



Data Sheet



- **25 to 50 Amps (see on next pg.)**
- **<5 ns[†] pulse width**
- **<2.5 ns[†] rise time**
- **<2.5 ns[†] fall time**
- **$di/dt = 20 \text{ A/ns}$**
- **Drives single & multi stack diodes**
- **Ultra lightweight and compact**
- **Use for rangefinding, remote sensing, research, and other defense and security applications**

The PLDD-50-SP is a compact all solid-state, pulsed current source designed to drive single or multichip laser diodes. The unit features a peak current of 50 amps. The pulse repetition frequency can be varied from single shot to 15 KHz at maximum current. Higher repetition frequency is possible at lower current (see graph on next page).

The current monitor output may be viewed with an oscilloscope (>200 MHz BW recommended) allowing the user a real time view of the load current.

Mounting holes are supplied which accept the most common laser diode packages (5.6 mm, 9 mm, TO-18, TO-5, and TO-52). This allows the light to exit normal to the driver; however, edge mounting of these laser diodes can also be accommodated.

Two power supplies are required: +12 to +28 VDC @ 10 mA and a +350 VDC (max) @ 6 mA (average current depends on rep rate).

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SPECIFICATIONS*

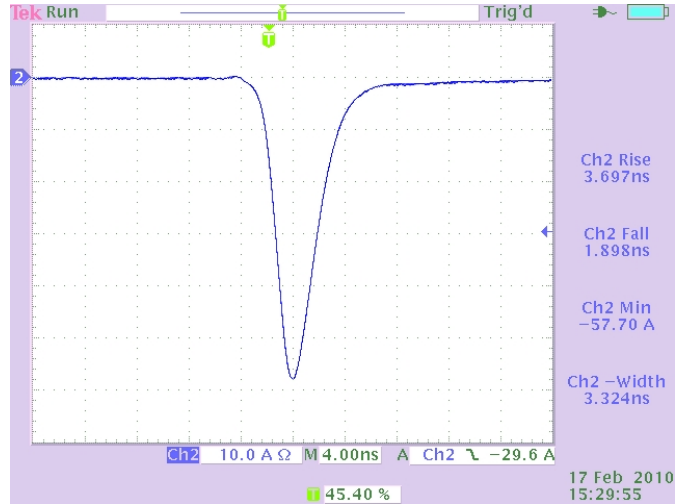
Parameter	Value (load dependant)
Output Current	Approximately 25 to 50 amps. Adjustment made by varying high voltage input from +250 to +350 V (+375 V is the absolute maximum)
Pulse Rise Time	<2.5 ns [†]
Pulse Fall Time	<2.5 ns [†]
Pulse Width	<5.0 ns [†]
Pulse Recurrence Frequency Range	See graph
Compliance Voltage**	350 V (nom.) same as HV input
Output Connector	Pads on edge of PC board and thru holes for various popular laser diode packages
Propagation Delay	10 ns typ.
Jitter	TBD
Input	
Trigger	SMA, +5 V CMOS, rising edge Hi-Z or 50 Ω jumper selectable input
Output	
Current Monitor	SMA, 50 Ω, 1.00 V/100 A
General	
Input Power	+12 to +28 VDC @ 10 mA +250 to +350 V @ 6 mA*** (proportional to pulse frequency)
Dimensions (HxWxD)	0.74" X 1.30" X 2.74"

† With output shorted

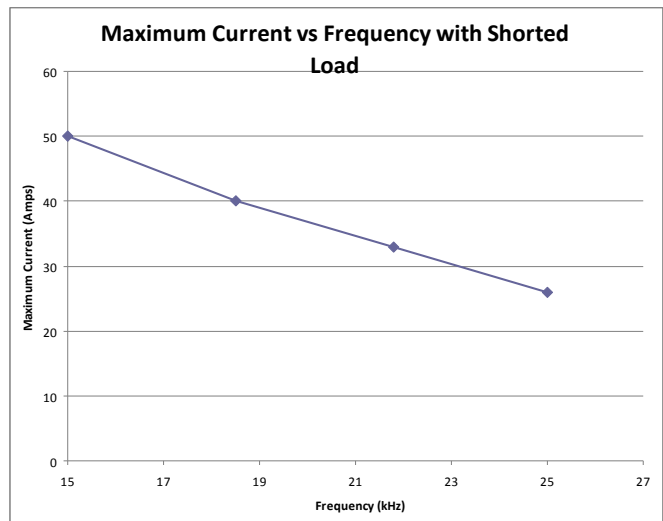
** no load

***proportional to pulse frequency (HV supply only)

Current Monitor Output
(Shorted Load)



(averaged)



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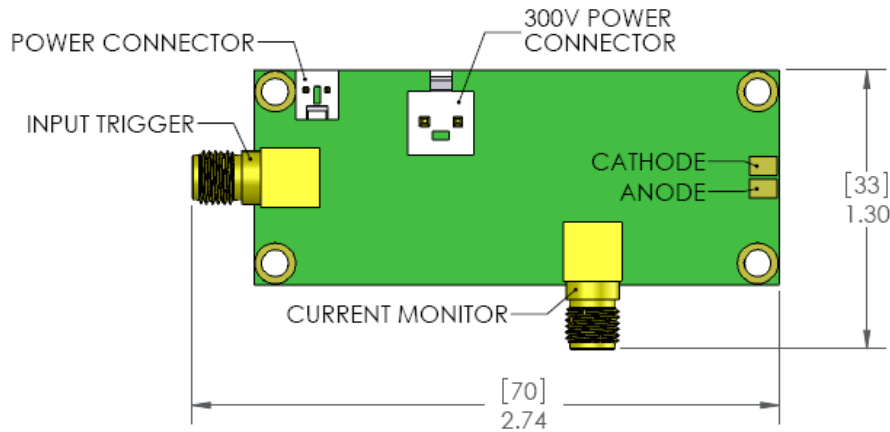
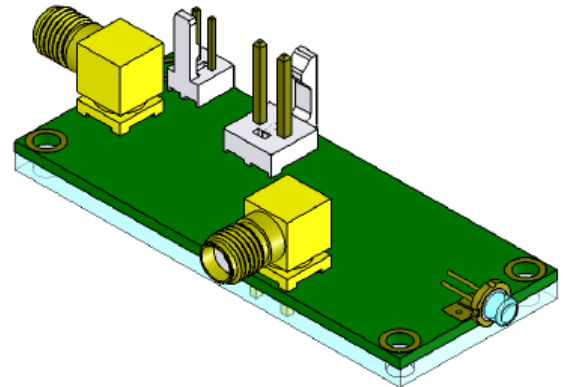
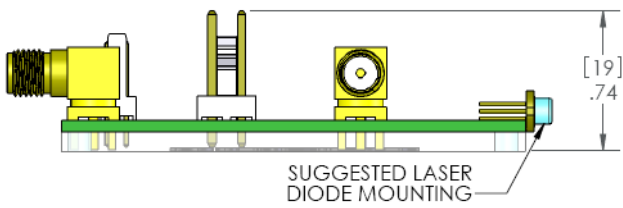
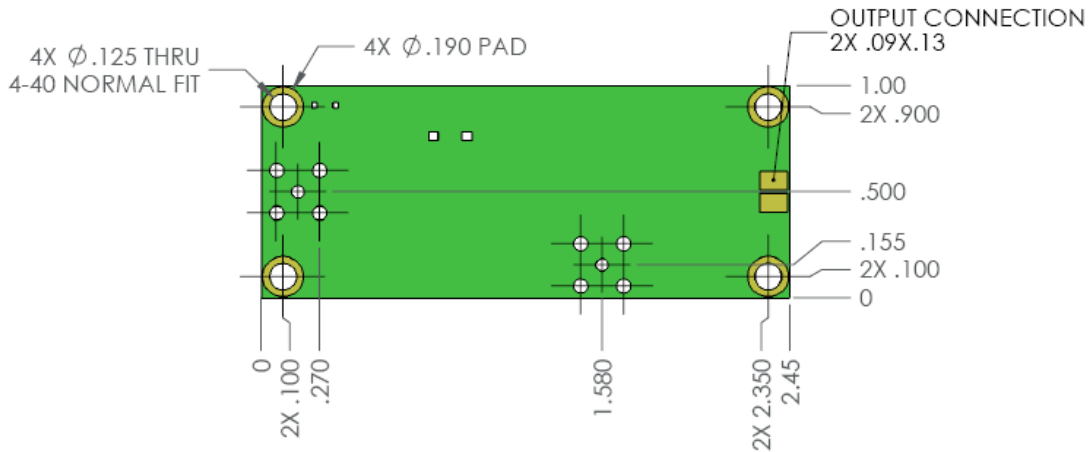
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Physical Dimensions*



**Subject to change without notice.*

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