

DATA SHEET

- **Models range from 0.05 to 0.5 amps, 0.2 to 2 amps, or 0.5 to 5 amps peak current**
- **Variable pulsewidth (5 ns – 100 ns)**
- **Rise/Fall times of <4 ns**
- **Single-shot to 10 MHz***
- **Current monitor output**
- **Lightweight**

The PLDD-X-SP Series driver is a flexible, compact, all solid-state, pulsed current source designed to drive single or multichip laser diodes. Three models are available with currents ranging from 0.05 to 0.5 amps, 0.2 to 2 amps, and 0.5 to 5 amps. The peak current is adjusted by either an on-board potentiometer or an external DC voltage. The current pulsewidth can be controlled by triggering an on-board pulse generator or by an externally supplied pulse. The pulse repetition rate is controlled by the external trigger.

Solder pads near board edge accept the most common laser diode packages (5.6 mm, 9 mm, TO-18, TO-5, and TO-52). In addition the driver can be configured to interface with the standard 14-pin butterfly package or an optionally installed MMCX connector to allow for rapid disconnect of the load.

The laser diode current can be observed with the current monitor output. This high fidelity output ensures accurate determination of the laser diode current.**

**Maximum rep-rate is pulsewidth and current dependent see chart on pg 3*

***Oscilloscope bandwidth should be >200 MHz with a 50 Ohm input*

OMNIPULSE TECHNOLOGY

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PLDD-X-SP SERIES

0.05 TO 5 AMP ULTRA SHORT PULSE LASER DIODE DRIVER SERIES

SPECIFICATIONS*

PARAMETER	VALUE		
	PLDD-0.5-SP	PLDD-2-SP	PLDD-5-SP
Pulse Output Current			
Amplitude Range (typ.)	0.05 to 0.5 A	0.2 to 2 A	0.5 to 5 A
Amplitude Adjustment	On board trimpot or external voltage control		
Pulse Rise Time**	<1 ns (typ)	<2 ns (typ)	<3 ns (typ)
Pulse Fall Time**	<2 ns (typ)	<3 ns (typ)	<4 ns (typ)
Pulsewidth	variable from 5 ns to 100 ns		
Pulse Repetition Rate	Single Shot to 10 MHz†		
Compliance Voltage	Consult factory with your specific load for compliance specification		
Output Connector	Diode soldered directly to PCB pads, stripline connection to standard 14 pin butterfly package, or optional MMCX connector (shown in datasheet photo above)		
Propagation Delay	16 ns (typ)		
Trigger Requirements			
Type	+5 V positive edge, 50 Ω		
Outputs			
Current Monitor	Linear output 1.00 V/A into 50 Ω		
General			
Input Power	+28 V VDC, 150 mA max		
Dimensions (HxWxD)	2.7" x 2.2" x 0.5"		

*Subject to change without notice

**Load dependent

†See chart on next page for details

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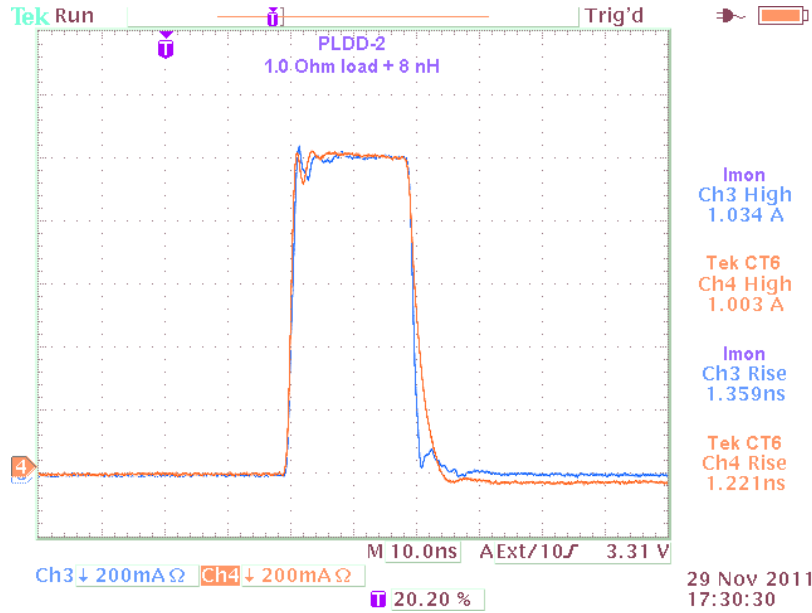
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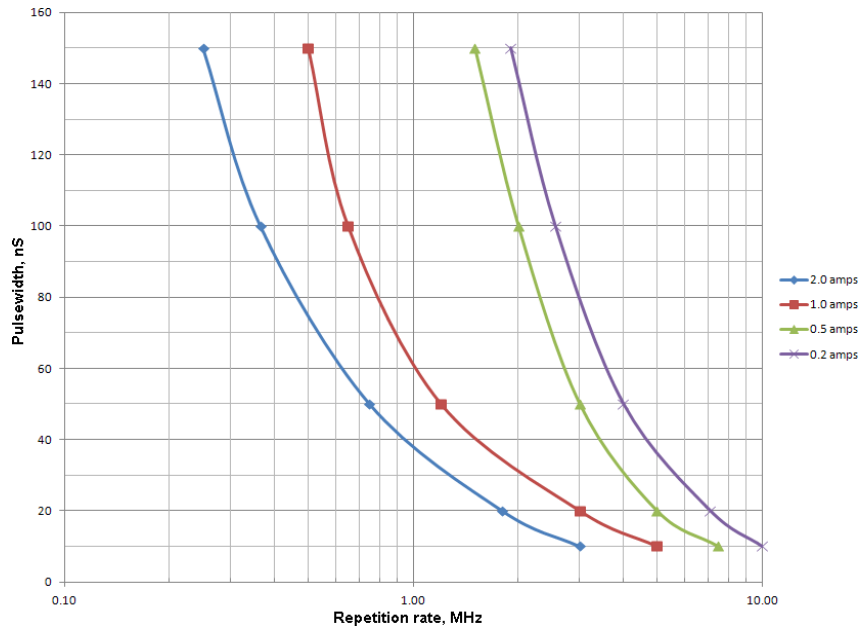
PLDD-X-SP SERIES

0.05 TO 5 AMP ULTRA SHORT PULSE LASER DIODE DRIVER SERIES

200 mA/div, 10 nS/div



Maximum repetition rate versus pulse width



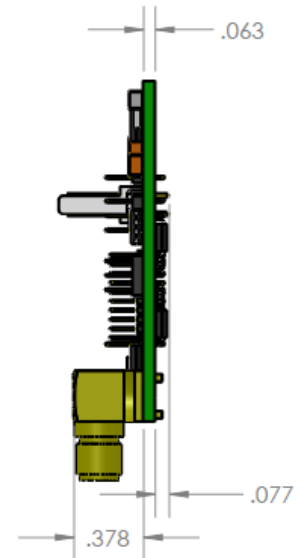
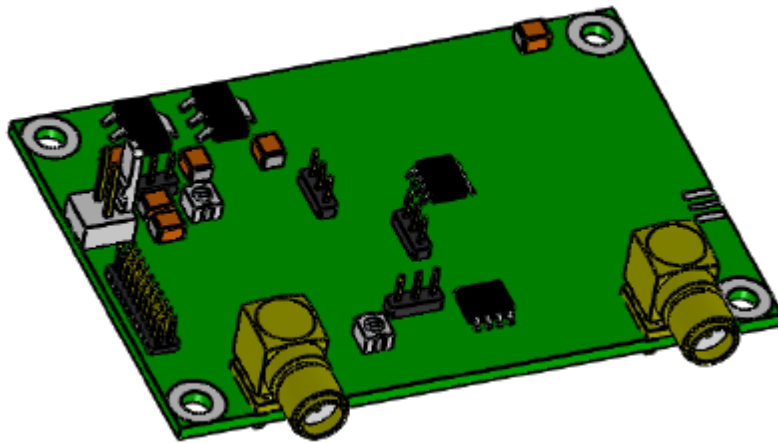
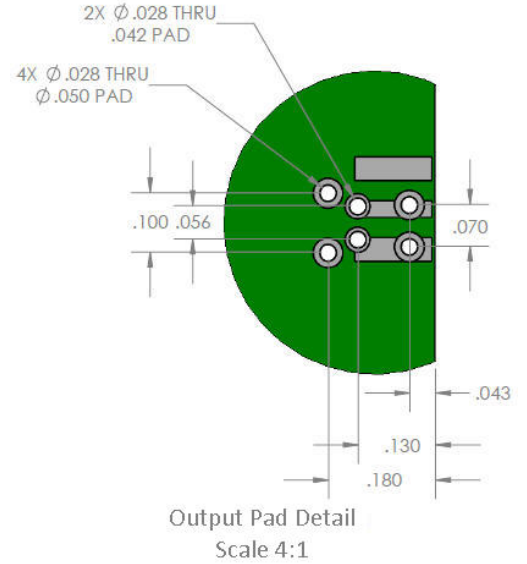
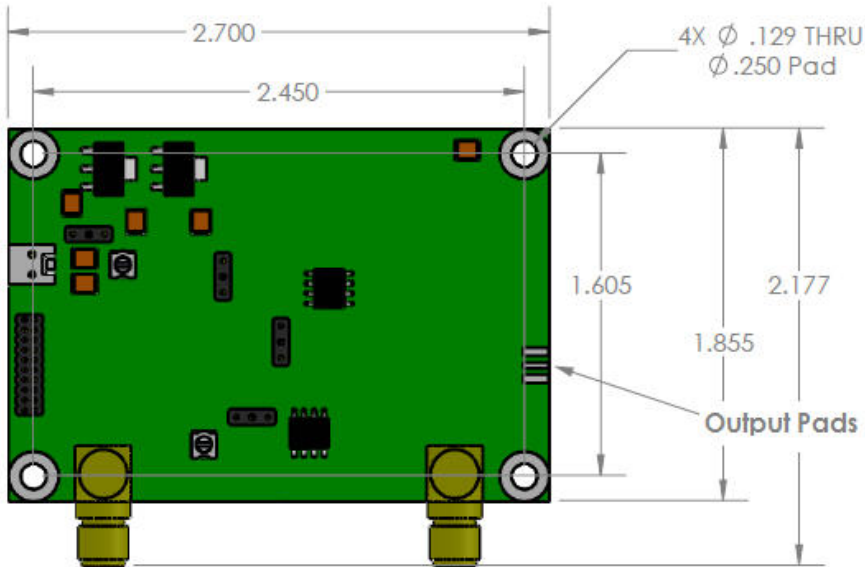
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PHYSICAL DIMENSIONS



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