



FEATURES:

- Constant Current LED Driver
- Low Output Current Ripple
- 3 in 1 Dimming (0-10V/PWM/Resistor)
- Short Circuit, Open Circuit, Over Temperature Protection
- No Flicker, IP62
- Low THD
- Active Power Factor Correction
- 5 Year Warranty



Models
Single output

Model	Max Output Power (W)	Output Voltage Range (V)	Output Current (mA)	Input Voltage (VAC/Hz)	Efficiency (%)
AMEPR30NC-4250Z	21.0	24-42	500	90-305/47-63	79
AMEPR30NC-4260Z	25.2	24-42	600	90-305/47-63	80
AMEPR30NC-4270Z	29.4	24-42	700	90-305/47-63	81

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
Input Current	90 VAC, full load		0.43	Arms
Inrush current <2ms	115 VAC, cold start		50	A
	305 VAC, cold start		60	
Leakage current			0.75	mA
Input dissipation	No Load, 115Vac		1.9	W
	Output Short, 230Vac		3.0	W
Power Factor	115 VAC, full load		0.98	
	277 VAC, full load		0.72	
Input Fuse			250V/2A	
Start-up Time	115 VAC, full load		1.5	Sec.
	277 VAC, full load		1.0	Sec.

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Current accuracy		±5		%
Line regulation	LL to HL	±1		%
Load regulation	Full Output Voltage Range	±1		%
Ripple & Noise		210	420	mV p-p
Output Current Ripple	Full load		35	mA
Current Overshoot	LL to HL, full load at cold start		10	% of lout
Hold-up time		>1		ms
Minimum Load Voltage	See Models Table Above			
Dimming Output Current	DIM+ to DIM- short	10	30	mA
Dimming Voltage	0-10V dimming		12	V
Dimming PWM Freq.	PWM dimming		3	kHz
Recommended Dimming Resistor	Variable Resistor dimming		36	kOhm

Isolation Specifications

Parameters	Conditions	Typical	Rated	Units
Isolation Voltage	I/P – O/P		3750	VAC
	I/P – FG		2000	VAC
	O/P – FG		500	VAC
Isolation Resistance	I/P – O/P, 500Vdc	>100MΩ		VAC
Isolation Capacitance		150		pF

General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency			138	KHz
Over current protection	Refer to Constant Current vs. Constant Voltage Mode curve			
Over voltage protection	Refer to Constant Current vs. Constant Voltage Mode curve			
Short circuit protection	Continuous, Hiccup Mode, Auto recovery			
Open circuit protection	Continuous Clamping, Constant Output Voltage			
Over Temperature Protection	Threshold – Shutdown Output	+103		°C
	Hysteresis – Auto Recovery	+85		°C
Operating temperature	Without derating	-30 to +50		°C
Maximum case temperature		-30 to +80		°C
Storage temperature		-40 to +85		°C
Temperature coefficient			0.05	% / °C
Cooling	Free Air Convection			
Humidity			90	% RH
Case material	Plastic			
Weight		180		g
Dimensions (L X W+ X H)		6.61 X 1.85 X 0.98 inches	168.0 X 47.0 X 25.0 mm	
MTBF		450,000 hrs (MIL-HDBK-217F at +25°C)		

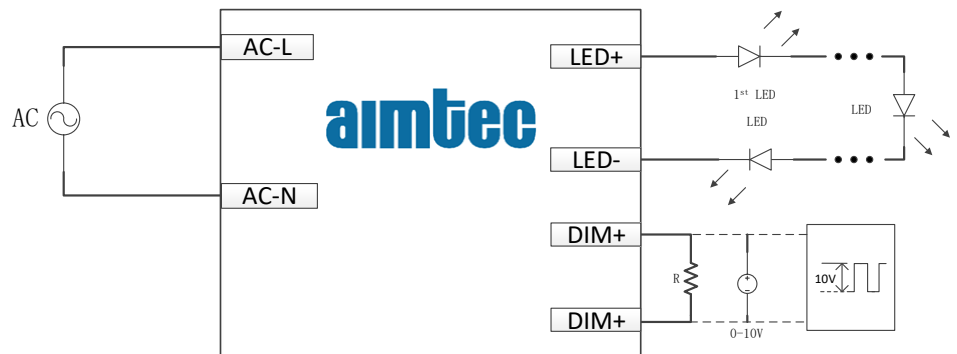
Safety Specifications

Parameters		
Standards	Electromagnetic Interference	EN55015 / FCC Part 15, Class B
	Harmonic Current Emissions	EN61000-3-2, Class B
	Voltage fluctuations and flicker	EN61000-3-3
	Electrostatic Discharge Immunity	EN61000-4-2, 8kV Air, 4kV Contact, Level 3, Criteria A
	RF, Electromagnetic Field Immunity	EN61000-4-3, Test-RS Level 3, Criteria A
	Electrical Fast Transient / Burst Immunity	EN61000-4-4, Burst EFT Level 3, Criteria A
	Surge Immunity	EN61000-4-5, Line to Neutral 2kV, Line/Neutral to PE 4kV
	RF, Conducted Disturbance Immunity	EN61000-4-6. Test-CS Level 3, Criteria A
	Power frequency Magnetic Field Immunity	EN61000-4-8, Test 3A/m, Criteria A
	Voltage dips, Short Interruptions Immunity	EN61000-4-11, Criteria B
	Electromagnetic Immunity Requirements Applies to Lighting Equipment	EN61547

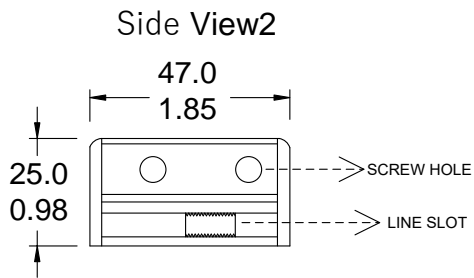
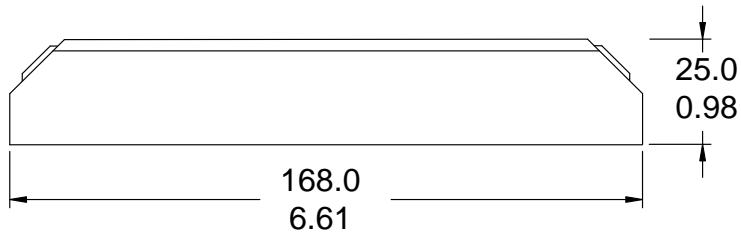
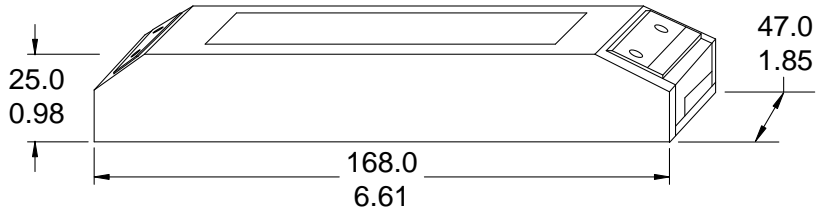
Wire connection:

Recommended Wire gauge	Connection
20-24	AC L
20-24	AC N
14-26	LED+
14-26	LED-
14-26	DIM+
14-26	DIM-

Block diagram

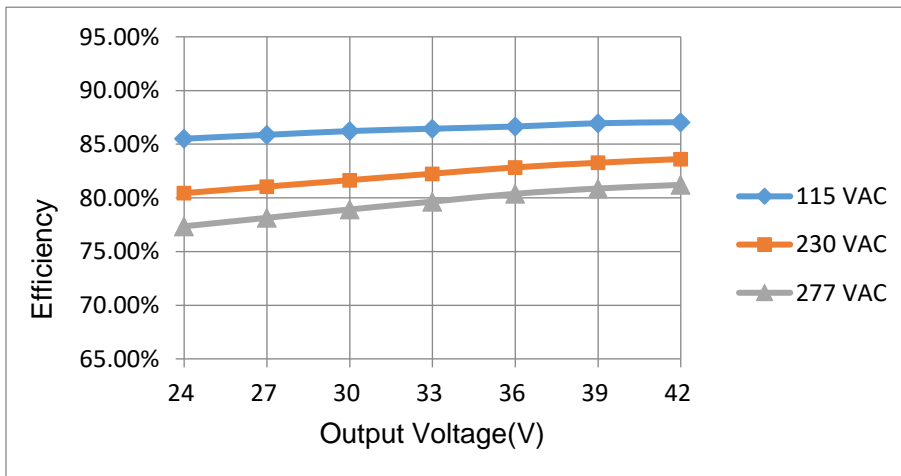


Dimensions

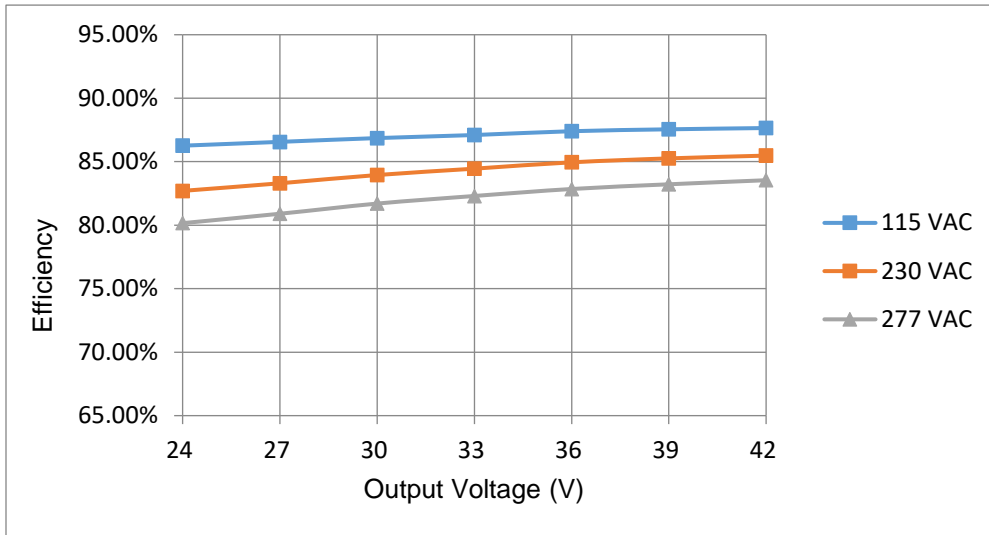


Efficiency vs. Input Voltage & Output Voltage (Constant current load)

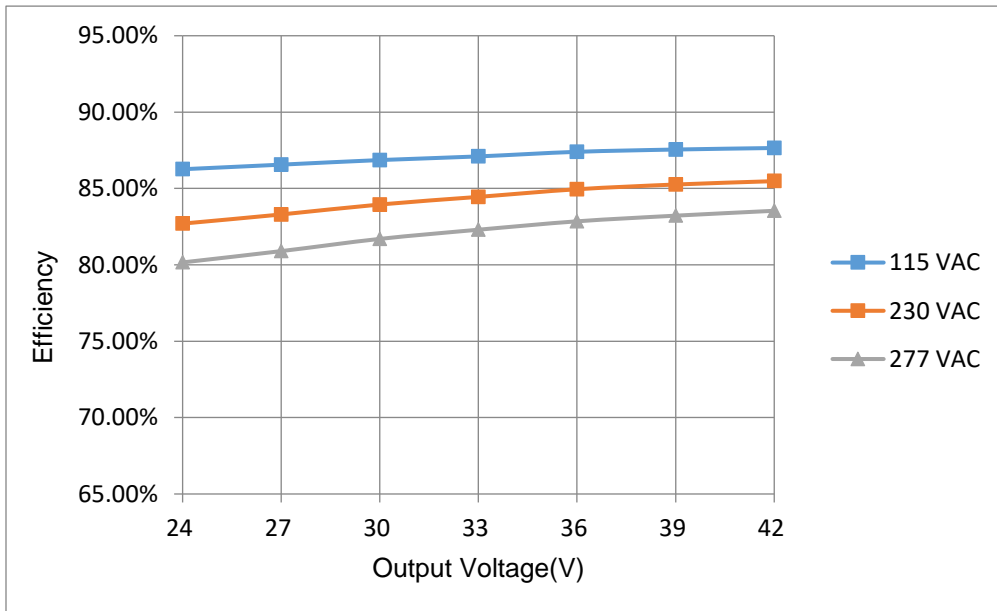
AMEPR30NC-4250Z



AMEPR30NC-4260Z

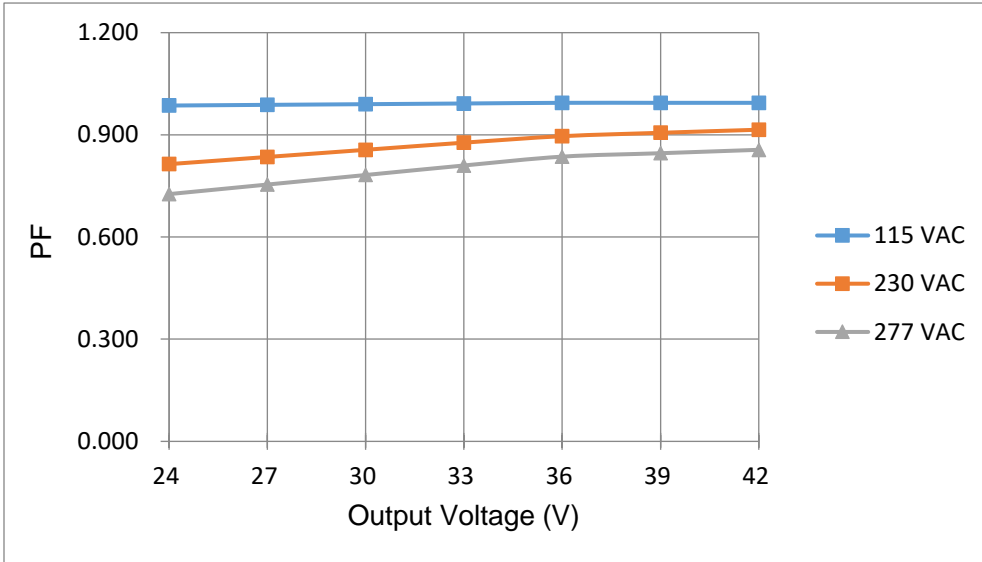


AMEPR30NC-4270Z

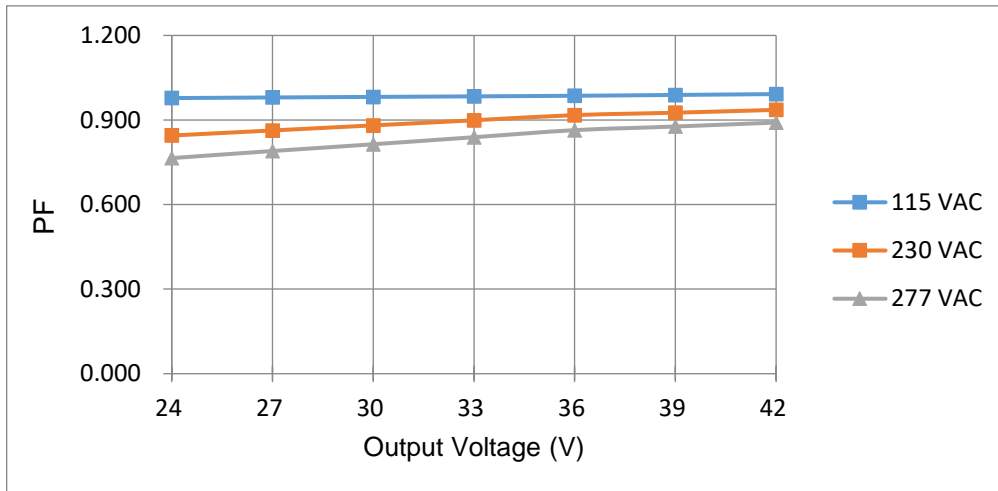


PFC Value vs. Output Load Voltage (constant current mode)

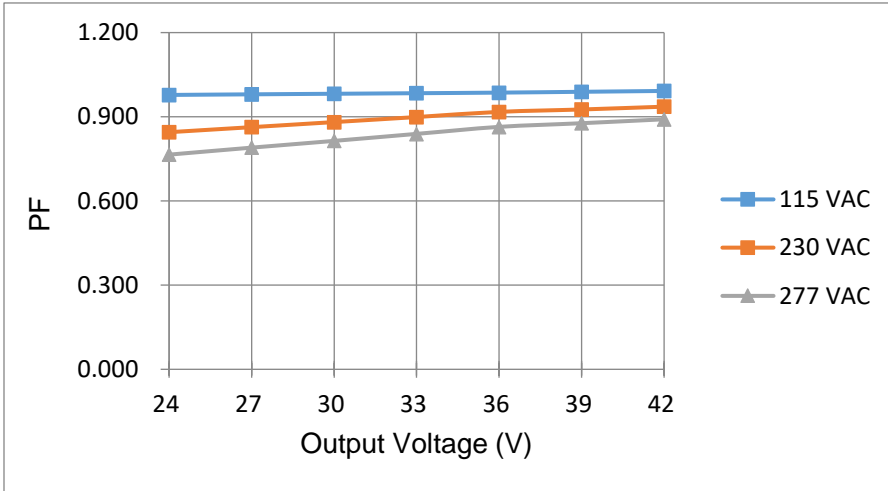
AMEPR30NC-4250Z



AMEPR30NC-4260Z

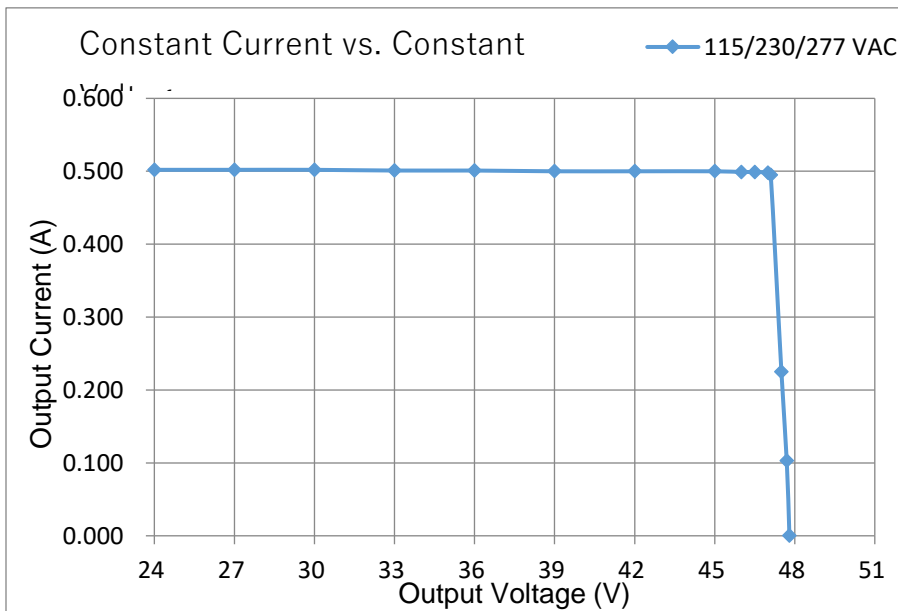


AMEPR30NC-4270Z

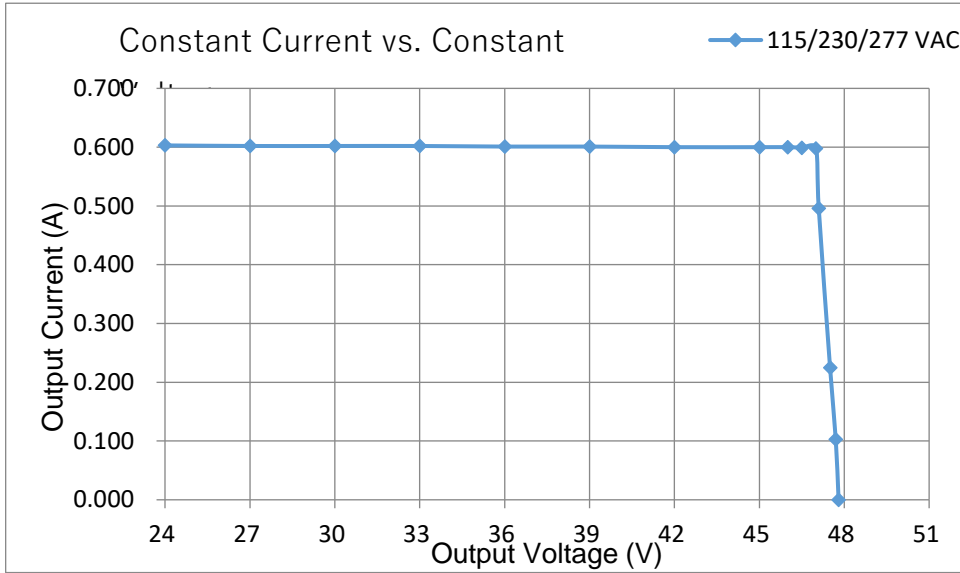


Constant Current vs. Constant Voltage Mode

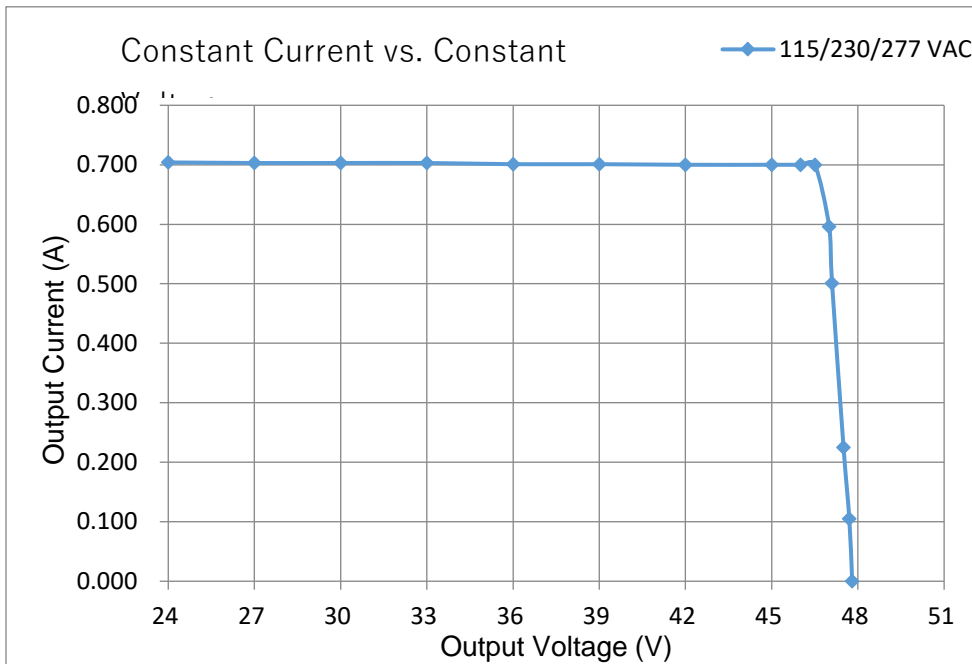
AMEPR30NC-4250Z



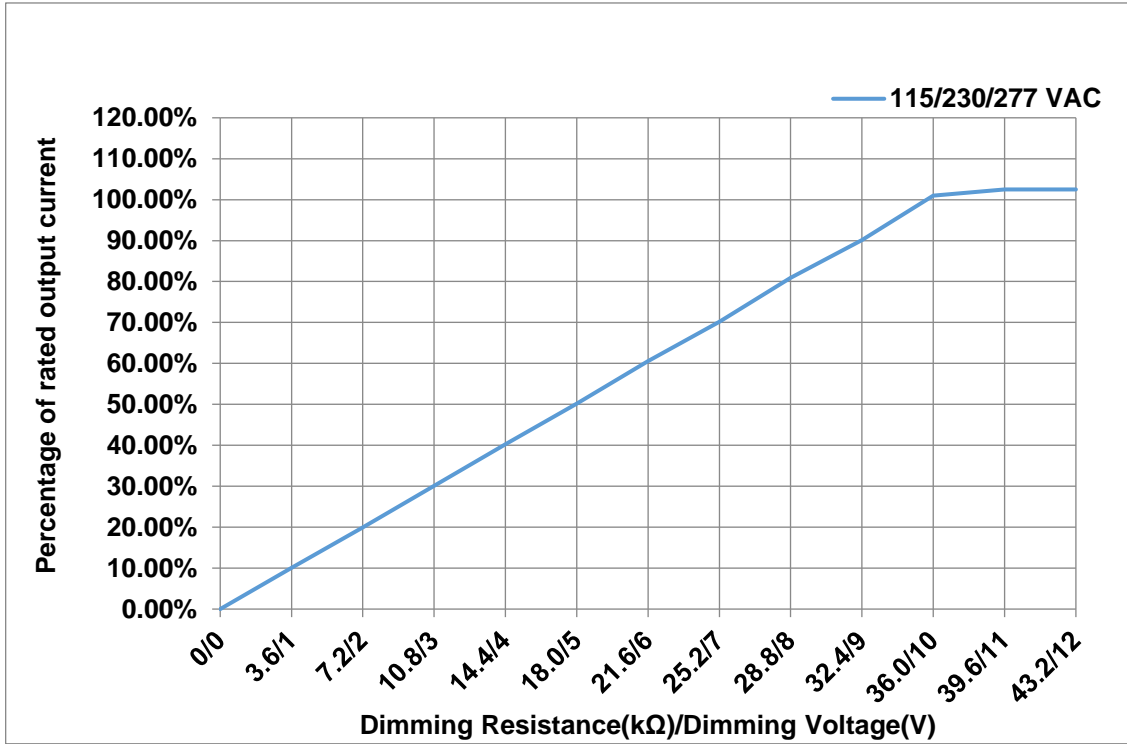
AMEPR30NC-4260Z



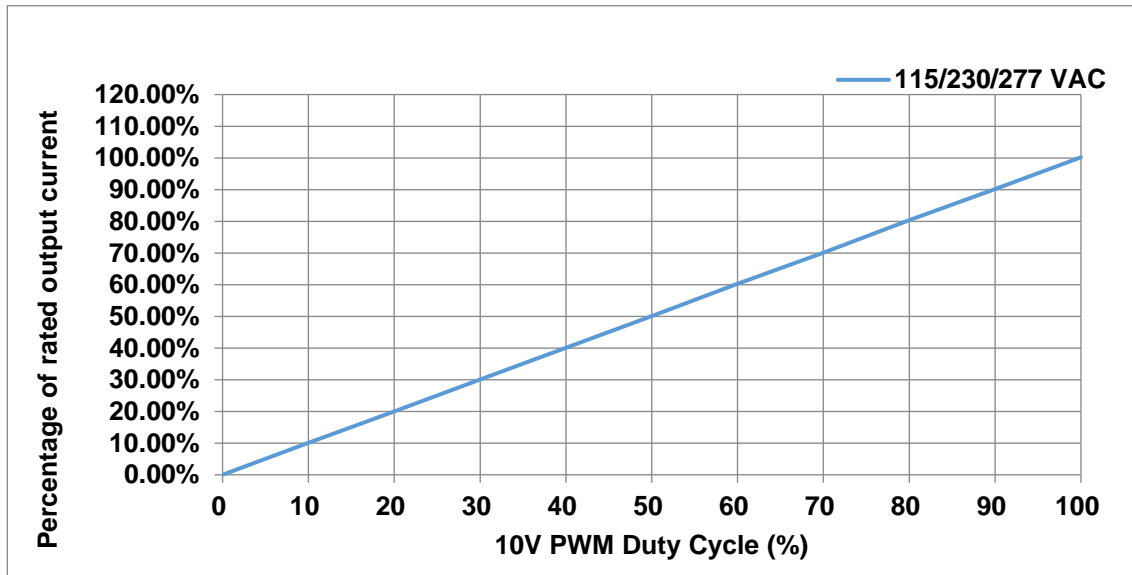
AMEPR30NC-4270Z



Dimming Resistor/Dimming Voltage vs. Percentage of Output Current



10V PWM duty cycle vs Percentage of Output Current



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.