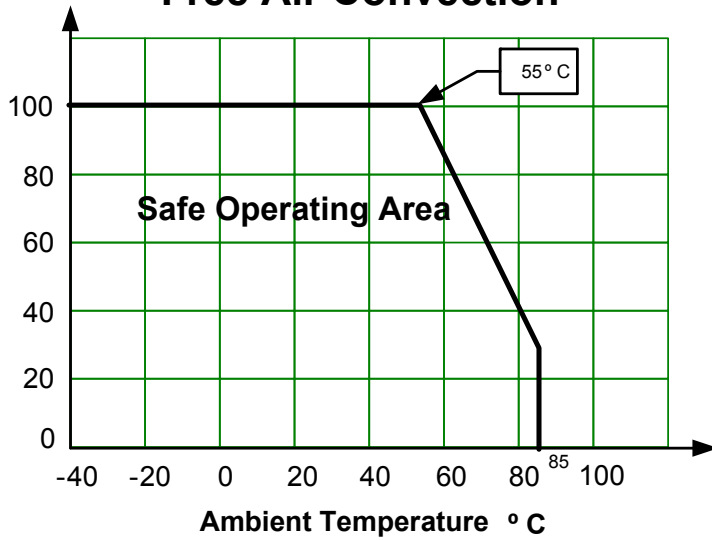
Application Circuit



Model Number	Maximum Pot Value (kΩ)
AMEPR60-50120AZ	26.00
AMEPR60-36170AZ	16.95
AMEPR60-24250AZ	26.10
AMEPR60-12500AZ	34.10

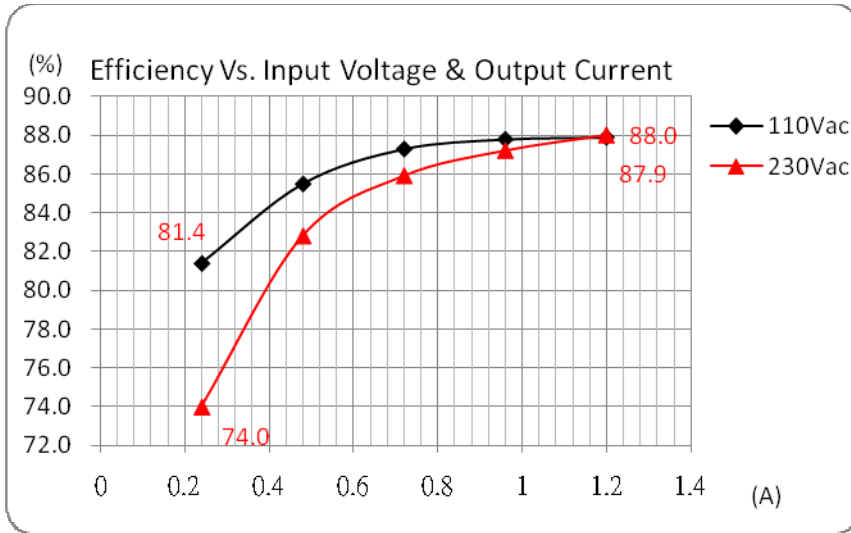
Temperature graph

Free Air Convection

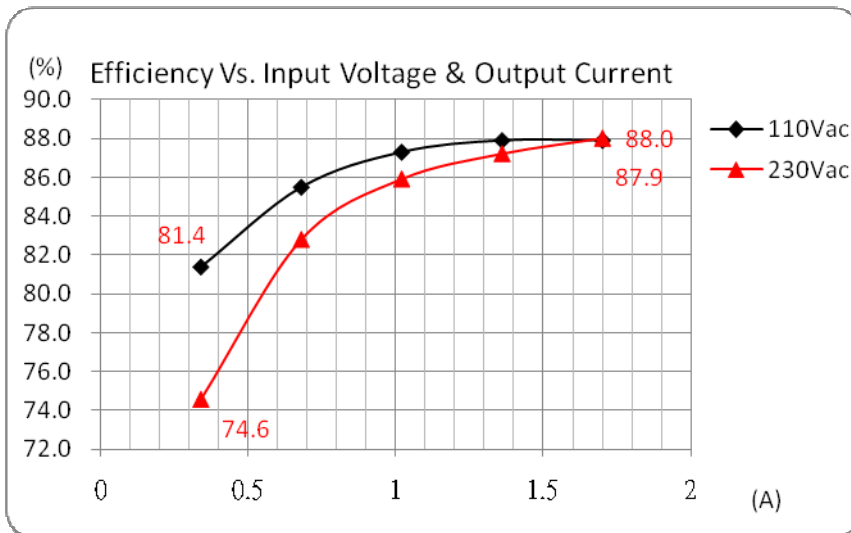


Efficiency Vs. Input Voltage & Output Current (Constant current load)

AMEPR60-50120AZ

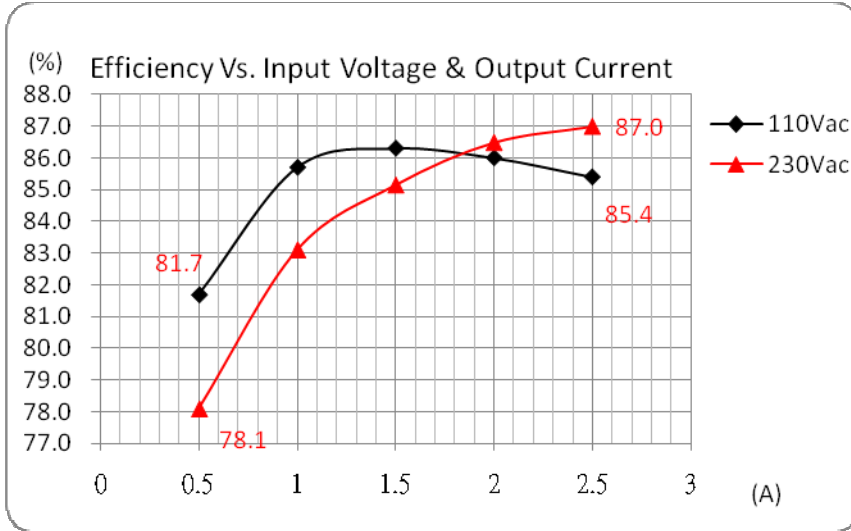


AMEPR60-36170AZ

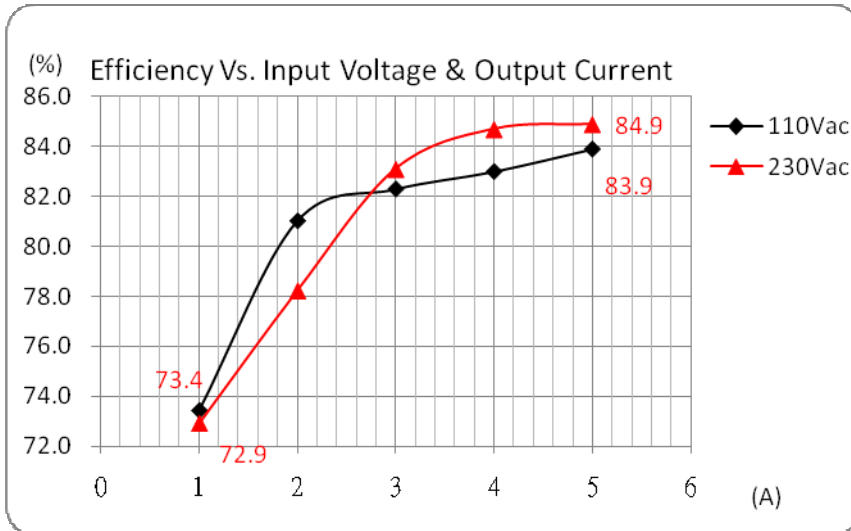


**Efficiency Vs. Input Voltage & Output Current (Constant current load)
Continued**

AMEPR60-24250AZ

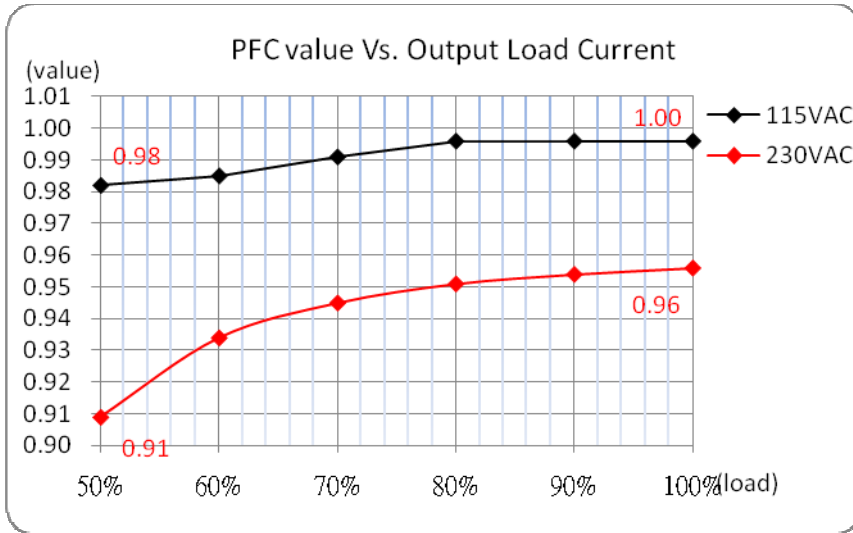


AMEPR60-12500AZ

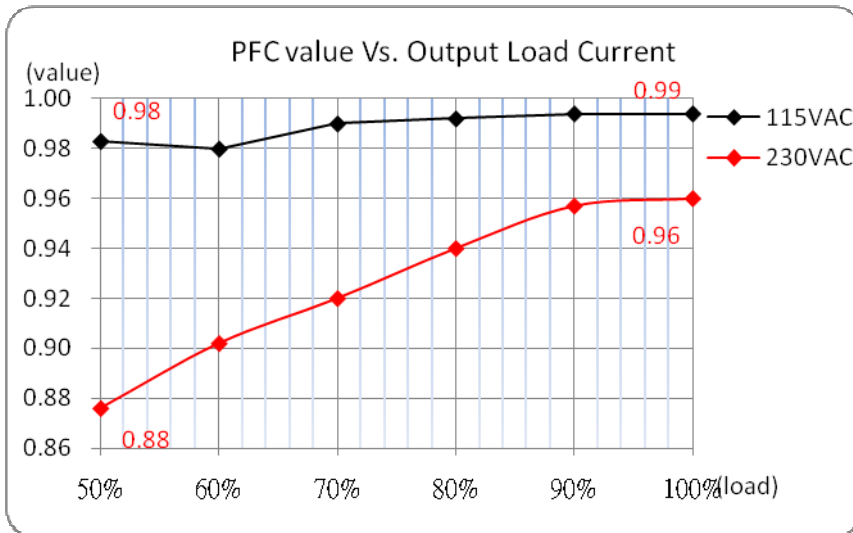


PFC Value vs. Output Load Current (constant current mode)

AMEPR60-50120AZ

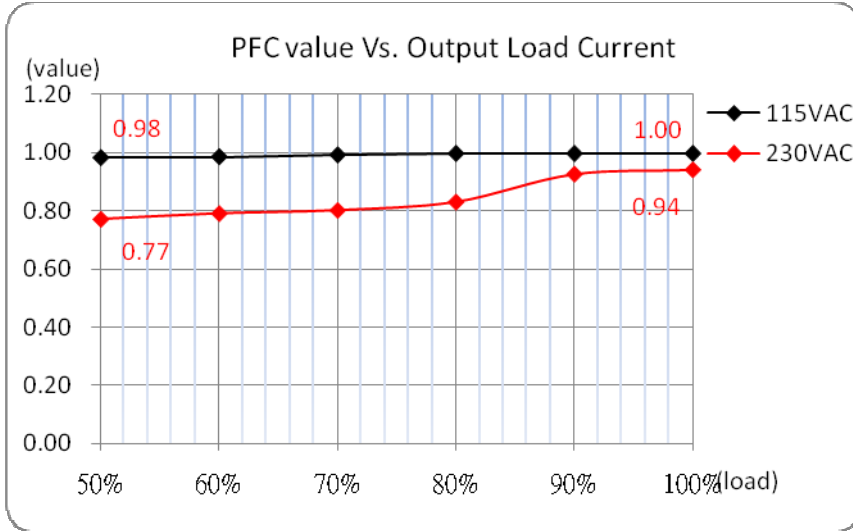


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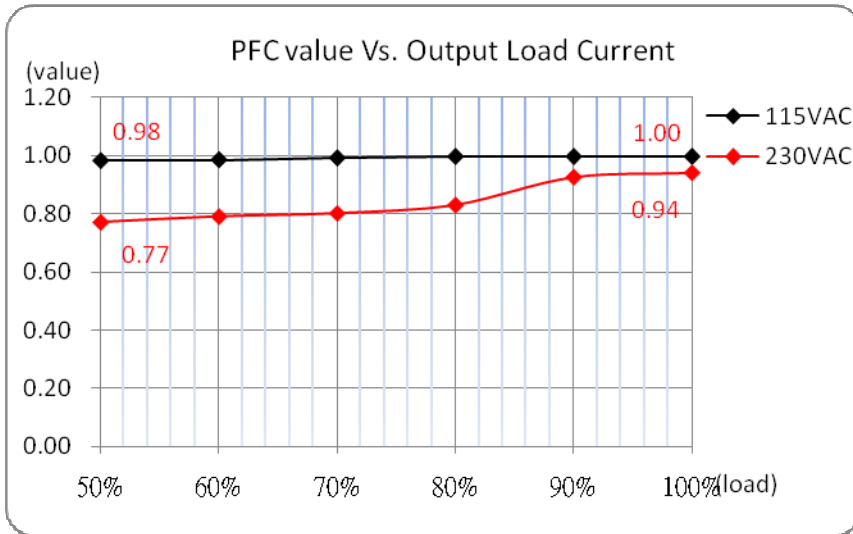


PFC Value vs. Output Load Current (constant current mode)
Continued

AMEPR60-24250AZ

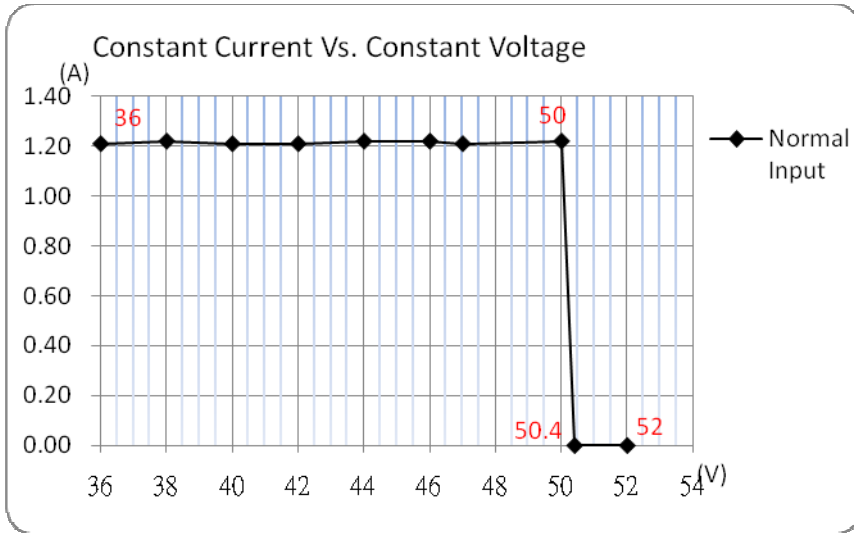


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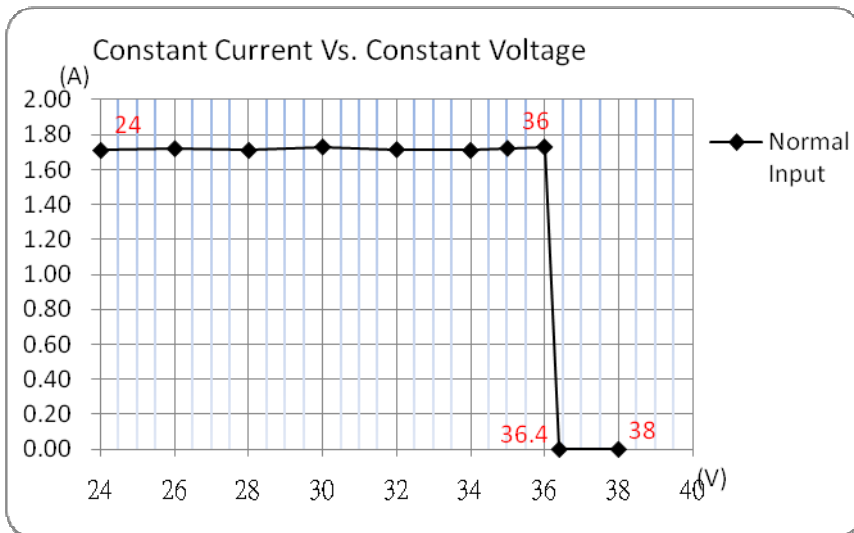


Constant Current vs. Constant Voltage Mode

AMEPR60-50120AZ

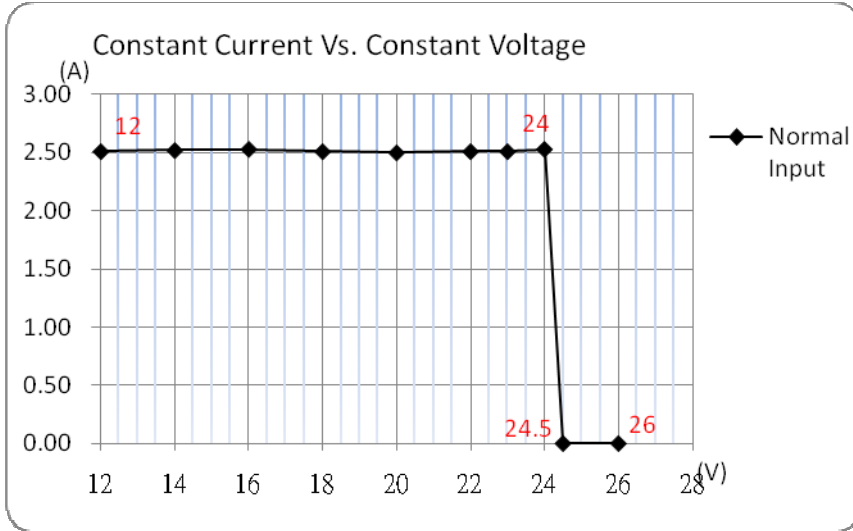


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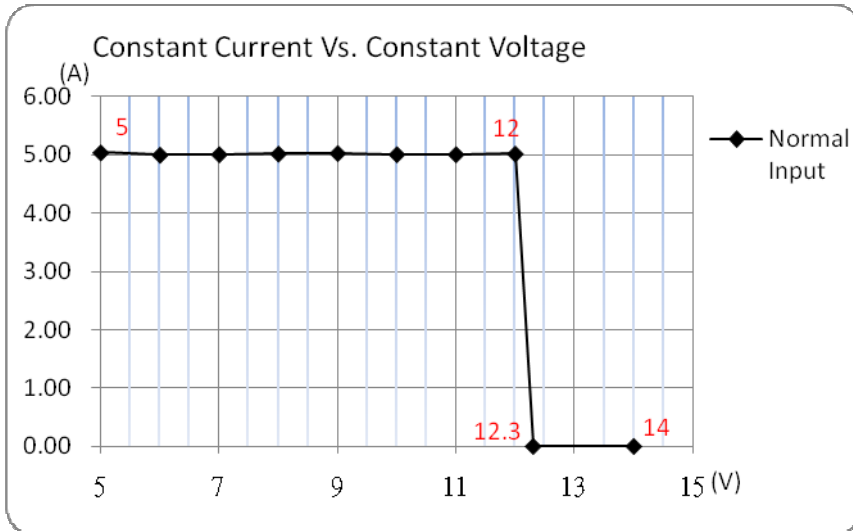


Constant Current vs. Constant Voltage Mode Continued

AMEPR60-24250AZ

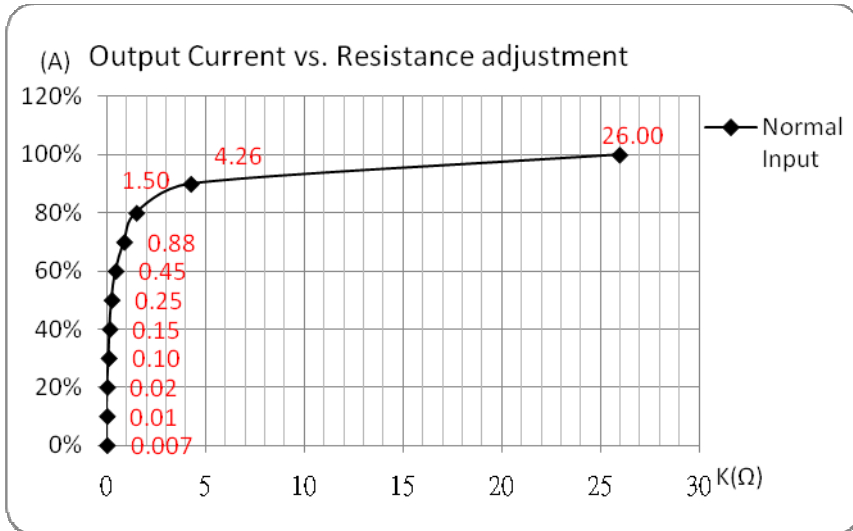


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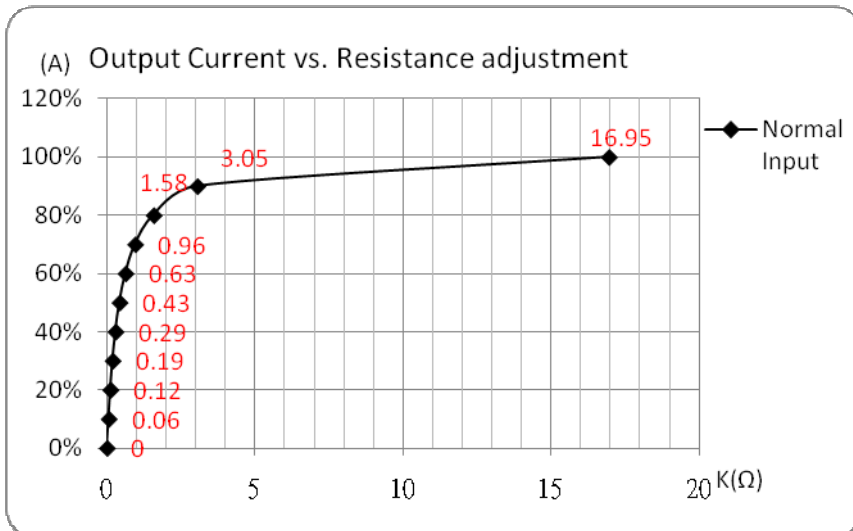


Dimming Control (Output Current vs. R_{adj})

AMEPR60-50120AZ

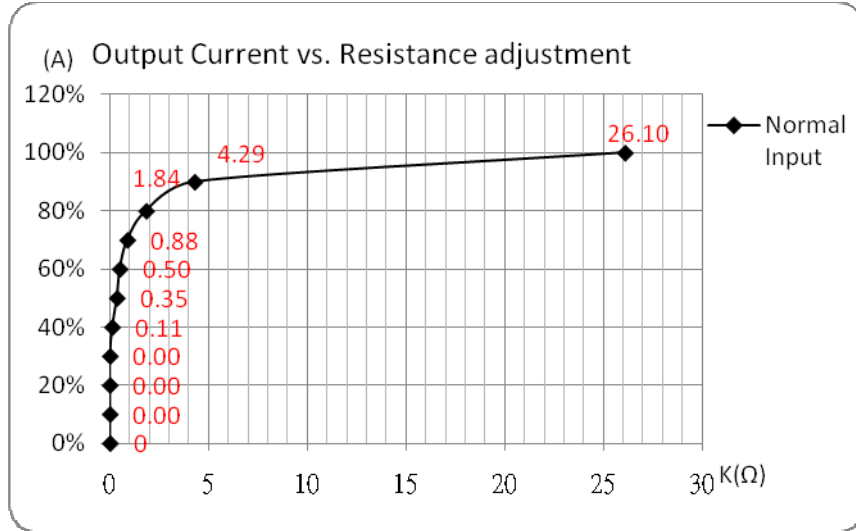


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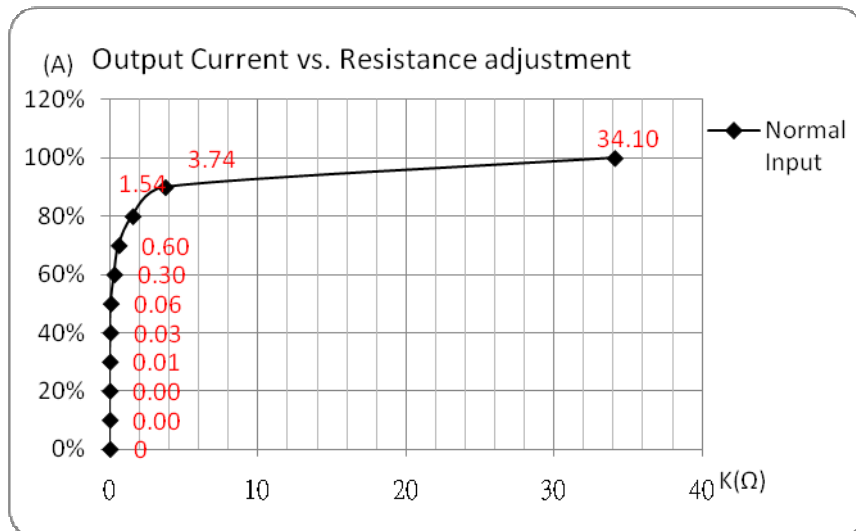


Constant Current vs. Constant Voltage Mode Continued

AMEPR60-24250AZ



AMEPR60-12500AZ



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