



FEATURES:

- AC-DC Constant current LED Driver
- Input range 90-305VAC/47-440Hz
- High Efficiency up to 86%
- 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 (%)
AMEPR30-5070AZ	35	36-50	0.7	90-305/47-440	120-430	86
AMEPR30-4864AZ	30.7	36-48	0.64	90-305/47-440	120-430	86
AMEPR30-36100AZ	36	24-36	1	90-305/47-440	120-430	85
AMEPR30-24140AZ	33.6	12-24	1.4	90-305/ 47-440	120-430	84
AMEPR30-12250AZ	30	5-12	2.5	90-305/47-440	120-430	83

*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	25		A
	230VAC	40		
Leakage current	115VAC	0.3		mA
	230VAC	0.5		
AC current	115VAC	0.43		A
	230VAC	0.25		
Power Factor	115VAC		0.96	
	230VAC		0.90	
External fuse			250V/1A	
Start up time		450		ms

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Current accuracy		±2		%
Line regulation	LL-HL	±1		%
Load regulation	0-100% load	±2		%
Ripple & Noise *	20MHz Bandwidth	75		mV p-p
Hold-up time		50		ms
Current adjustment range		100-0		%
Minimum Load Voltage	See the models table			

* 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		3000	VAC
Isolation Resistance	500VDC	>1000		MΩ
Isolation Capacitance		1000		pF

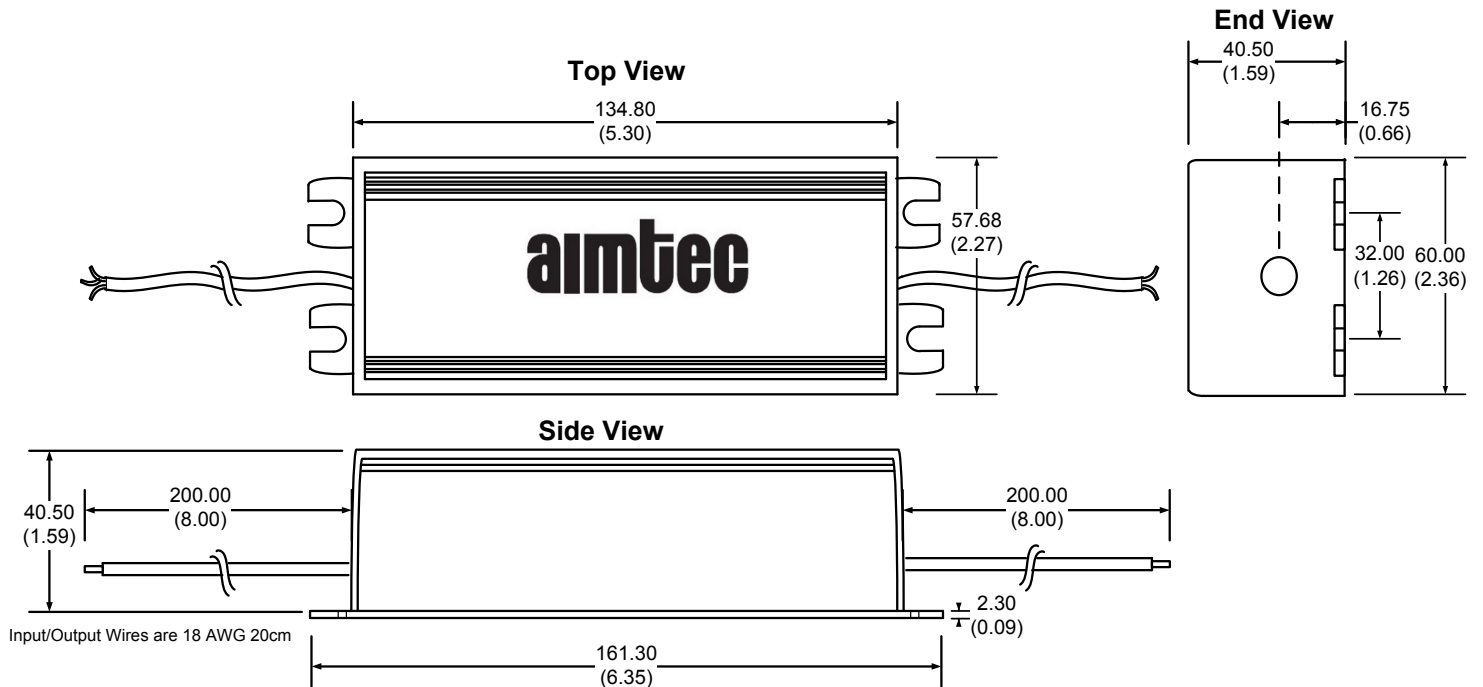
General Specifications

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		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

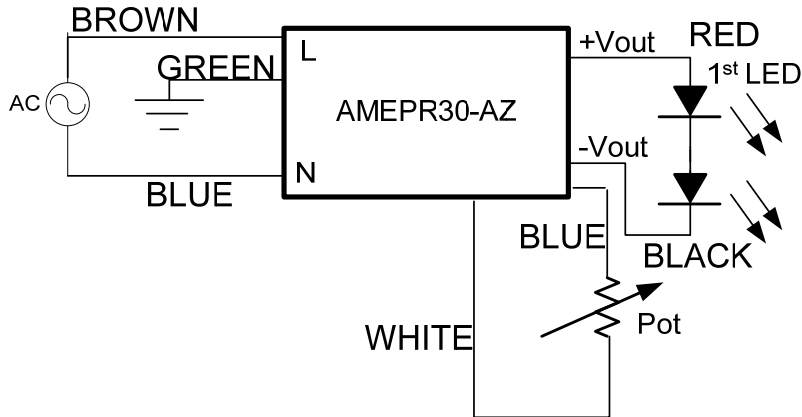
Parameters	
Agency approvals	cULus, CE
Standards	UL8750, UL60950-1, EN55022, class B, EN60529(IP68), EN61347-1, EN61347-2-13

Dimensions



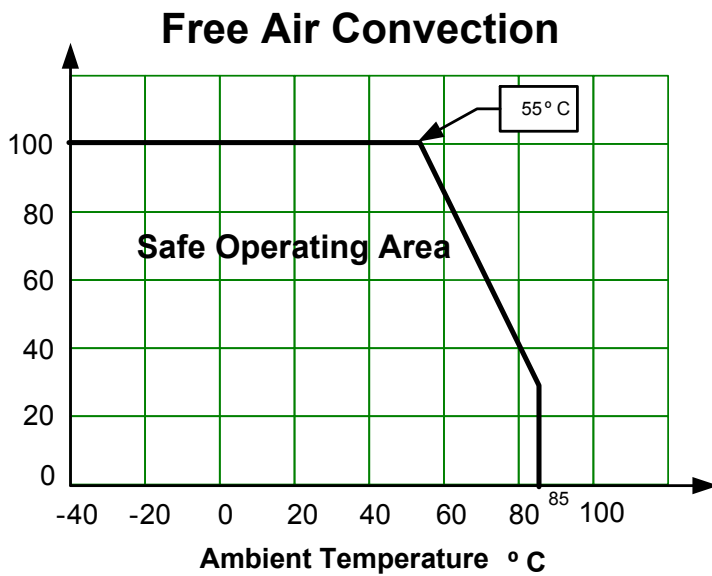
NOTE: to adjust the output current connect a 20K Ohm pot between blue and white wire

Application Circuit



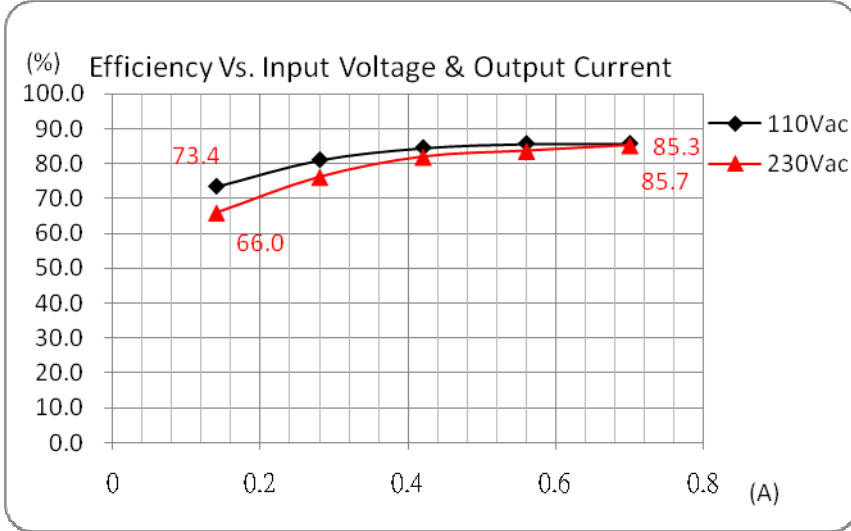
Model Number	Maximum Pot Value (kΩ)
AMEPR30-5070AZ	9.00
AMEPR30-4864AZ	9.00
AMEPR30-36100AZ	9.00
AMEPR30-24140AZ	26.00
AMEPR30-12250AZ	26.10

Temperature graph

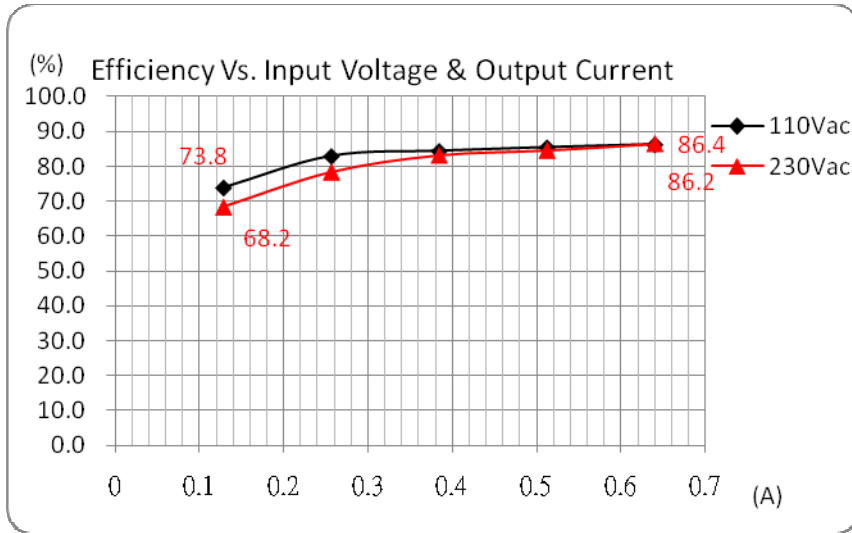


Efficiency Vs. Input Voltage & Output Current (Constant current load)

AMEPR30-5070AZ

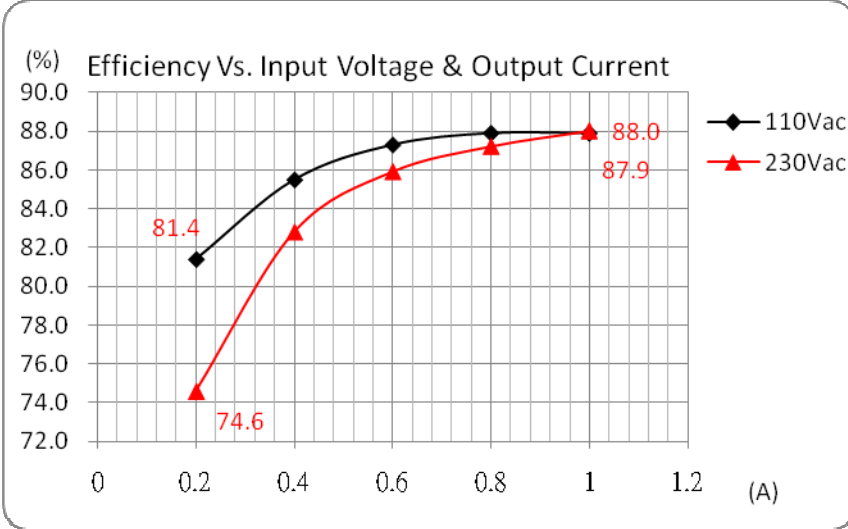


AMEPR30-4864AZ

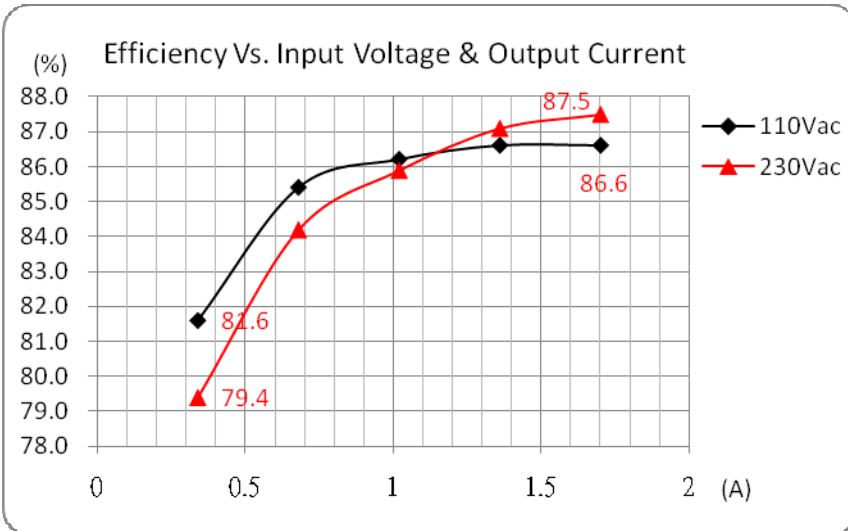


Efficiency Vs. Input Voltage & Output Current (Constant current load)
Continued

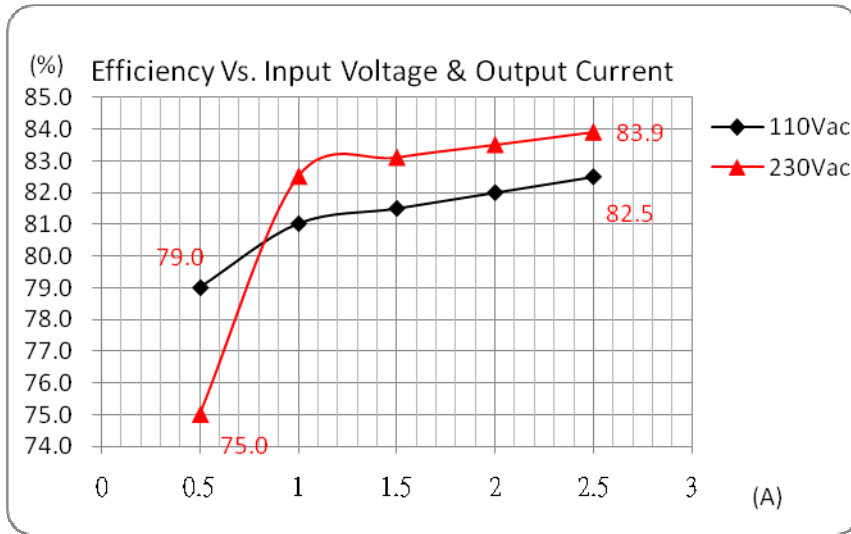
AMEPR30-36100AZ



AMEPR30-24140AZ

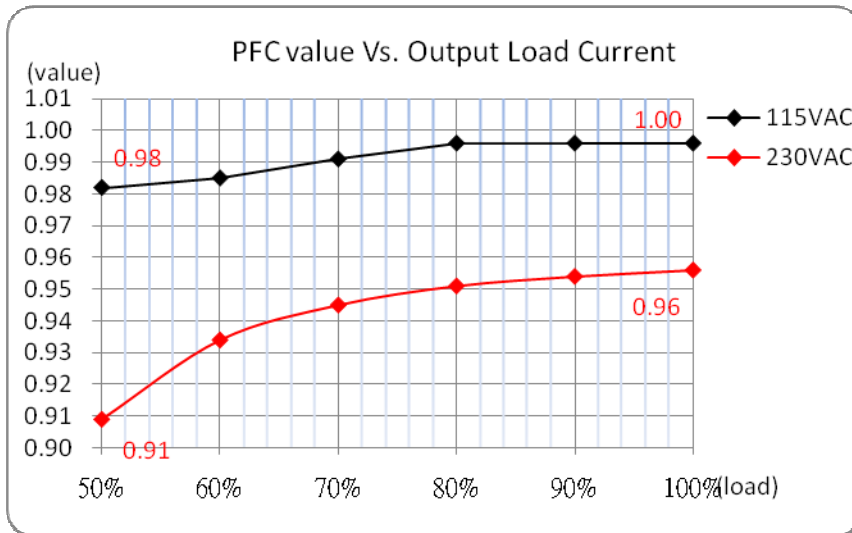


AMEPR30-12250AZ



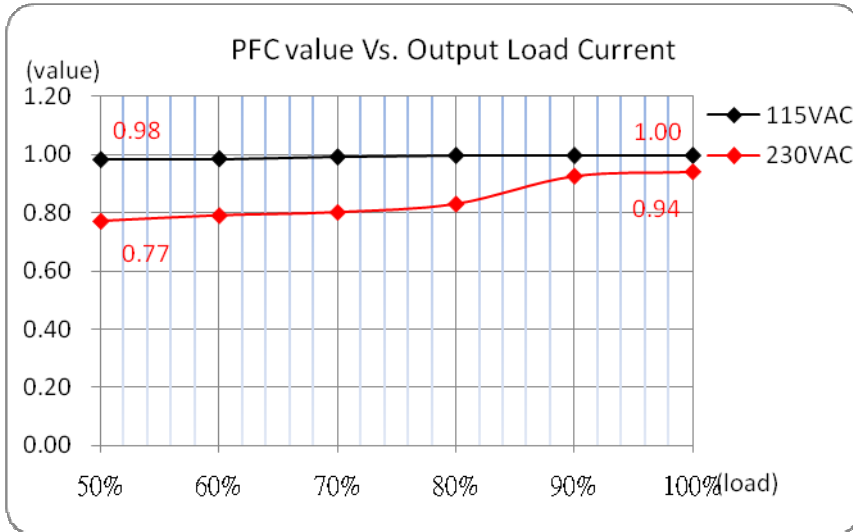
PFC Value vs. Output Load Current (constant current mode)

AMEPR30-5070AZ

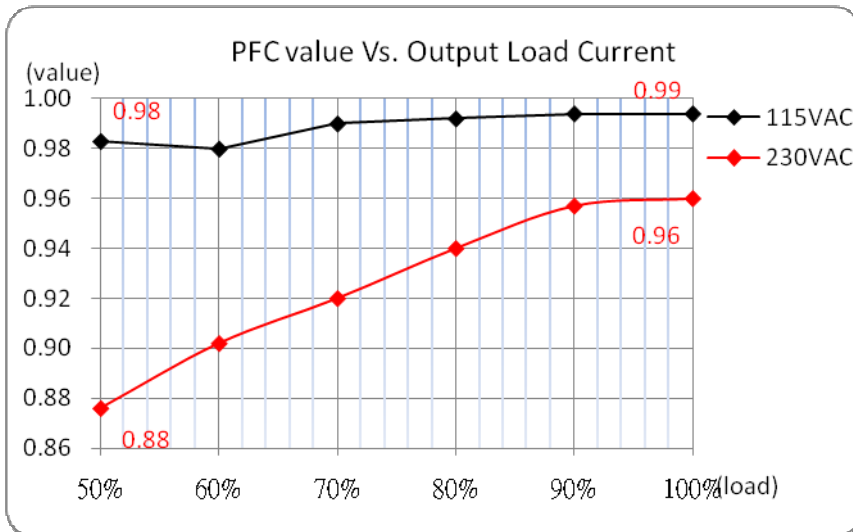


PFC Value vs. Output Load Current (constant current mode)
Continued

AMEPR30-4864AZ

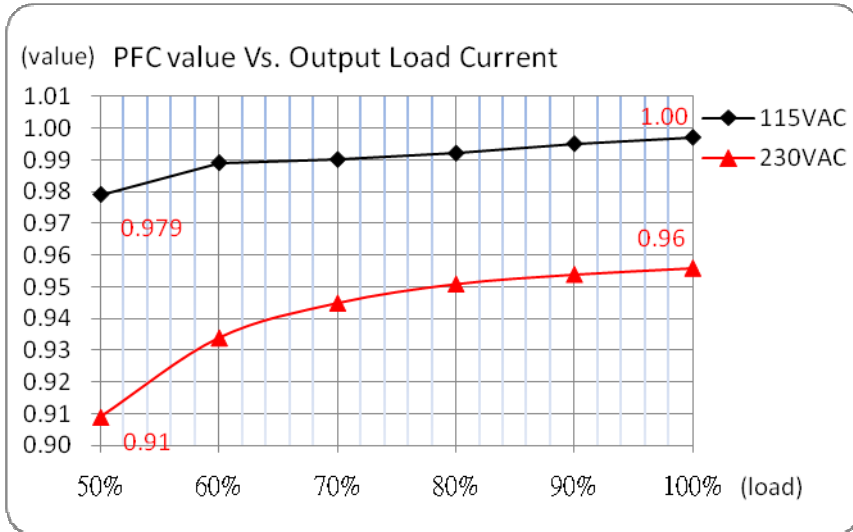


AMEPR30-36100AZ

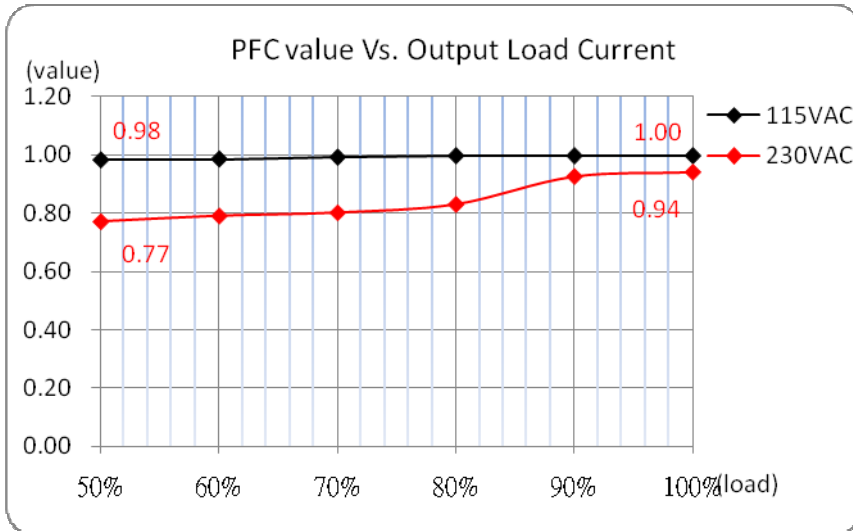


PFC Value vs. Output Load Current (constant current mode)
Continued

AMEPR30-24140AZ

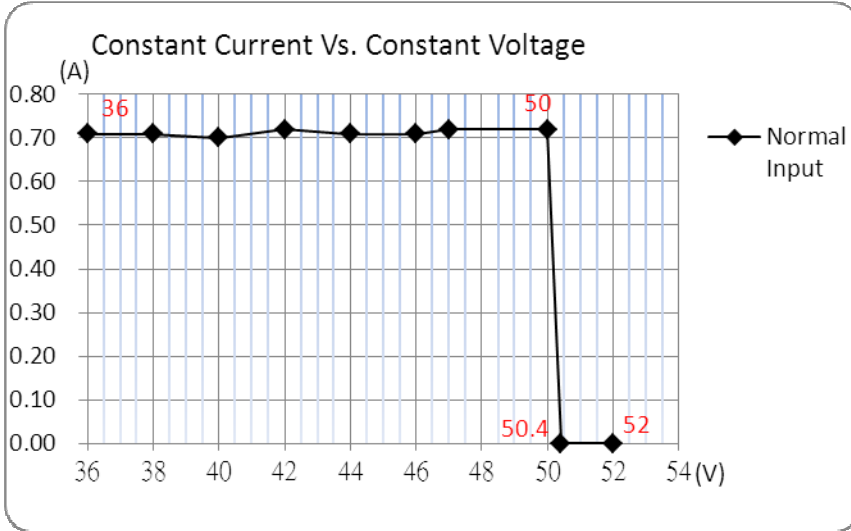


AMEPR30-12250AZ

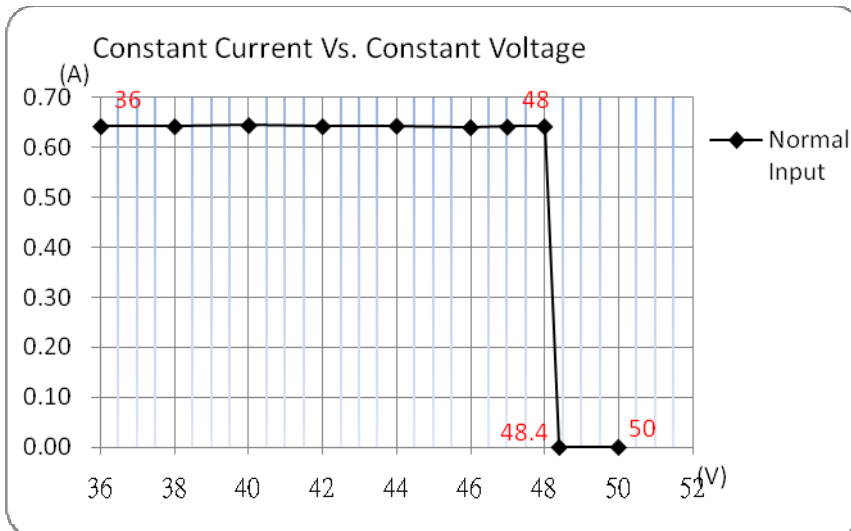


Constant Current vs. Constant Voltage Mode

AMEPR30-5070AZ

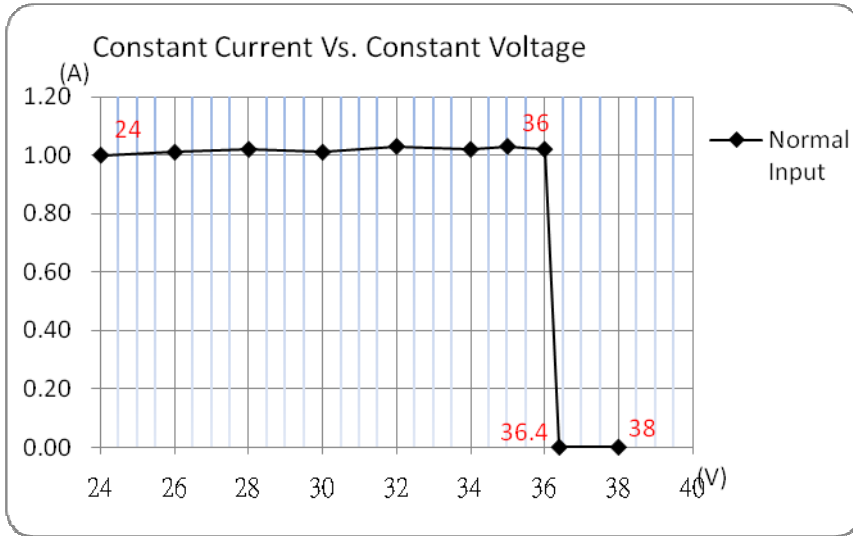


AMEPR30-4864AZ

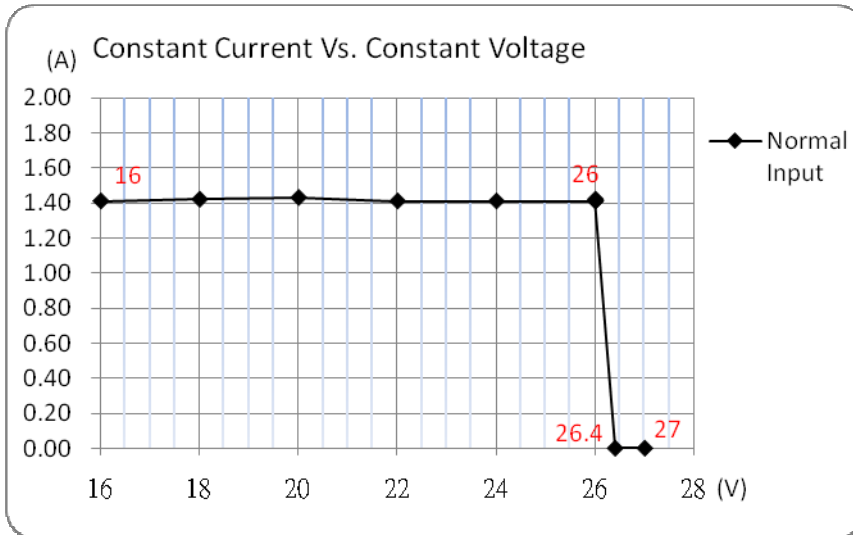


Constant Current vs. Constant Voltage Mode Continued

AMEPR30-36100AZ

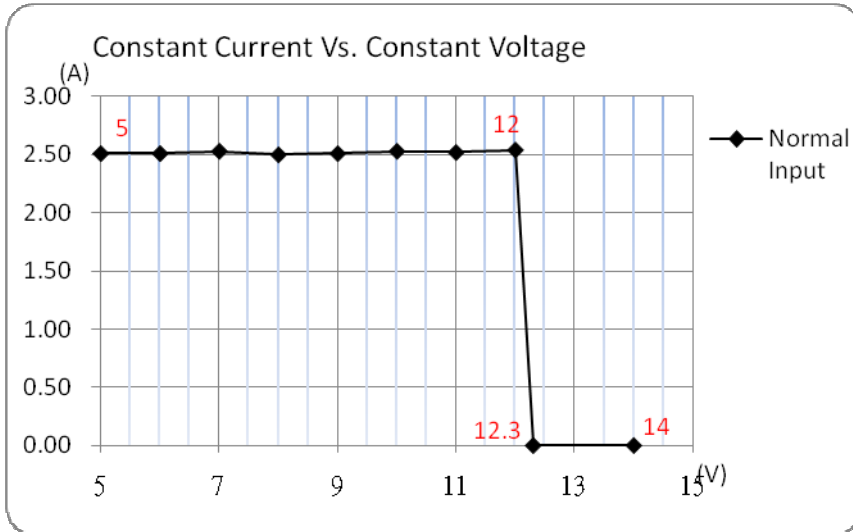


AMEPR30-24140AZ



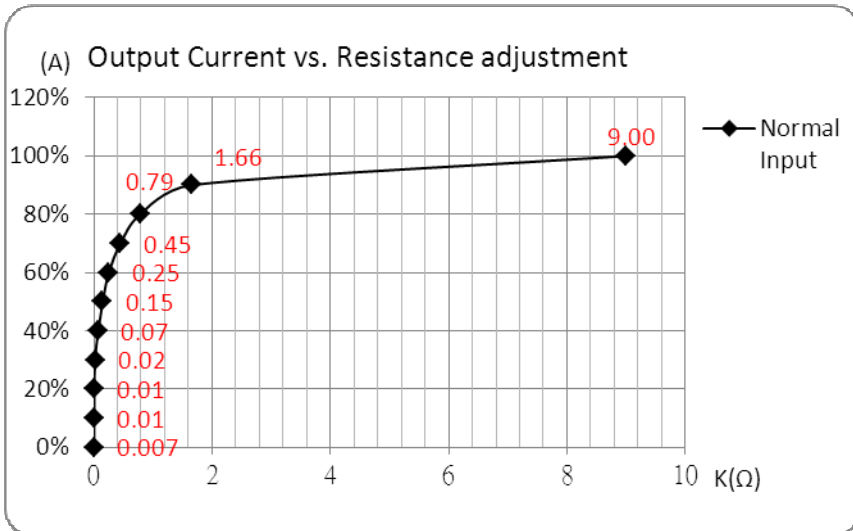
Constant Current vs. Constant Voltage Mode Continued

AMEPR30-12250AZ



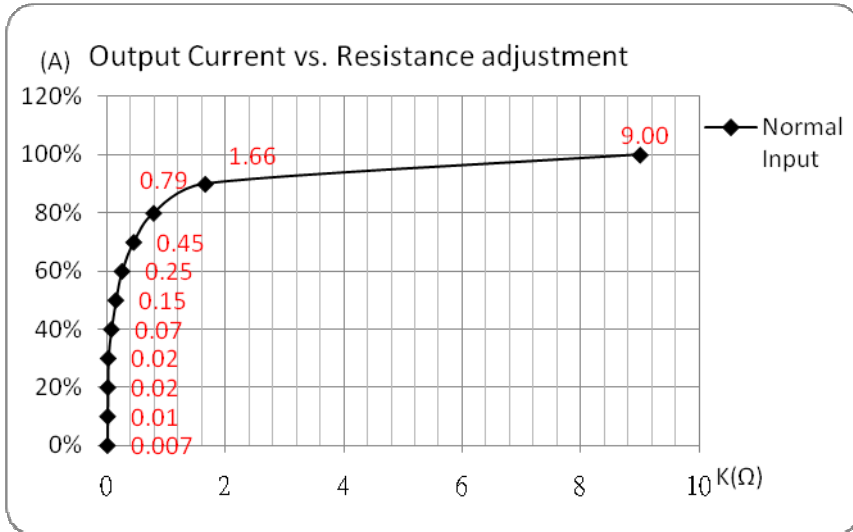
Dimming Control (Output Current vs. Radj)

AMEPR30-5070AZ

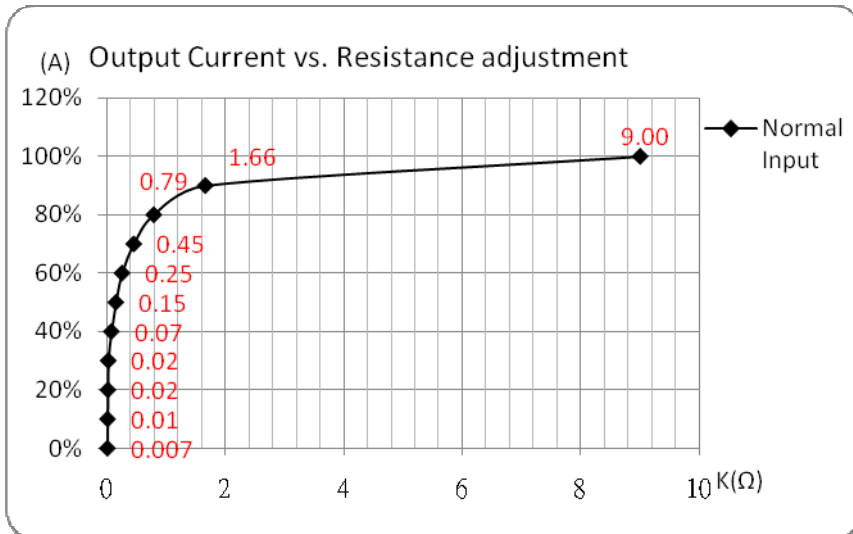


**Dimming Control (Output Current vs. Radj)
Continued**

AMEPR30-4864AZ

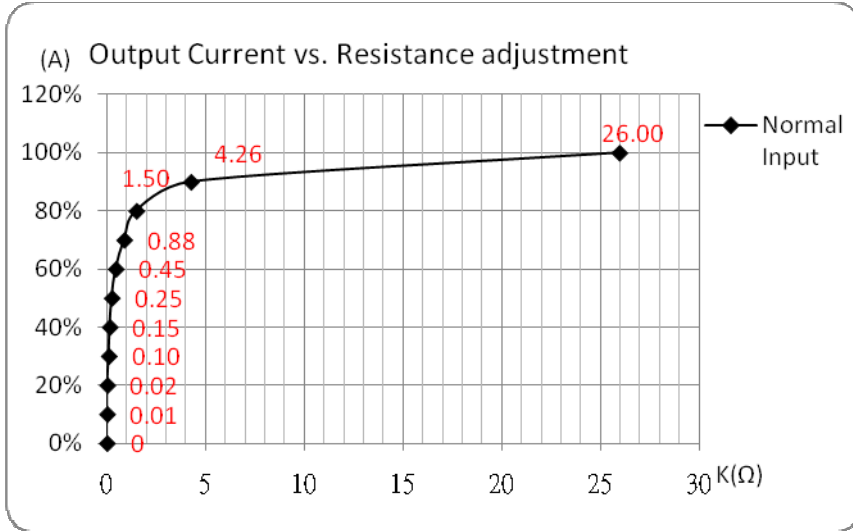


AMEPR30-36100AZ

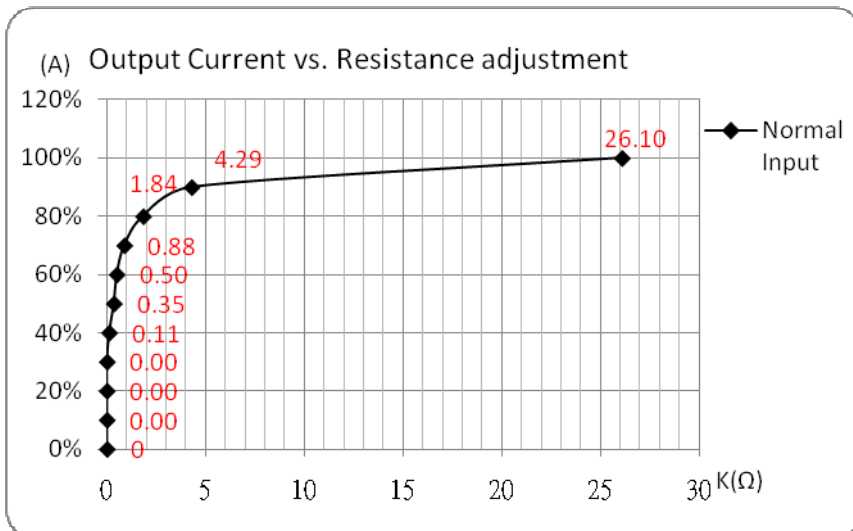


Dimming Control (Output Current vs. Radj)
Continued

AMEPR30-24140AZ



AMEPR30-12250AZ



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