

**DATA SHEET**



- **Output Current up to 120 amps**
- **Up to 300  $\mu$ s pulse width**
- **Rise-time of <10  $\mu$ s**
- **1 PPS**
- **Current monitor output 1 volt/100 amps**
- **Optimized for driving a nine bar stack of diodes**
- **Only 24 grams**

The PLDD-120-9-1 is an ultra-miniature, battery operated, laser diode driver for driving a nine bar laser diode stack to 120 amps of peak current. Due to the compact size and weight (only 24 grams check current weight), this unit is well suited for man-portable and airborne applications.

The magnitude of the output current is controlled by a user supplied DC voltage (1 V/100 A). The input trigger signal controls the pulsewidth. The user needs to supply a +3.3 to +5 V signal to enable the capacitor charger.

The optional Universal Interface Board (UIB-01) allows the user easy access to all control pins. Commonly used signals on the UIB-01 are available through BNC connections such as the input trigger and the current monitor which allows the user a real time view of the current.

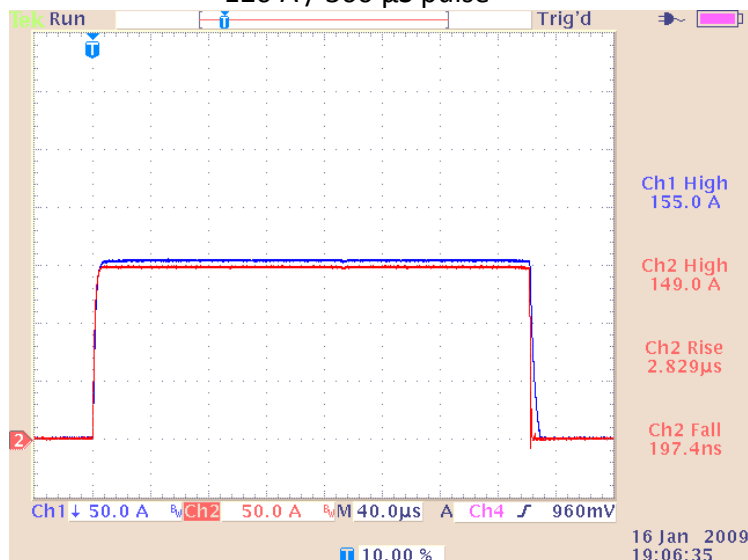
The PLDD-120-9-1 can be powered by a +5 volt supply. Contact factory for battery operation.

| SPECIFICATIONS*   |  |
|---|--|
| Parameter   | Value  |
| <b>Pulse Output Current (Load = Single Laser Diode Bar)</b> |  |
| Amplitude Range   | 0-120 amps   |
| Means of Adjustment   | user supplied DC voltage (1.2 volts=120 amps)                      |
| Pulse Rise Time   | <10 $\mu$ s  |
| Pulse Width   | 0-300 $\mu$ s (set by user supplied input trigger)                 |
| Pulse Recurrence Frequency Range                            | 1 PPS  |
| Compliance Voltage  | 18 volts (up to nine bars)   |
| Output Connection   | Twister pair AWG 16, 6" length                                     |
| <b>Trigger Requirements</b>                                 |  |
| Type  | 3.3/5 volt CMOS  |
| <b>Outputs</b>  |  |
| Current Monitor   | 1.0 volt/ 100 amps into >10 kOhm<br>0.50 volt/100 amps into 50 Ohm |
| <b>General</b>  |  |
| Input Power   | +5 volt 500 mA<br>Consult factory for battery operation            |
| Operating Temperature Range                                 | For mil-spec temperature operation,<br>please contact factory      |
| Dimensions (H X W X D) inches                               | 0.95" X 0.75" X 2.1"<br>(Approximate)                              |

**Warning:** Please discharge capacitor before connecting or removing any load

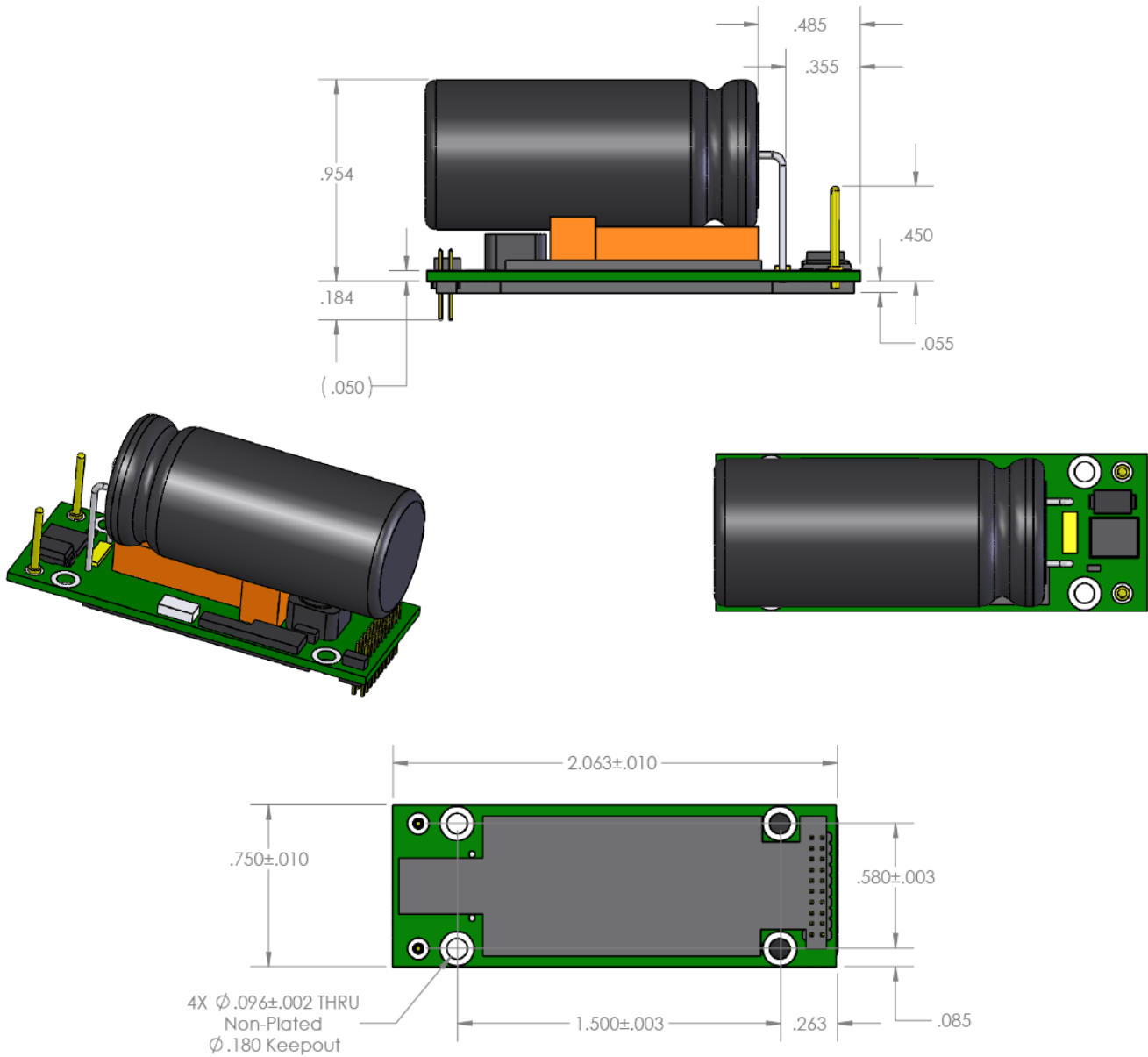
\*Specifications are subject to change without notice.

#### Current Monitor Output 120 A / 300 $\mu$ S pulse



Comparison of the I-mon output (lower trace) and a Pearson current monitor (upper trace).

**PHYSICAL DIMENSIONS\***



*\*Subject to change without notice.*