

DATASHEET AND OPERATING GUIDE

PWRPAK >10 A Series

Power Supplies



FEATURES & BENEFITS

- Low Profile
- High Power Density
- Short Circuit Protection
- 1% Noise and Ripple
- 100-240 VAC, 47-63 Hz Input Voltage

GENERAL DESCRIPTION:

Wavelength Electronics provides a variety of power supplies suitable for greater than 10 A operation to supply switched power for fast, reliable, off-the-shelf test and development.

These PWRPAK supplies are offered with unconnected leads to facilitate easy connection to a high current terminal block. These supplies are suitable for benchtop use or OEM design and prototyping.

USED WITH

- LD10CHA Laser Diode Driver
- MPL7500 Laser Diode Driver
- PLD5K-CH, PLD10K-CH & PLD12.5K-CH Laser Diode Drivers
- PLD6500, PLD10000 & PLD12500 Laser Diode Drivers
- MPT10000 Temperature Controller
- PTC5000 & PTC10000 Temperature Controllers
- PTC5K-CH & PTC10K-CH Temperature Controllers

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ORDERING INFORMATION

PART NO	DESCRIPTION
PWRPAK-11A-12V	12 V, 11 A Power Supply
PWRPAK-13A-5V	5 V, 13 A Power Supply

COMPATIBILITY GUIDE



TO DETERMINE IF THE PWRPAK POWER SUPPLY IS APPROPRIATE FOR YOUR APPLICATION, IT IS IMPERATIVE THAT YOU VERIFY THE UNIT WILL BE OPERATING WITHIN THE INTERNAL HEAT DISSIPATION SAFE OPERATING AREA (SOA).

Visit the Wavelength Electronics website for the most accurate, up-to-date, and easy to use SOA calculator.

The SOA calculator for Laser Diode Drivers is at this page: www.teamwavelength.com/support/design-tools/soa-ld-calculator/

The SOA calculator for Temperature Controllers: www.teamwavelength.com/support/design-tools/soa-tc-calculator/

The PWRPAK leads are not color-coded. **Figure 1** indicates correct connection of positive and negative leads.

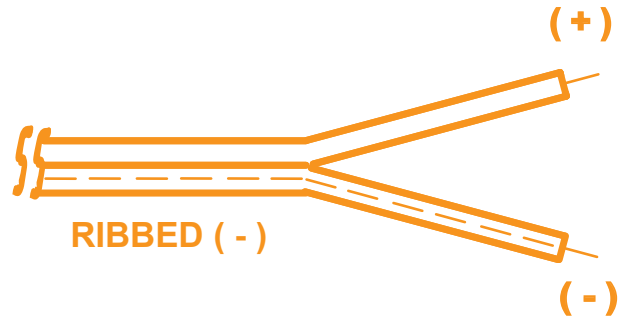


Figure 1. Wire Lead Polarity

COMPONENT COMPATIBILITY

Several PWRPAK models are available. **Table 1** indicates the various compatibilities.

Table 1. PWRPAK >10 A MODEL COMPATIBILITY COMPARISON

WAVELENGTH PRODUCT	PWRPAK-11A-12V	PWRPAK-13A-5V	NOTES
LASER DIODE DRIVERS			
LD10CHA	X	X	
MPL7500	X		
PLD6500	*	X	* Driver circuitry must be 5 V. Use external circuit to limit high voltage power supplies to the appropriate value. Reference the PLD datasheet for connection of supply voltages greater than 5 V.
PLD10000	*	X	
PLD12500	*	X	
PLD5K-CH	*	X	
PLD10K-CH	*	X	
PLD12.5K-CH	*	X	
TEMPERATURE CONTROLLERS			
MPT10000	X	X	
PTC5000	X	X	
PTC10000	X	X	
PTC5K-CH	X	X	
PTC10K-CH	X	X	

PERFORMANCE SPECIFICATIONS

PARAMETER DESCRIPTION	PARAMETER VALUE	
	PWRPAK-13A-5V	PWRPAK-11A-12V
INPUT		
Input Voltage	100-240 VAC	100-240 VAC
Frequency	47-63 Hz	47-63 Hz
Input Current Maximum @ 115 / 230 VAC	1.9 A	3.2 A
OUTPUT		
Output Power Maximum	65 W	130 W
Output Voltage	5.0 V	12.0 V
Output Current	13 A	11 A
Minimum Hold Up Time @ 115 VAC	12 ms	75 ms
Line Regulation	± 1%	± 1%
Load Regulation	± 5%	± 5%
Ripple & Noise @ 20 MHz BW, > 3.3 V	1% peak-to-peak	1% peak-to-peak
Overvoltage Protection	125%	125%
Overload Protection, hiccup trip & auto restart	125%	125%
Temperature Coefficient	± 0.04% / °C	± 0.04% / °C
GENERAL		
Efficiency @ 230 VAC & 100% load	83%	80%
Switching Frequency	30 kHz	60 ± 10 kHz
Operating Temperature ⁽¹⁾	0 to 70°C	0 to 70°C
EMC		
Emissions, FCC 20780 EN55022 / CISPR22	Class B	Class B
SAFETY		
UL/cUL, CB, CE Mark Approved	Yes	Yes
GS Approved	Yes	Yes
TUV Certified	Yes	No
SIZE		
Volume	36 cubic inches	53 cubic inches

⁽¹⁾ Derate linearly from full load at +40°C to half load at +70°C.

MECHANICAL SPECIFICATIONS

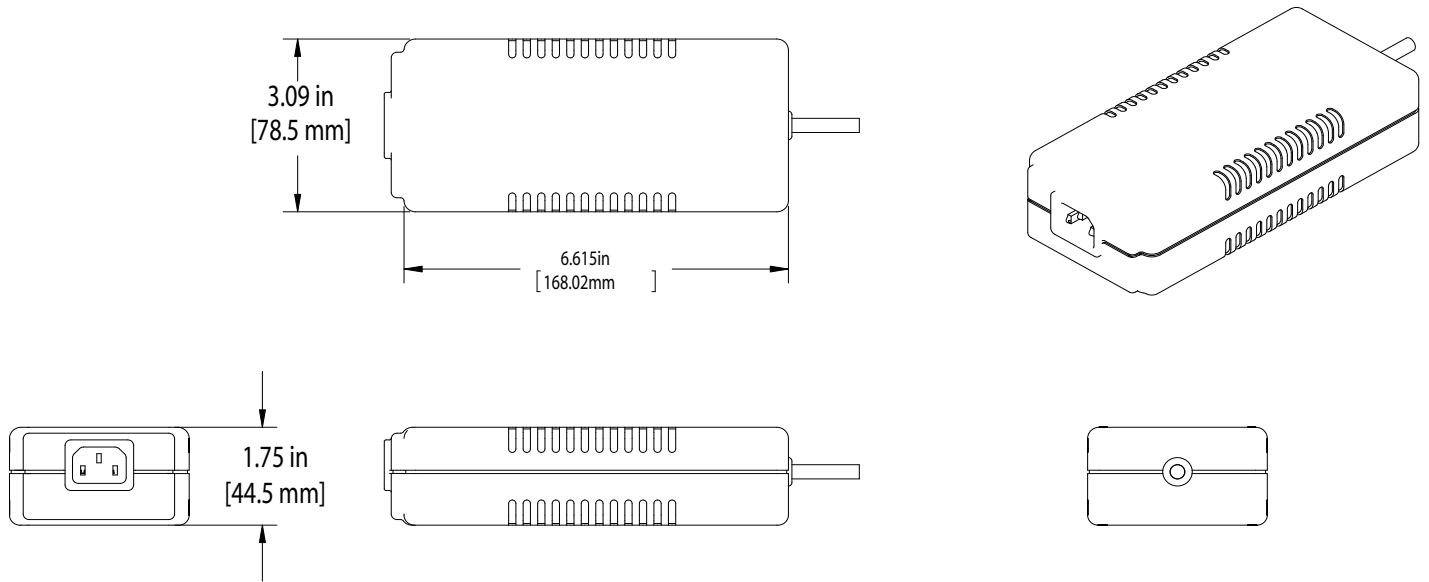


Figure 2. PWRPAK-13A-5V

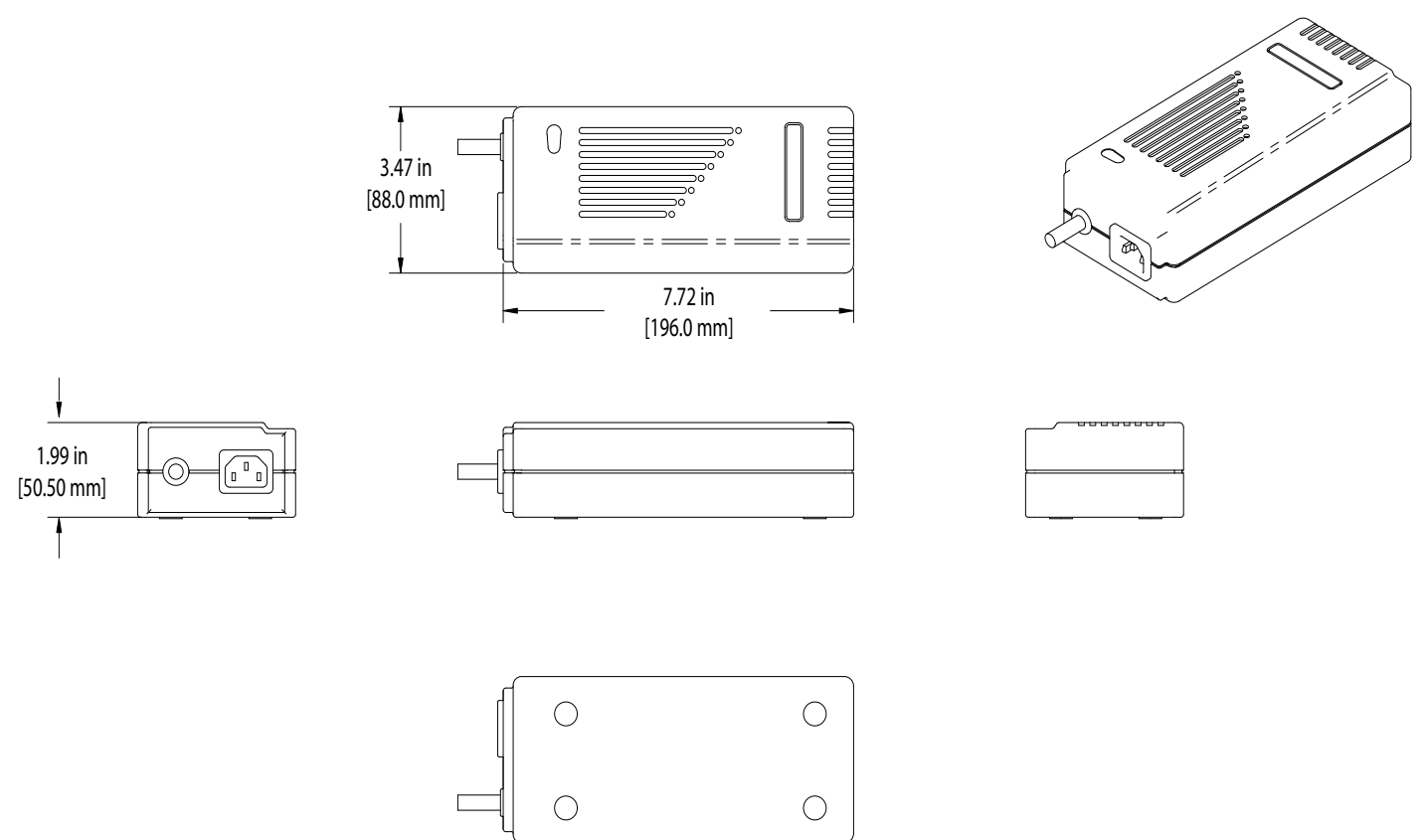


Figure 3. PWRPAK-7V

CERTIFICATION AND WARRANTY

CERTIFICATION

Wavelength Electronics, Inc. (Wavelength) certifies that this product met its published specifications at the time of shipment. Wavelength further certifies that its calibration measurements are traceable to the United States National Institute of Standards and Technology, to the extent allowed by that organization's calibration facilities, and to the calibration facilities of other International Standards Organization members.

WARRANTY

This Wavelength product is warranted against defects in materials and workmanship for a period of one (1) year from date of shipment. During the warranty period, Wavelength will, at its option, either repair or replace products which prove to be defective.

WARRANTY SERVICE

For warranty service or repair, this product must be returned to the factory. An RMA is required for products returned to Wavelength for warranty service. The Buyer shall prepay shipping charges to Wavelength and Wavelength shall pay shipping charges to return the product to the Buyer upon determination of defective materials or workmanship. However, the Buyer shall pay all shipping charges, duties, and taxes for products returned to Wavelength from another country.

LIMITATIONS OF WARRANTY

The warranty shall not apply to defects resulting from improper use or misuse of the product or operation outside published specifications. No other warranty is expressed or implied. Wavelength specifically disclaims the implied warranties of merchantability and fitness for a particular purpose.

EXCLUSIVE REMEDIES

The remedies provided herein are the Buyer's sole and exclusive remedies. Wavelength shall not be liable for any direct, indirect, special, incidental, or consequential damages, whether based on contract, tort, or any other legal theory.

REVERSE ENGINEERING PROHIBITED

Buyer, End-User, or Third-Party Reseller are expressly prohibited from reverse engineering, decompiling, or disassembling this product.

NOTICE

The information contained in this document is subject to change without notice. Wavelength will not be liable for errors contained herein or for incidental or consequential damages in connection with the furnishing, performance, or use of this material. No part of this document may be translated to another language without the prior written consent of Wavelength.

SAFETY

There are no other user-serviceable parts inside this product. Return the product to Wavelength for service and repair to ensure that safety features are maintained.

LIFE SUPPORT POLICY

This important safety information applies to all Wavelength electrical and electronic products and accessories:

As a general policy, Wavelength Electronics, Inc. does not recommend the use of any of its products in life support applications where the failure or malfunction of the Wavelength product can be reasonably expected to cause failure of the life support device or to significantly affect its safety or effectiveness. Wavelength will not knowingly sell its products for use in such applications unless it receives written assurances satisfactory to Wavelength that the risks of injury or damage have been minimized, the customer assumes all such risks, and there is no product liability for Wavelength. Examples of devices considered to be life support devices are neonatal oxygen analyzers, nerve stimulators (for any use), auto-transfusion devices, blood pumps, defibrillators, arrhythmia detectors and alarms, pacemakers, hemodialysis systems, peritoneal dialysis systems, ventilators of all types, and infusion pumps as well as other devices designated as "critical" by the FDA. The above are representative examples only and are not intended to be conclusive or exclusive of any other life support device.

REVISION HISTORY

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REV.	DATE	CHANGE
C	October 2013	Release in new format and extend warranty
D	December 2020	Added LD10CHA



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