



## FEATURES:

- Step Down DC/DC LED driver
- Constant current output
- Ultra Wide (7:1) input voltage range
- High efficiency up to 97%
- Operating Temperature range -40°C to +85°C
- Open and Short LED Protection
- PWM / Digital Voltage dimming
- Output power up to 56 Watts



## Models Single output

Model	Input Voltage (V)	Output Voltage (V)	Maximum Rated Current (mA)	Max Capacitive Load (uF)	Efficiency (%)	Ripple & Noise (mV p-p)
AMLD-6030-RZ	9-60	2-56	300	2.2	97	250
AMLD-6035-RZ	9-60	2-56	350	2.2	97	300
AMLD-6050-RZ	9-60	2-56	500	2.2	97	350
AMLD-6060-RZ	9-60	2-56	600	2.2	97	400
AMLD-6070-RZ	9-60	2-56	700	2.2	97	400
AMLD-60100-RZ	9-60	2-56	1000	2.2	97	450

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	Nominal	Typical	Maximum	Units
Voltage range	48	9-60		VDC
Filter	Capacitor			
Absolute Maximum Rating			65	VDC
Peak Input Voltage time			500	ms
DC/DC ON (Leave open if not used)	ON –Open or 2.5V< Vadj <5V			
DC/DC OFF (or short pins 2,3,4)	OFF(shutdown) – Vadj <0.8			
Maximum Remote pin drive current	Vadj = 0 - 5V		<1	mA
Quiescent Current in Shutdown mode	Vin = 60V		3	mA
On/Off Control (Digital Control)	Max PWM Frequency 1KHz			
Output current adjustment	1 to 100			%

## Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Current accuracy		±5		%
Output Voltage range	V input = 60V	2-56		VDC
Output current	Vin – Vout > 4V			
Short Circuit protection	Regulated at the rated current for each model			
Temperature coefficient		±0.03		%/°C

## General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency	100% load	40-1000		KHz
Operating temperature	See derating chart -40 to +85			°C
Storage temperature	-40 to +125			°C
Maximum case temperature			105	°C
Thermal Impedance	Free air convection	+30		°C/W
Cooling	Free air convection			
Humidity			95	% RH
Case material	Non-Conductive Black Plastic (UL94V-0 rated)			
Weight		17.7		g
Dimensions (L x W x H)	1.25 x 0.80 x 0.49 inches	31.75 x 20.32 x 12.45 mm		
MTBF	> 2 000 000hrs (MIL-HDBK-217 F at +25 °C)			
Maximum Soldering Temperature	1.5 mm from case for 10sec.		260	°C

### NOTES:

1. Reversed polarity at the input power will damage the driver. The input ground must not be connected to the negative output.
2. Maximum output open voltage is equal to input voltage.

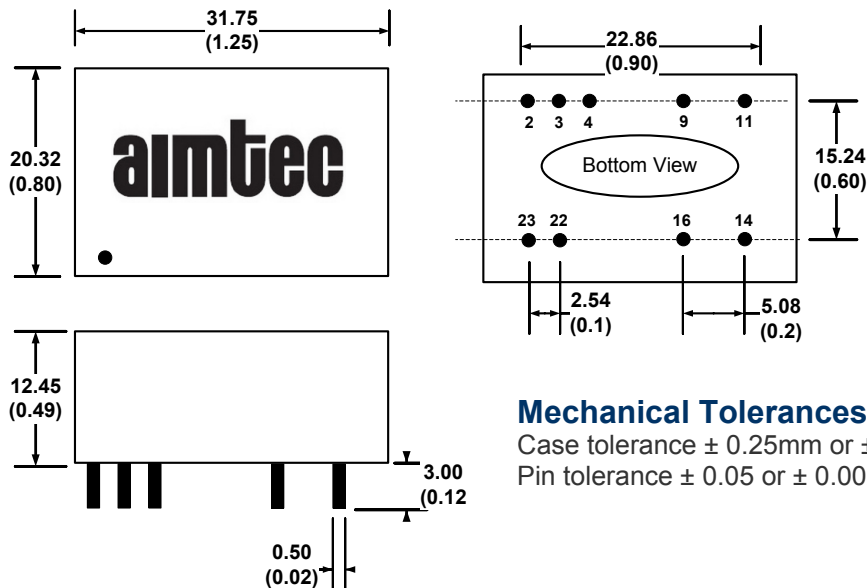
## Safety Specifications

Parameters	
Standards	CE
	EN 55015 : 2006+A1 : 2007+A2 : 2009
	EN 61547 : 2009
	(Designed to meet EN 60950-1)

## Pin Out Specifications

Pin	Single	
2	- V Input	- DC Supply
3	- V Input	- DC Supply
4	Vadj	PWM/ON/OFF or not used
9	- V Output	LED Cathode connection
11	- V Output	LED Cathode connection
14	+ V Output	LED Anode connection
16	+ V Output	LED Anode connection
22	+ V Input	+ DC Supply
23	+ V Input	+ DC Supply

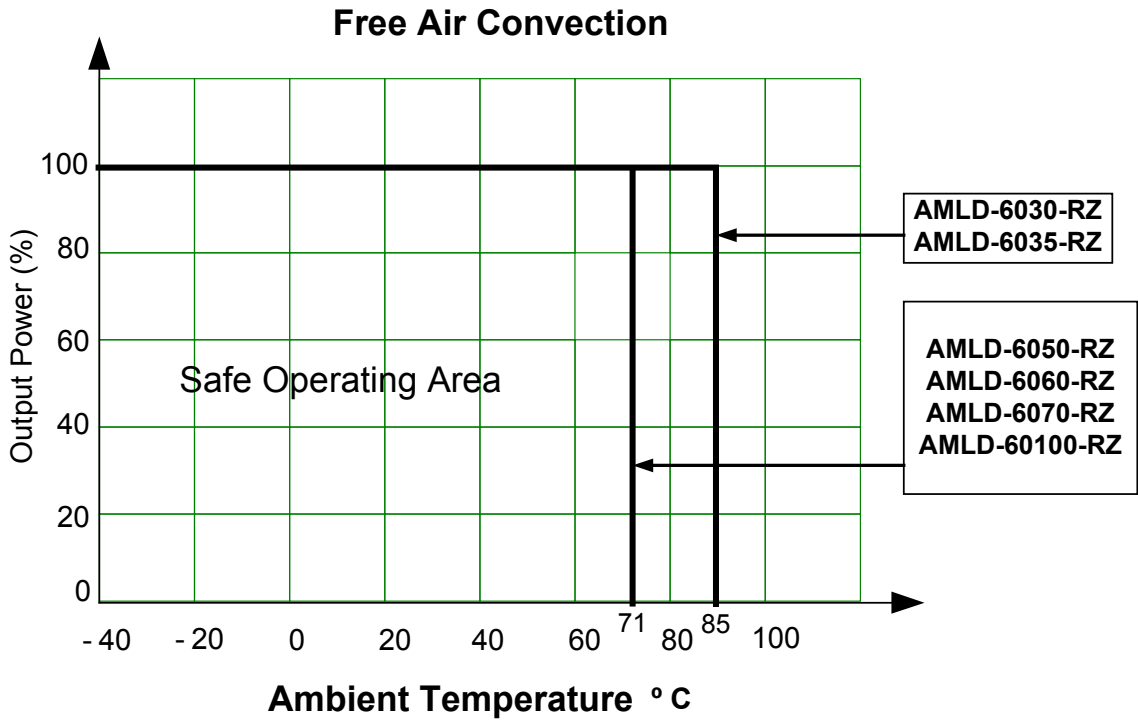
## Dimensions



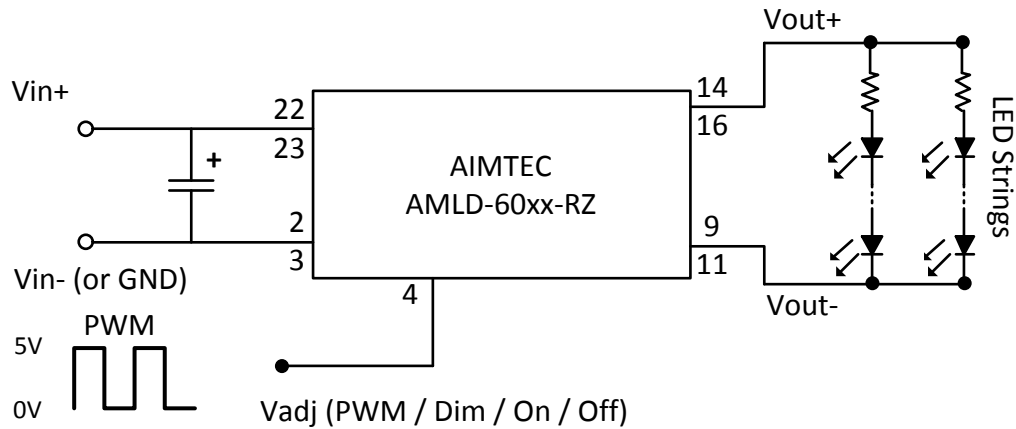
### Mechanical Tolerances

Case tolerance  $\pm 0.25\text{mm}$  or  $\pm 0.01$  inches  
Pin tolerance  $\pm 0.05$  or  $\pm 0.002$

**Derating**



**Typical Application Circuits**



**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](http://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](http://www.aimtec.com).