



FEATURES:

- AC-DC Constant Current LED Driver
- Input Range 90-264VAC/47-440Hz
- Active PFC with TRIAC Dimmable⁽²⁾
- Operating Temperature -20 to 80°C
- Total Harmonic Distortion < 20%
- IP67 Case
- High Efficiency up to 83%
- SCP, Over Load Protection
- Leading or Trailing Edge Triac

Models Single Output



Model	Max Output Power (W) ^①	Output Voltage Range (V)	No Load Output Voltage (V max.)	Output Current (A)	Input Voltage (VAC/Hz)	Efficiency (%)	
						115 VAC	230 VAC
AMEPR25D-24100AZ	24	9-24	35	1	90-264/ 47-440	80	83

Exceeding the maximum output power will permanently damage the converter.

Input Specifications

Parameters	Conditions	Typical	Maximum	Units
Current (full load)	115VAC		260	mA
	230VAC		150	mA
Inrush current <2ms (cold start)	115VAC		8	A
	230VAC		13	A
Leakage current			0.25	mA
Power factor	115VAC		0.9	
	230VAC		0.9	
External fuse	Recommended slow blow type	1		A
Start-up time		100		ms

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Current accuracy		±15		%
Line regulation	(LL-HL)	±20		%
Load regulation	0-100% load	±15		%
Ripple & Noise *		2		V p-p
Hold-up time		16		ms
Maximum Capacitive load			47	µF

* Ripple and Noise are measured at 20MHz bandwidth by using a 0.1µF (M/C) or (C/C) and 47µF (E/C) parallel capacitor.

Isolation Specifications

Parameters	Conditions	Typical	Maximum	Units
Tested I/O voltage	60sec/10mA		3000	VAC
Isolation resistance		>1000		MΩ

General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency		60		KHz
Over load protection		≥ 110		%
Over voltage protection		≥ 110		%
Short circuit protection		Auto recovery		
Operating temperature	With derating over 55 °C	Refer to model application		°C
Storage temperature		-40 to +95		°C
Maximum case temperature			100	°C
Temperature coefficient		±0.02		% / °C

General Specifications (continued)

Parameters	Conditions	Typical	Maximum	Units
Cooling		Free air convection		
Humidity	Non condensing	20~95		% RH
Case material		Plastic		
Wires		UL1015 Input 18AWG*10CM/ Output 20 AWG * 10CM		
Weight		150		g
Dimensions (L X W X H)		133 x 33 x 30mm (5.24 x 1.30 x 1.18inches)		
MTBF		>400,000 hrs (MIL-HDBK-217F at t=+25°C)		

Environment Approval

Test	Parameters	Conditions
Shock	Wave form	Half sine wave
	Acceleration amplitude	5gn
	Bump duration	30ms
	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	1mm
	Acceleration	3g, 3 loops 30min one cycle, 3h total, every axis tested
	Converter operation	Before and after test, body mounted (on chassis)

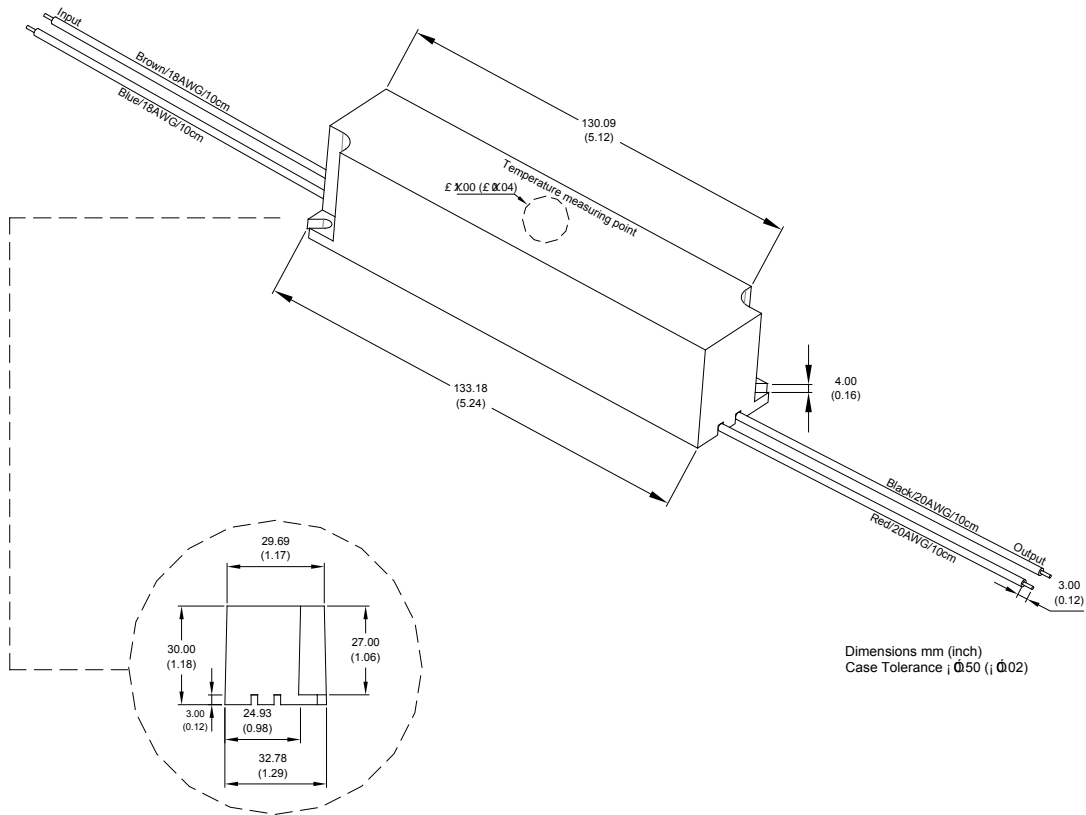
Safety Specifications

Parameters		
Standards	EN61347-1, EN61347-2-13, IEC62384, EN55015, EN55024	
	Radiated and Conducted Emission	FCC Part 15 Subpart B, Class B, ANSI C63.4 :2003
	EMI - Conducted and radiated emission	EN55022
	Harmonic Current Emissions	IEC/EN 61000-3-2, (EN60555-2)
	Voltage Fluctuations and Flicker	IEC/EN 61000-3-3, (EN60555-3)
	Electrostatic Discharge Immunity	IEC 61000-4-2 Level 3
	RF, Electromagnetic Field Immunity	IEC 61000-4-3 Level 2
	Electrical Fast Transient/Burst Immunity	IEC 61000-4-4 Level 2
	Surge Immunity	IEC 61000-4-5 Level 2
	RF, Conducted Disturbance Immunity	IEC 61000-4-6 Level 2
	Power Frequency Magnetic Field Immunity	IEC 61000-4-8 Level 2
	Voltage Dips, Short Interruptions Immunity	IEC 61000-4-11

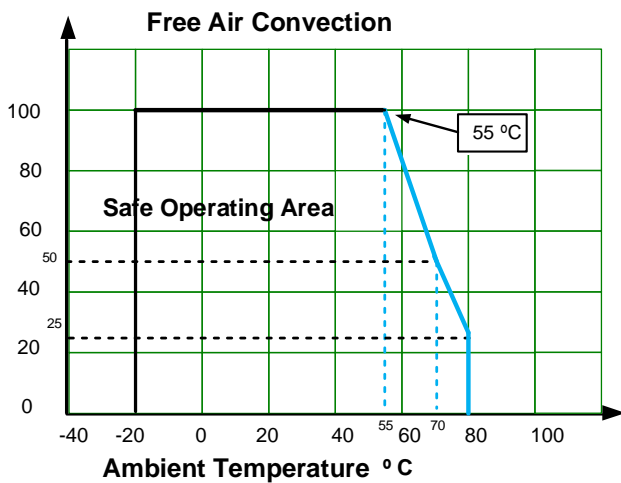
Wire Specifications

Wire	Parameters	Color
Input	ACN	Blue
	ACL	Brown
Output	+V Output	Red
	-V Output	Black

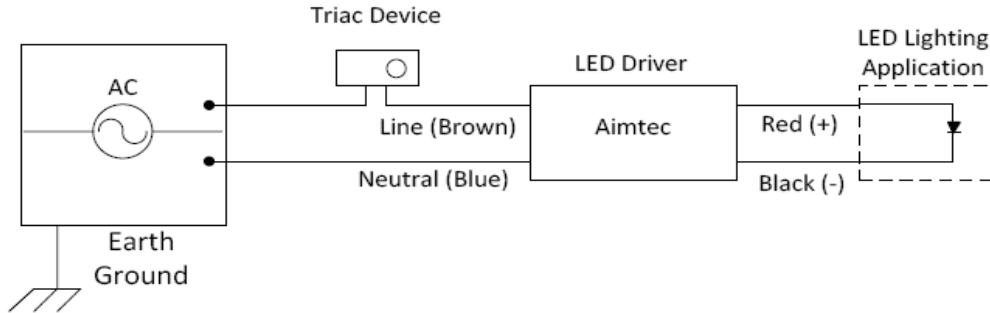
Dimensions



Derating



Triac Dimming Feature



Triac Dimming Notes:

A- The triac device can be installed on either Line or Neutral
B- Aimtec LED drivers have been designed to function with a wide range of available Triac devices, however the following list of Triac devices have been tested and are recommended by Aimtec.

- 1) Company: LUTRON
Series: SKYLARK
Model: SF-10P-WH (input voltage: 120Vac)
Model: SF-12P-277-WH (input voltage: 277Vac)
- 2) Company LUTRON
Series: DIVA
Model: DVF-103P-WH (input voltage: 120Vac)
Model: DVF-103P-277-WH (input voltage: 277Vac)
- 3) Company BERKER
Model: 2867 10 (input voltage: 230Vac)

If the power voltage range is 90~135Vac, triac suggested use model SF-10P-WH or DVF-103P-WH.

If the power voltage range is 180~260Vac, triac suggested use model SF-12P-277-WH or DVF-103P-277-WH.

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. 5. 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. 6. The Dimming performance is based on typical value of input.