

FEATURES:



- Accurate Constant Current Output $\pm 3\%$
- High Efficiency: Up to 91%
- Active Power Factor Correction
- UVLO, Short Circuit, Open Circuit
- Adjustable output current: 50-100%
- IP65/IP67 design for indoor/outdoor
- Over Temperature Protection
- Dimmable output current: 10-100%
- Over Voltage Protection
- 5 Year Warranty



Models
Single output

Model	Max Output Power (W)	Input Voltage (VAC/Hz)	Output Voltage Range (V)	Output Current (A)	Efficiency (%)
AMER90C-70120Z-PD	84.0	90-305/47-63	35-70	1.2	90.5
AMER90C-70120Z-P	84.0	90-305/47-63	35-70	1.2	90
AMER90C-70120Z	84.0	90-305/47-63	35-70	1.2	91

Model Nomenclature functional differences:

With Suffix "-PD"	With manually adjustable 50-100% & fully dimmable 10-100% (0-10V/10PWM/Resistive) output current
With Suffix "-P"	Only with manually adjustable output current: 50-100%
Without Suffix	Only with fully dimmable 10-100% (0-10V/10PWM/Resistive) output current

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		2.5	Arms
Inrush current <2ms	115 VAC, cold start		40	A
	305 VAC, cold start		75	
Leakage current			0.75	mA
Input dissipation	No Load		3.0	W
	Output Short		10.0	W
Power Factor	115 VAC, full load		0.98	
	277 VAC, full load		0.92	
Input Fuse	3.15A/300V			
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		± 3		%
Line regulation	LL to HL	± 1		%
Load regulation	Full Output Voltage Range	± 1		%
Ripple & Noise			4.5	V p-p
Output Current Ripple	Full load		800	mA p-p
Current Overshoot	LL to HL, full load at cold start, % of rated output current		10	%
Hold-up time (min.)			0.5	ms
Minimum Load Voltage	See Models Table Above			

Isolation Specifications

Parameters	Conditions	Typical	Rated	Units
I/O 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			3800	pF

General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency			130	KHz
Over voltage protection		75		V
Short circuit protection	Continuous, Hiccup mode, auto recovery			
Open circuit protection	Continuous			
Over Temperature Protection	Threshold – Shutdown Output	+106		°C
	Hysteresis – Auto Recovery	+90		°C
Operating temperature	With Derating over 60°C	-40 to +70		°C
Maximum case temperature		90		°C
Warranty case temperature		-40 to 75		°C
Storage temperature		-40 to +85		°C
Temperature coefficient			0.03	% / °C
Cooling	Free Air Convection			
Humidity			95	% RH
Case material	Metal (Aluminum)			
Potting material	polysiloxane			
IP Rating	IP67			
Weight		850		g
Dimensions (L X W+ X H)		6.93 x 2.70 x 1.65 inches	176.0 x 68.7 x 42.0 mm	
MTBF		>400,000 hrs (MIL-HDBK-217F at +25°C)		

Safety Specifications

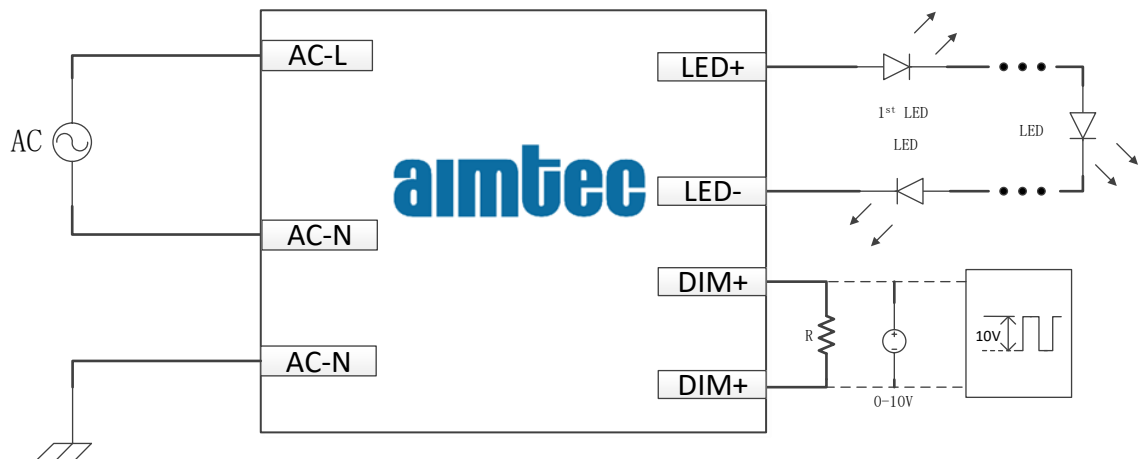
Parameters		
Standards	Electromagnetic Interference	EN55015 / FCC Part 15, Class B
	Harmonic Current Emissions	EN61000-3-2, Class B
	Voltage fluctuations and flicker	EN61000-3-3
	Electrostatic Discharge Immunity	EN61000-4-2, 8kV Air, 4kV Contact, Level 3, Criteria A
	RF, Electromagnetic Field Immunity	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 4kV, Line/Neutral to FG 6kV
	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

Pin Definition

Wire	Pin
Blue	AC-N
Brown	AC-L
Yellow/Green	FG
Red LED+	+V Output
Black LED-	-V Output
Red	DIM+
Black	DIM-

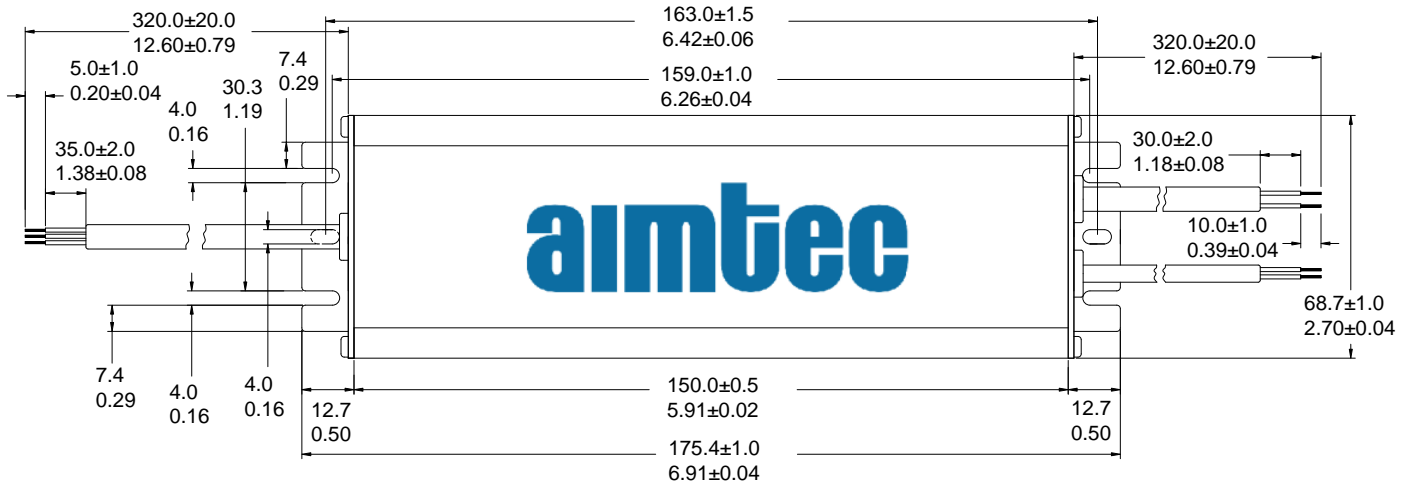
Input wire gauge #18
Output wire gauge #14

Block diagram

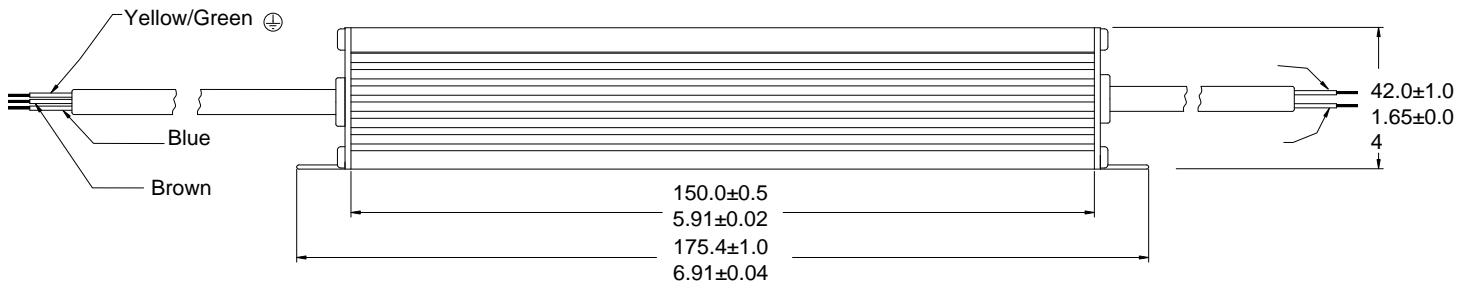


Dimensions

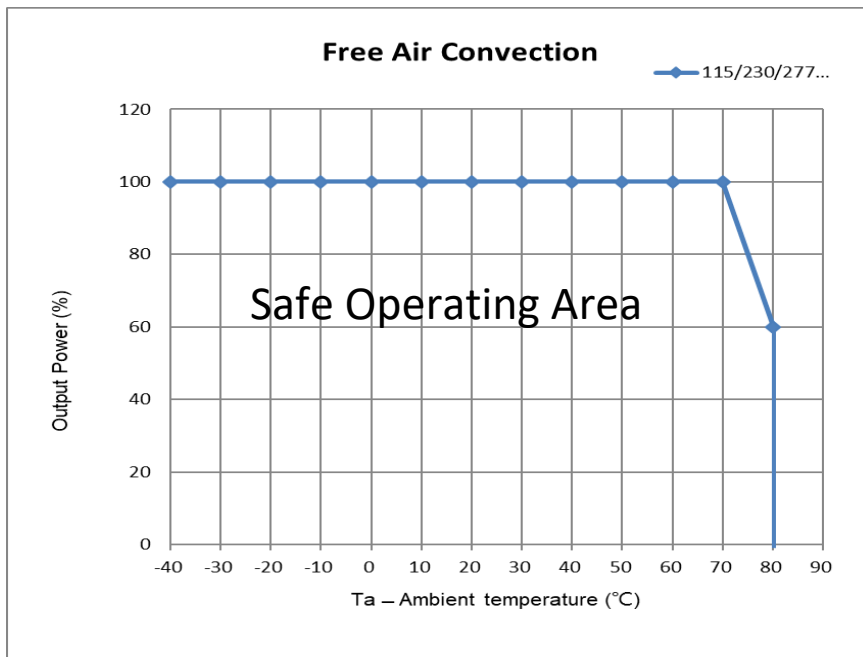
Top View



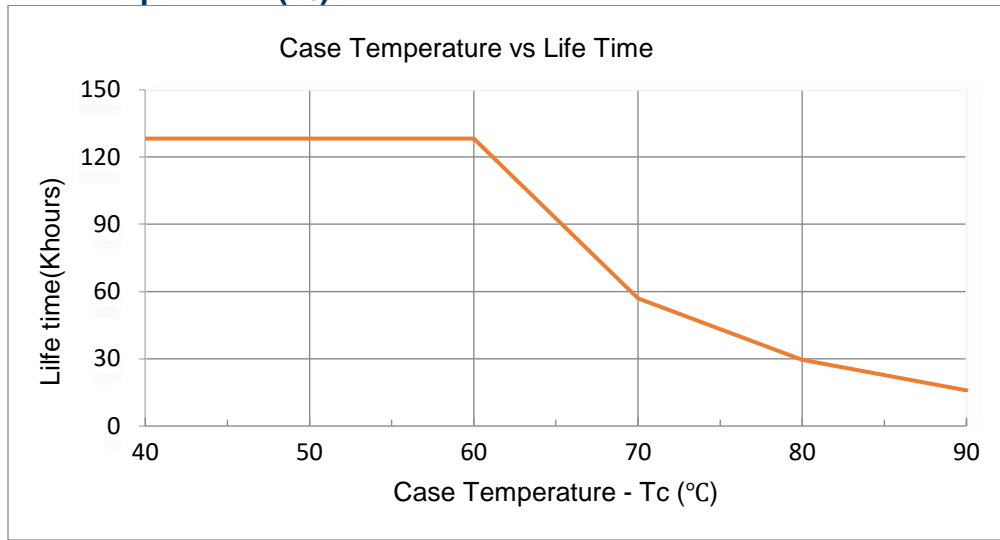
Side View



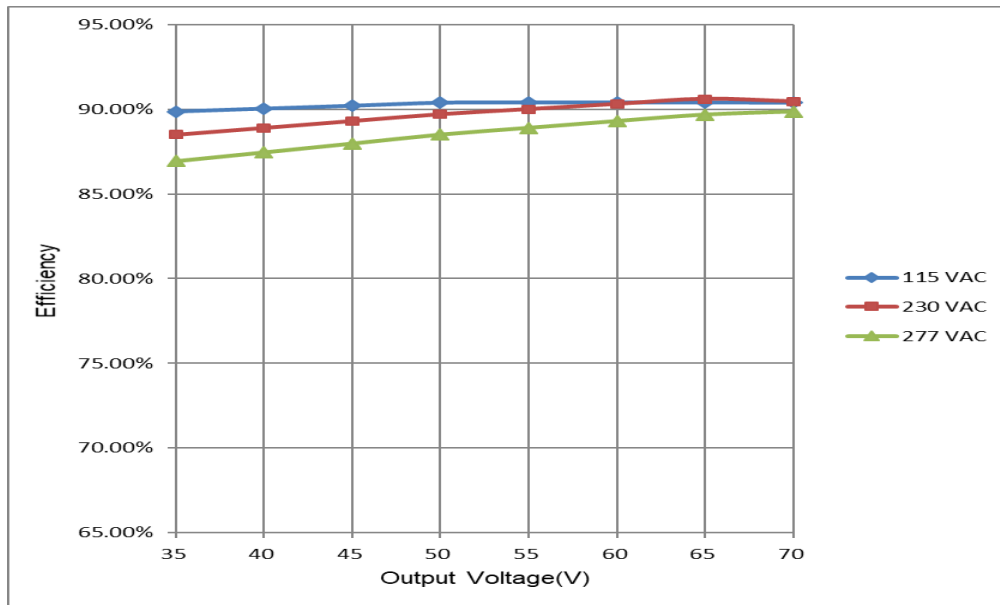
Derating Graph



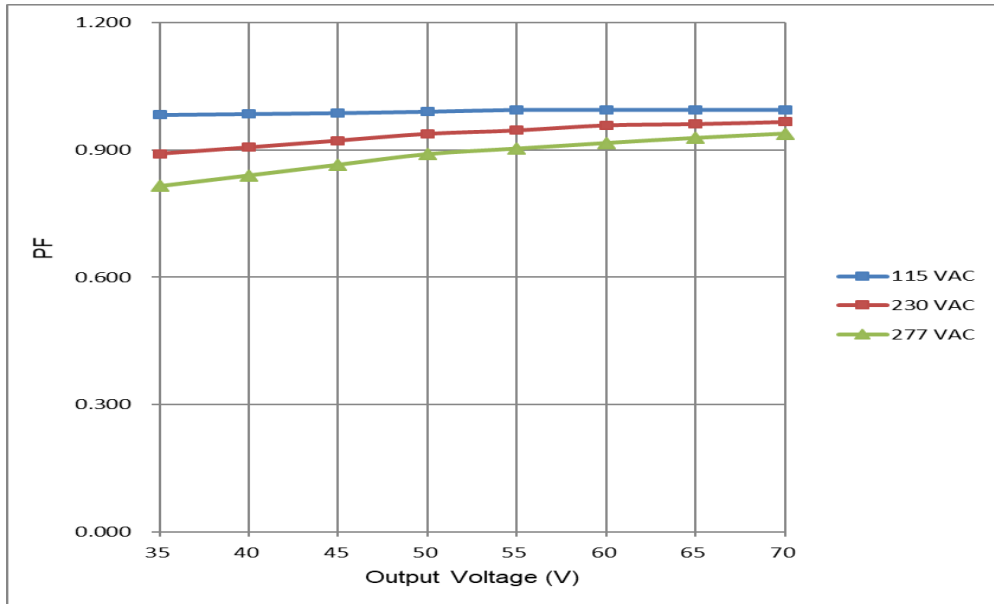
Life Timer vs. Case Temperature (T_c)



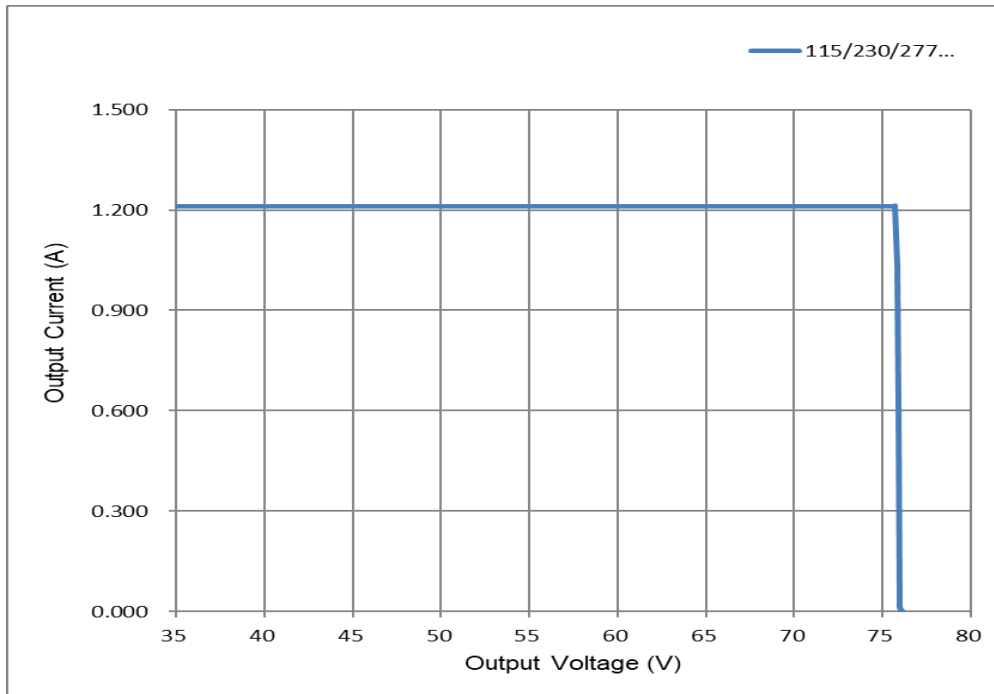
Efficiency Vs. Input Voltage & Output Voltage (Constant current mode)



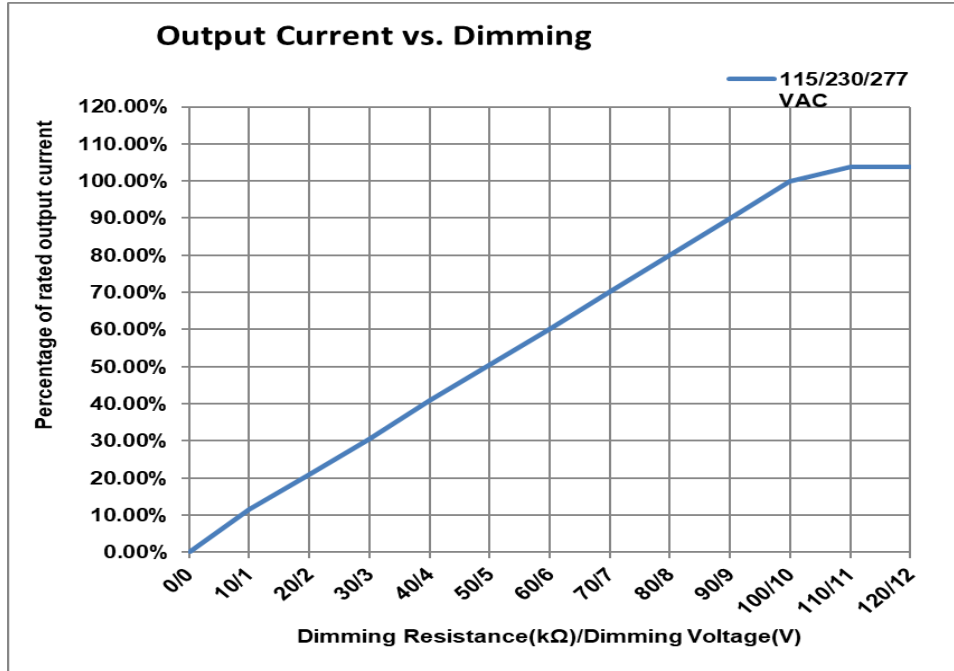
PF vs. Input Voltage & Output Voltage (constant current mode)



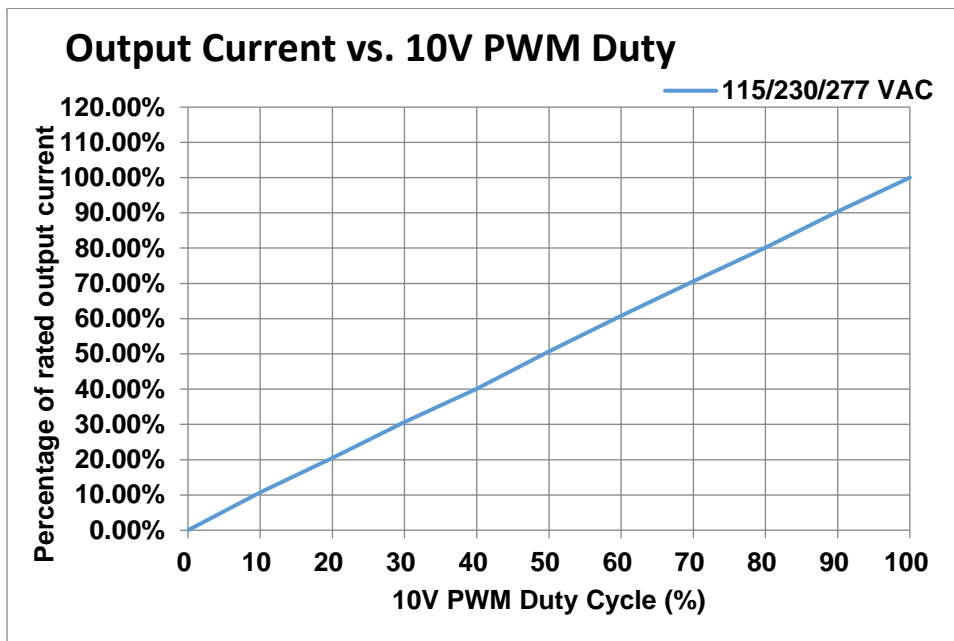
Output Current vs. Output Voltage



Output Current vs. Resistive / 0-10V Dimming



Output Current vs. 10V PWM Dimming



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 than the ones listed in this datasheet. 7. Warranty is in accordance with Aimtec's standard Terms of Sale available at www.aimtec.com.