



FEATURES:

- AC-DC Constant current LED Driver
- Input range 90-277VAC/47-440Hz
- High Efficiency up to 86%
- Operating temperature -40 to 80°C
- Over Temperature Protection
- Open frame
- 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 (%)
AMEOR30-5070AZ	35	36-50	0.7	90-277/47-440	120-390	86
AMEOR30-4864AZ	30.72	36-48	0.64	90-277/47-440	120-390	86
AMEOR30-36100AZ	36	24-36	1	90-277/47-440	120-390	85
AMEOR30-24140AZ	33.6	12-24	1.4	90-277/47-440	120-390	84
AMEOR30-12250AZ	30	5-12	2.5	90-277/47-440	120-390	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	0.33		A
	230VAC	0.16		
Power Factor	115VAC		0.99	
	230VAC		0.97	
External fuse			250V/1A	
Start up time		450		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		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		>1000		MΩ

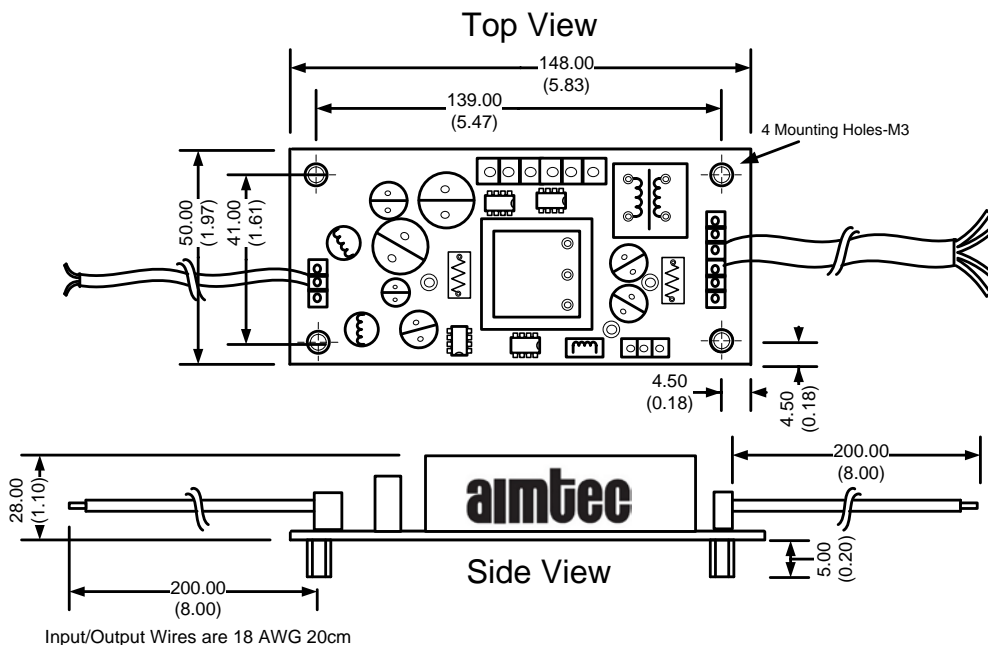
General Specifications

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 60°C	-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
Wires	UL1015 18AWG * 20CM			
Weight		220		g
Dimensions (L x H x W)	5.83 x 1.97 x 1.3 inches 148 x 50 x 33 mm			
MTBF	>400,000 hrs (MIL-HDBK-217F at +25°C)			

Environment Approval

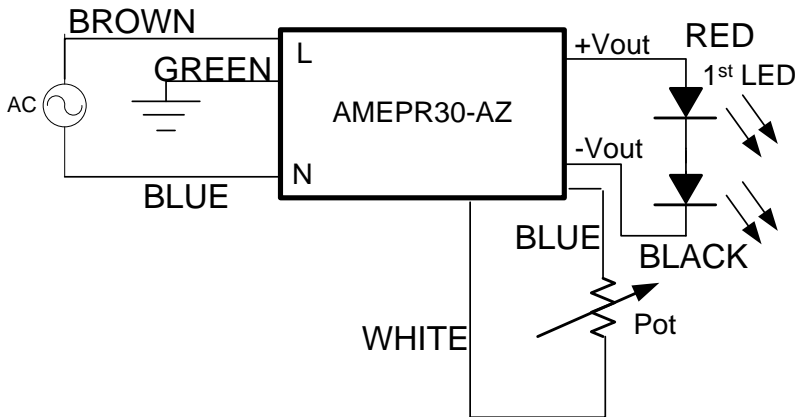
Test	Parameters	Conditions
Shock	Wave form	Half sine wave
	Acceleration amplitude	5gn
	Bump duration	30 ms
	Converter operation	Before and after test, body mounted (on chassis)
	Number of bumps	18 (3 in each direction for every axis)
Vibration	Test mode	Sweep sine, 10-100Hz, speed 0.05Hz/s
	Displacement	1 mm
	Acceleration	3g, 3 loops 30min one cycle, 3h total, every axis tested
	Converter operation	Before and after test, body mounted (on chassis)

Dimensions



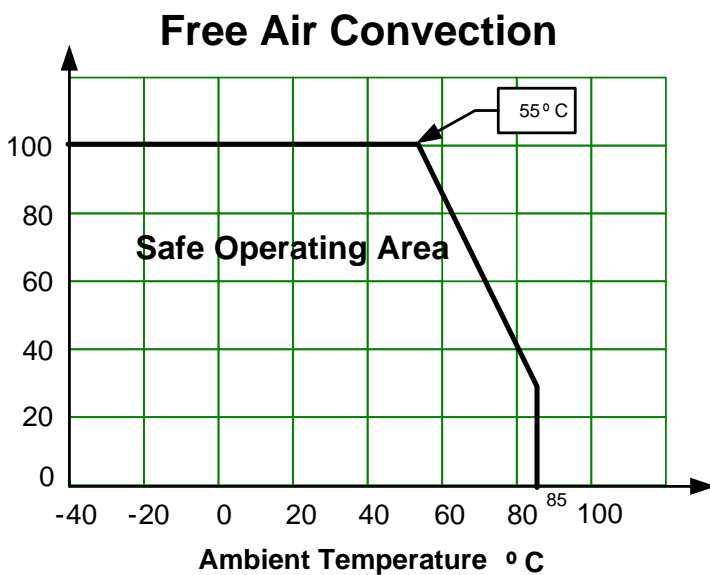
NOTE: to adjust the output current connect a 20K Ohm pot between blue and white wire

Application Circuit



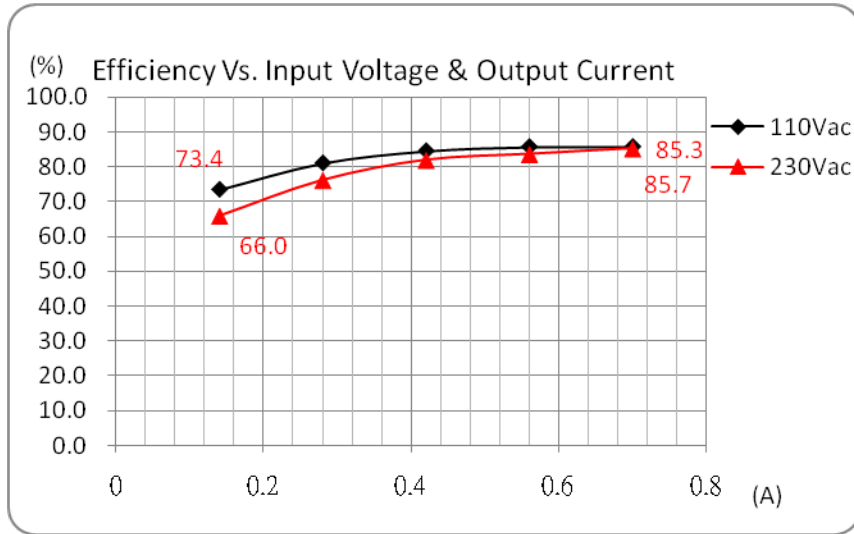
Model Number	Maximum Pot Value (kΩ)
AMEPR30-5070AZ	9.00
AMEPR30-4864AZ	9.00
AMEPR30-36100AZ	9.00
AMEPR30-24140AZ	26.00
AMEPR30-12250AZ	26.10

Temperature graph

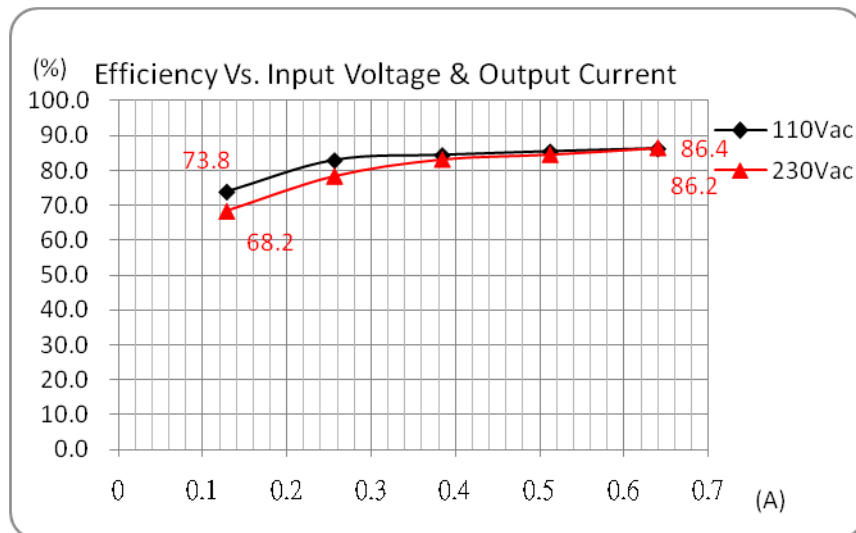


Efficiency Vs. Input Voltage & Output Current (Constant current load)

AMEOR30-5070AZ

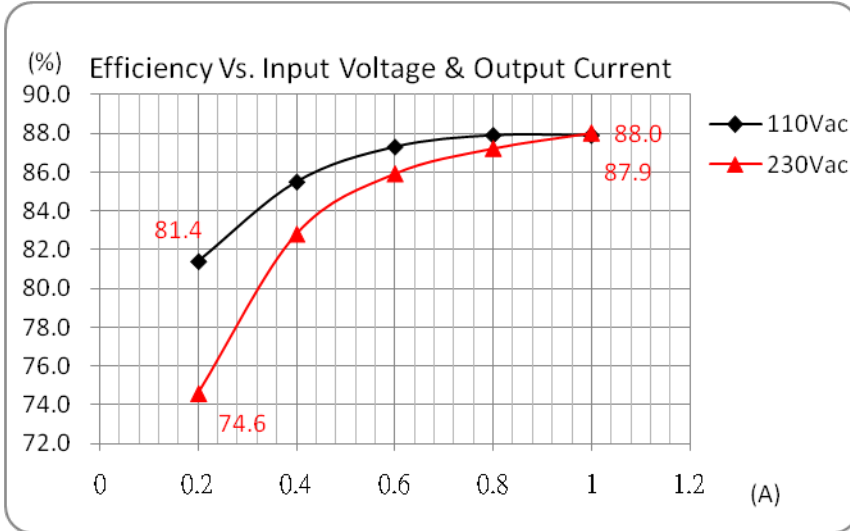


AMEOR30-4864AZ

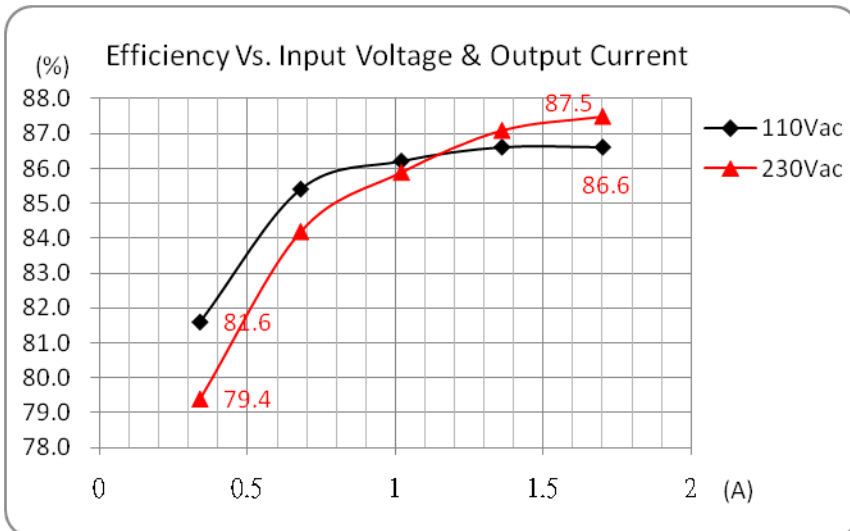


Efficiency Vs. Input Voltage & Output Current (Constant current load)
(continued)

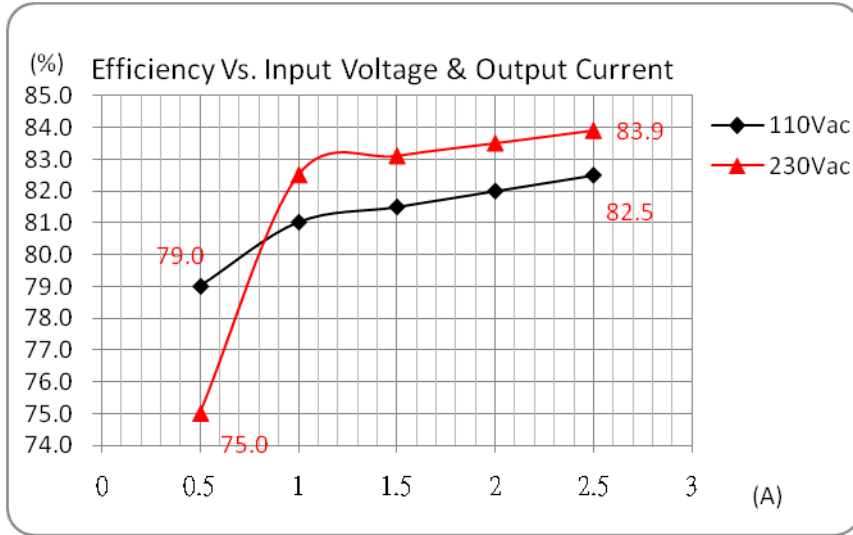
AMEOR30-36100AZ



AMEOR30-24140AZ

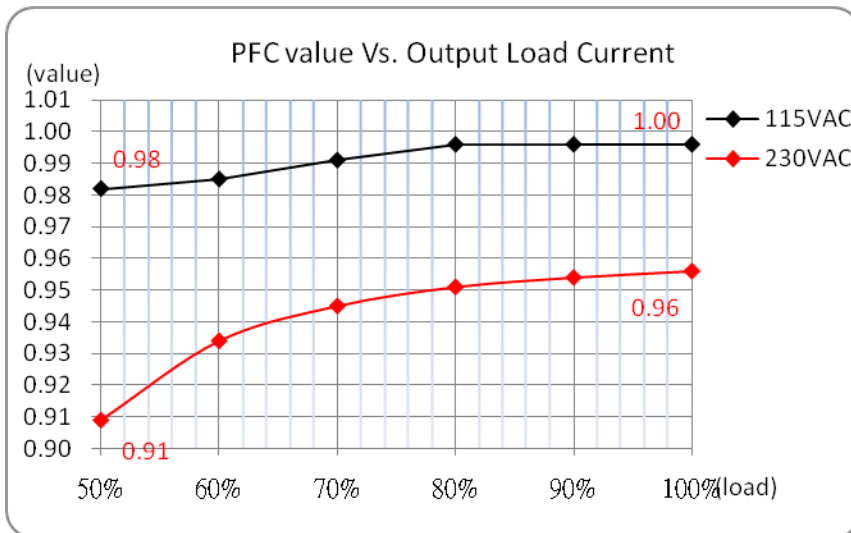


AMEOR30-12250AZ



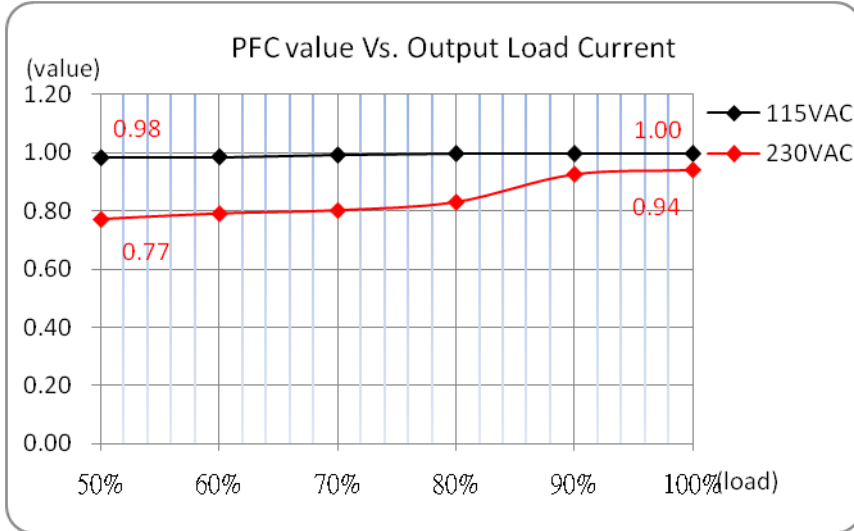
PFC Value vs. Output Load Current (constant current mode)

AMEOR30-5070AZ

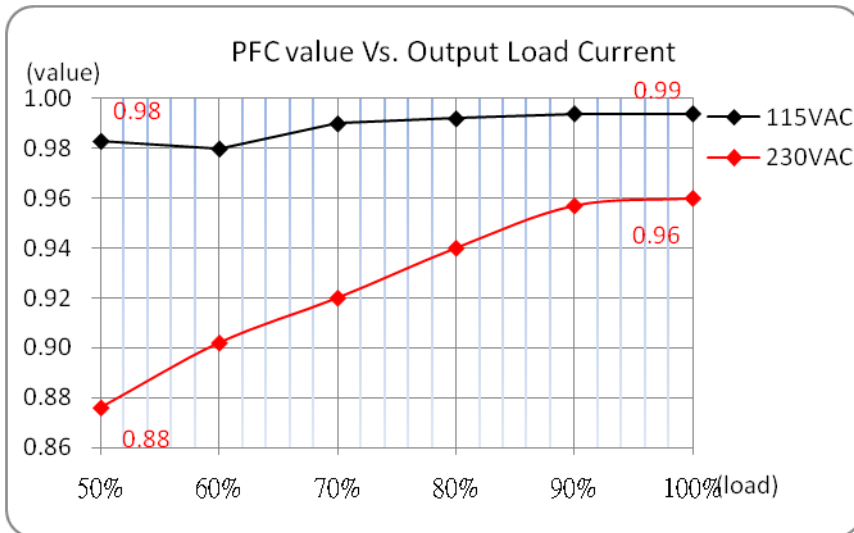


**PFC Value vs. Output Load Current (constant current mode)
(continued)**

AMEOR30-4864AZ

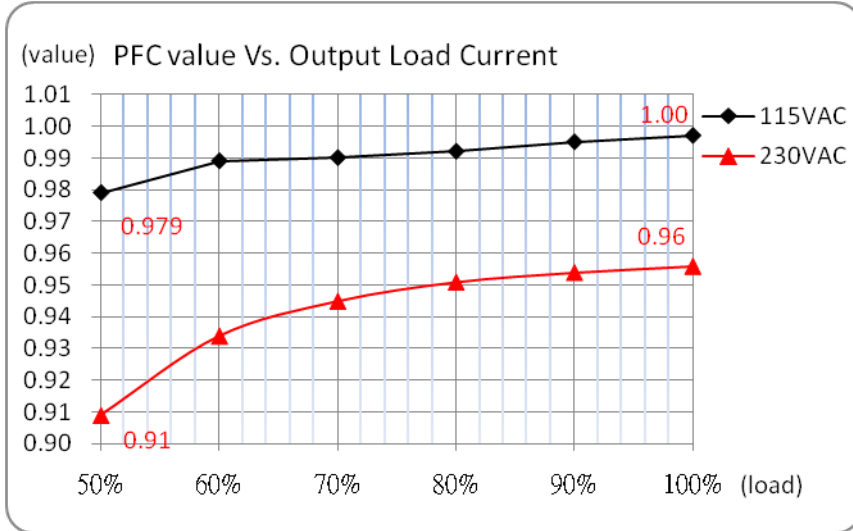


AMEOR30-36100AZ

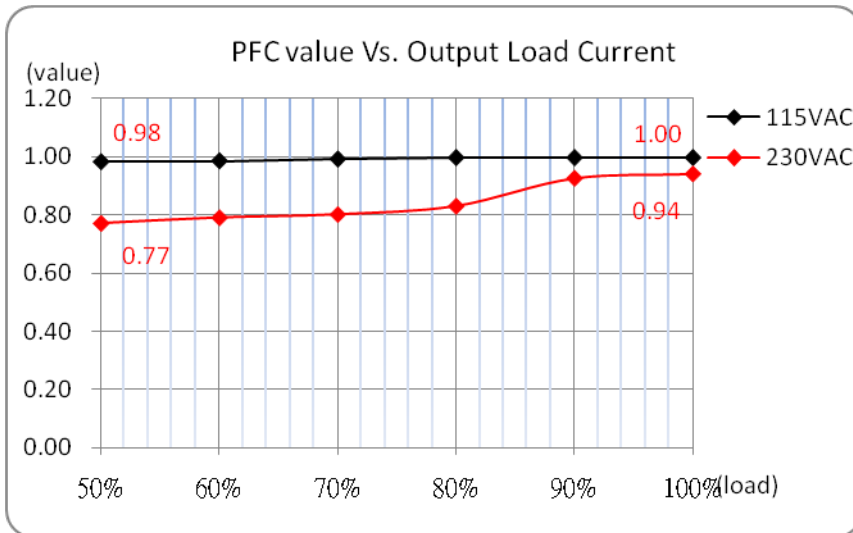


**PFC Value vs. Output Load Current (constant current mode)
(continued)**

AMEOR30-24140AZ

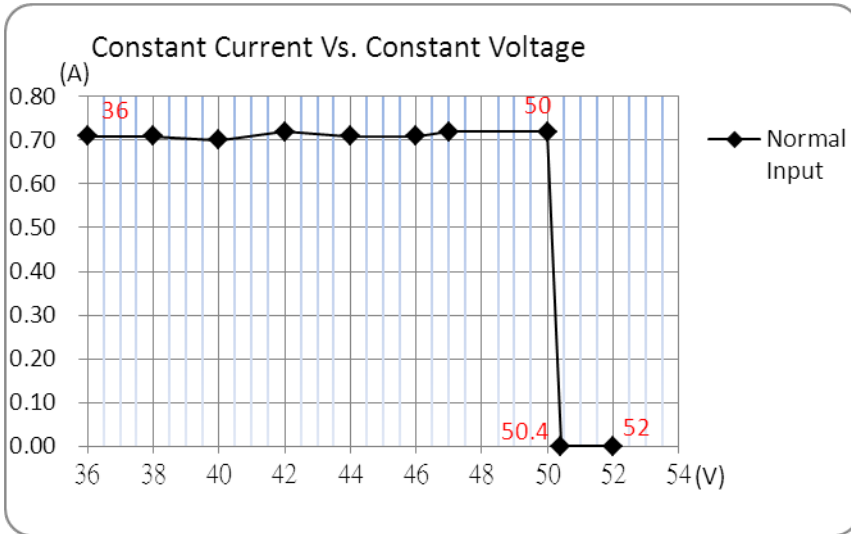


AMEOR30-12250AZ

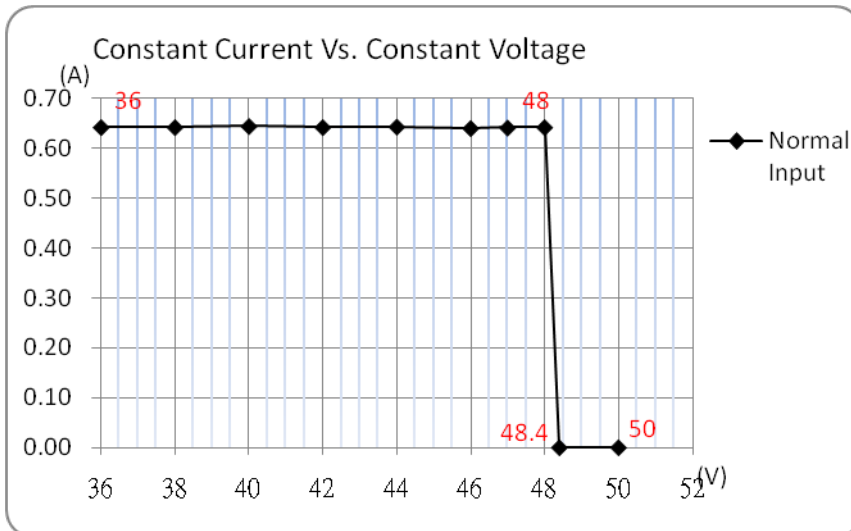


Constant Current vs. Constant Voltage Mode

AMEOR30-5070AZ

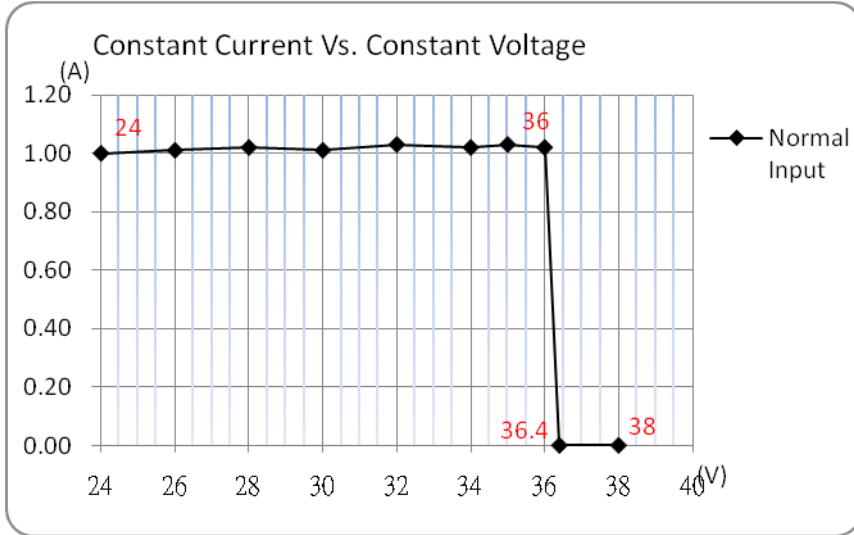


AMEOR30-4864AZ

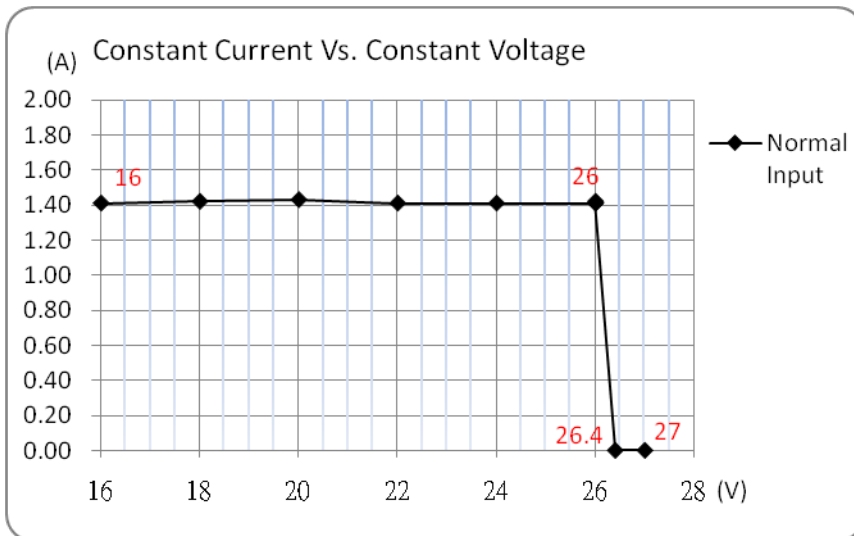


Constant Current vs. Constant Voltage Mode (continued)

AMEOR30-36100AZ

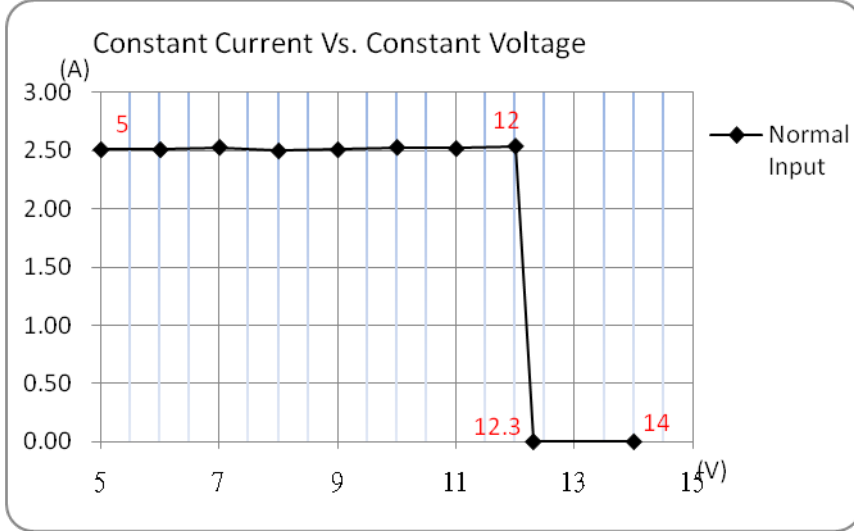


AMEOR30-24140AZ



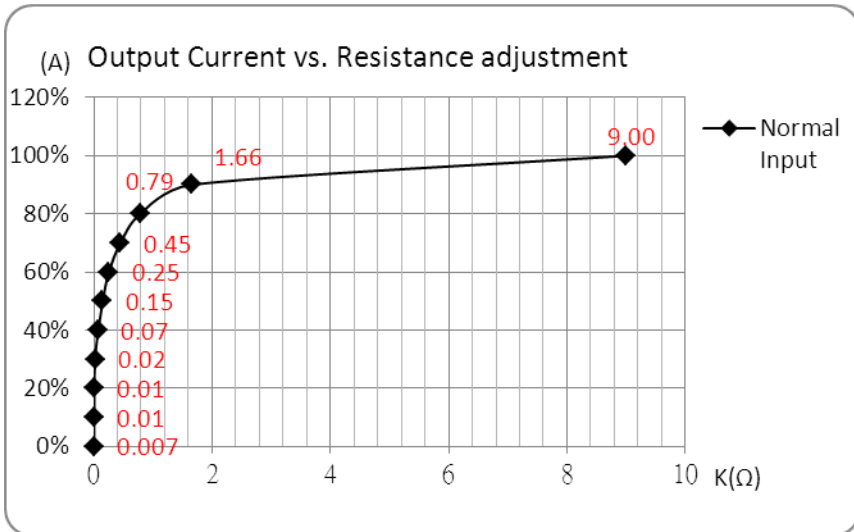
Constant Current vs. Constant Voltage Mode (continued)

AMEOR30-12250AZ



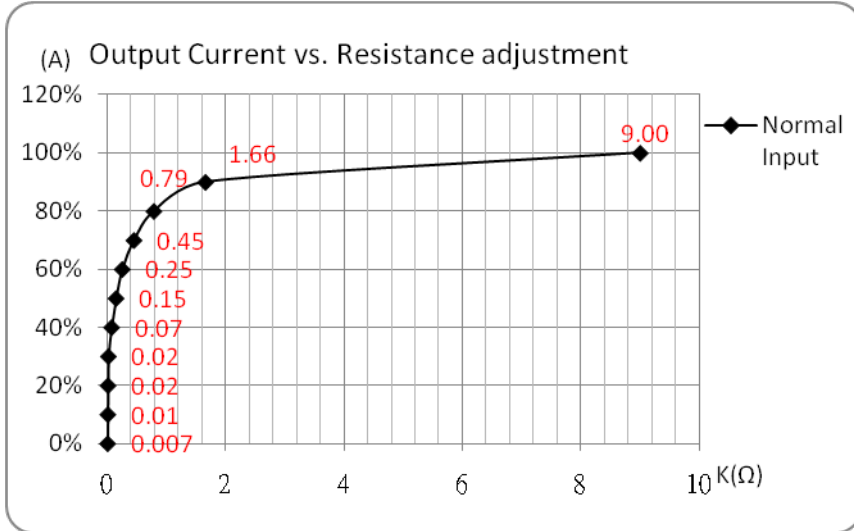
Dimming Control (Output Current vs. Radj)

AMEOR30-5070AZ

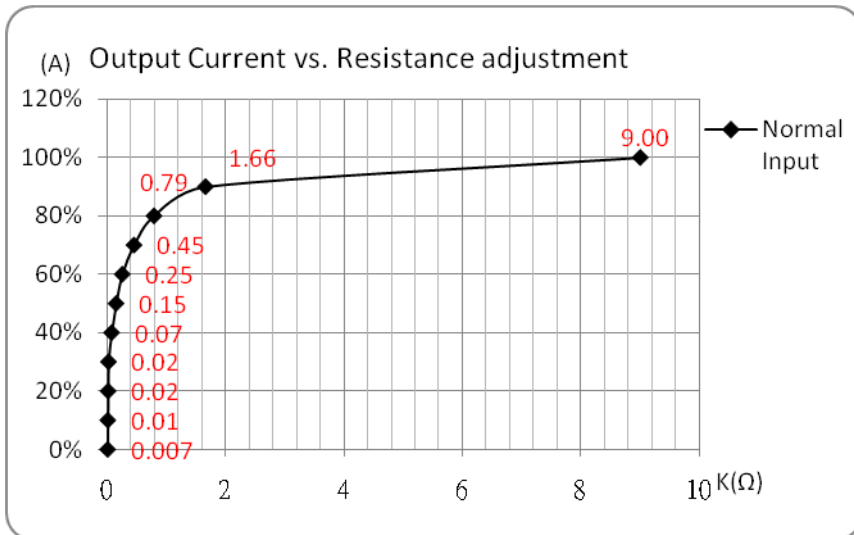


**Dimming Control (Output Current vs. Radj)
(continued)**

AMEOR30-4864AZ

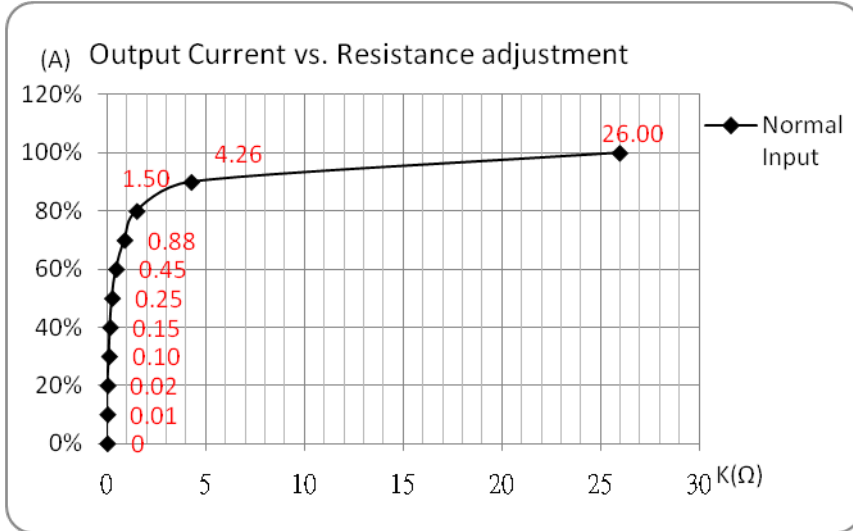


AMEOR30-36100AZ

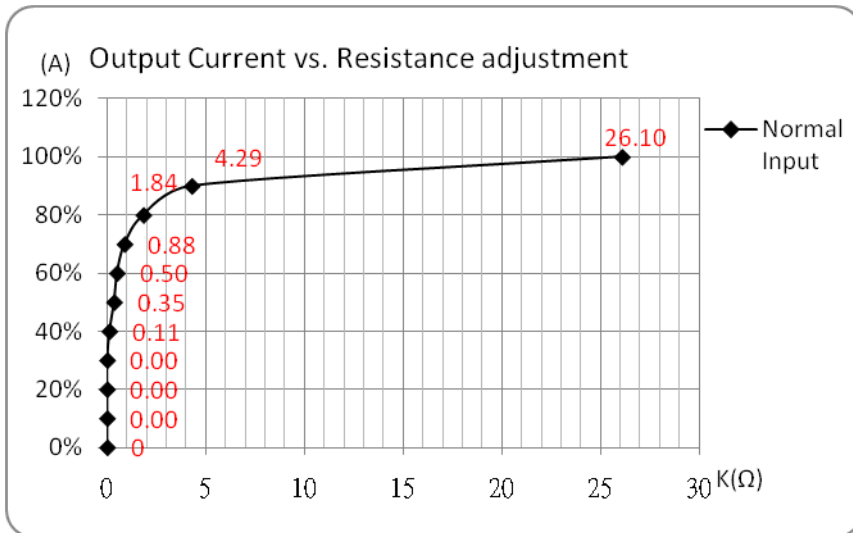


**Dimming Control (Output Current vs. Radj)
(continued)**

AMEOR30-24140AZ



AMEOR30-12250AZ



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