



LASER DIODE CONTROL
part of the Laser Lab Source Group



LaserDiodeSource.com ■ LaserLabSource.com ■ LaserDiodeControl.com



LDI Series Precision Laser Diode Drivers

LDI series laser diode drivers are low noise constant current sources which have been purpose-designed to electrically bias laser diodes. They are designed for laboratory R&D as well as manufacturing test applications. Many models offer high current and voltage levels for high power laser diodes. Because high power lasers require high levels of DC current and voltage, and generate high levels of waste heat, the LDI series drivers have a unique set of safety features which protect them from being damaged. Additionally, these drivers are designed with features to assist the user to safely operate the laser diode under test.

TECHNICAL QUESTIONS AND INSTALLATION SUPPORT

800.887.5065

contact@LaserLabSource.com

Precision Laser Diode Driver

LDI series drivers are designed to safely, precisely bias semiconductor laser diodes. They are precision-engineered to meet the most demanding laboratory R&D and system integration applications. They are also designed to safeguard the laser diode under test, and offer comprehensive protection features to prevent damage to your laser diode. Models are available to meet almost all current and voltage ranges.



MULTI-LAYER SAFEGUARDS FOR YOUR LASER DIODE



Polarity check circuit ensures your laser is connected correctly prior to turning laser on.



Soft-start current ramp prevents overstress to the laser diode's semiconductor junction.



ESD, power surge, and over-voltage protection circuits safeguard the laser diode's emitter facet.



Over-current and over-voltage limits keep your laser in its safe, specified operating ranges.



Temperature limit protects your laser from damage caused by over-heating.

The LDI series drivers offer multiple user interface options. Depending on the model selected, the user has complete control of all laser diode parameters through an intuitive front panel menu. The front panel has an LCD display with a keypad. For remote control, all units come standard with an RS-232 interface and USB adapter. The LabView GUI (included) makes set-up and control of the system fast and simple. An open-source terminal software program is also available for download. The user can also control the unit using analog controls signal inputs available on the rear panel.

In addition to CW (continuous wave) mode of operation, the LDI series laser diode drivers offer flexible modulation capabilities and a built-in QCW function generator. The rear panel of the controller has a BNC input for analog or TTL digital modulation inputs. QCW mode pulses can be internally or externally generated.

Set and monitor all key parameters of your laser diode from easy to use main display menu:

Labels pointing to the Main Menu display:

- Laser diode ON/OFF
- Laser diode bias current set-point
- Measured laser temperature from thermistor in laser package or on heat sink
- Measured voltage across laser diode
- Safety interlock active
- CW mode or Quasi-CW mode

Main Menu

525.00mA	
LD Laser On	MODE: CW
LDI 250.0uA	LDI 0.00mA
FW 1.80 V	FA 13.32°C
Error 0	QZ 0.0000

[illegible]

SPECIFICATIONS

MODEL	MAX CURRENT	MAX VOLTAGE	LINK TO PRODUCT
LDI-186	1.5A	14V	SPECIFICATIONS
LDI-127	14A	24V	SPECIFICATIONS
LDI-823	15A	24V	SPECIFICATIONS
LDI-187	20A	6V	SPECIFICATIONS
LDI-726	20A	30V	SPECIFICATIONS
LDI-824	25A	64V	SPECIFICATIONS
LDI-880	100A	30V	SPECIFICATIONS
LDI-581	120A	5V	SPECIFICATIONS
LDI-344	125A	12V	SPECIFICATIONS
LDI-607	70A	5V	SPECIFICATIONS

Two Year Full Warranty

The LDC series laser diode controllers are warranted against defects in materials and workmanship for a period of two years from the date of shipment. The warranty is honored and transacted by Laser Lab Source. The warranty does not include customer induced damage to the product.

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800-887-5065 EXT 1



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for laser scientists and engineers.

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