



100 Amp Laser Diode Driver, 30 Volt Compliance Range

**ENHANCED
PROTECTION
FOR HIGH VOLTAGE
PUMP LASER DIODES**

300 millisecond soft start
current ramp to set-point
Over-voltage burst & surge clamps
Fast open circuit detection &
shut-down



100 Amp, 30 Volt Laser Diode Driver High Power Laser Bars and Arrays

- o Current up to 100 A, Voltage up to 30 V
- o Optimized for High Power Laser Diodes from nLight, II-VI, Lumentum, Coherent/Dilas, Lumics
- o CW Mode and Integrated Quasi-CW Pulse Generator; Pulse Widths from 30 μ s to CW
- o Front-Panel Control and RS232 Remote Control; USB Optional
- o Open Circuit Detection and Fast Shut-Down with Analog Control Loop



**LASER
DIODE
DRIVERS**

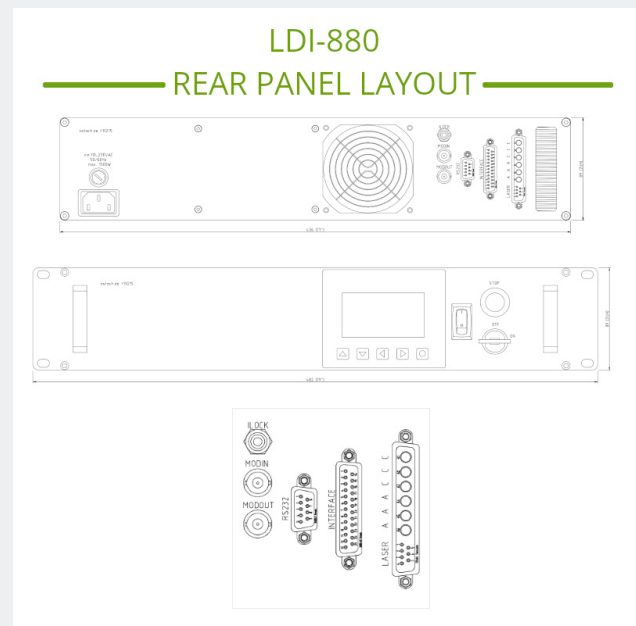
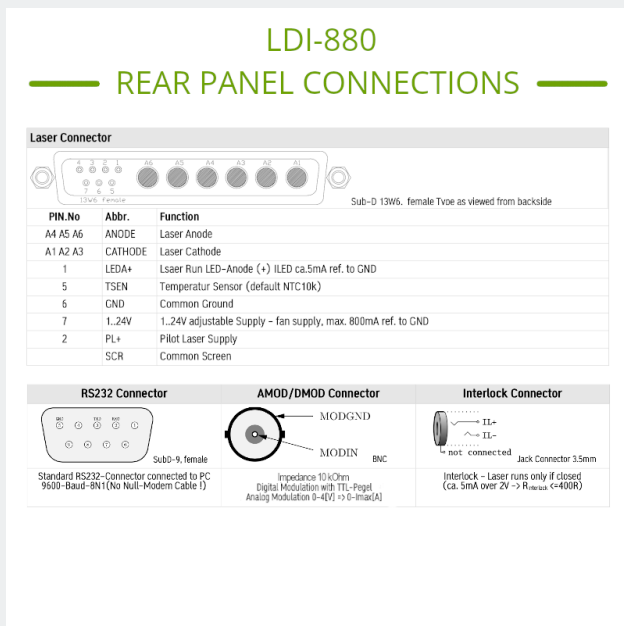
LDI-880 High Power Laser Diode Driver Overview

The LDI-880 laser diode driver is designed to precisely and safely bias a wide range of laser diodes connected in series, laser diode stacks and multi-emitter devices such as those from Jenoptik, Northrop Grumman, and Coherent This driver is ideal for 808 - 915 - 940 - 976nm high power pump Laser applications.

Modulation, Internal Function Generator, and QCW Pulse Modes

The LDI-880 operates in CW (continuous wave) mode, and also provides flexible modulation capabilities and a QCW mode. On the backpanel is the BNC input for an analog or TTL digital modulation (10k Ω input impedance).

The integrated function generator can be programmed to generate QCW pulses from 30 microseconds to CW. The QCW pulse mode feature is capable of delivering continuous pulses, single pulses, and pulse bursts which are internally or externally triggered.



Laser Diode Protection Features

These current sources feature multiple levels of built-in laser diode protection which have been optimized for high power bars, arrays, stacks, and multi-emitter devices. Soft-start current, programmable current and temperature limits, and a fast and safe shut-down sequence keep your device protected at all times. Additionally, transient filters and AC line filters protect the laser against brown-out or black-out power conditions.

A back-panel safety interlock connector and safety key-switch ensure that the laser diode current is not switched on until the user has determined it is safe to do so.

The 15-pin D-sub provides access to a range of ancillary control functions, including external photodiode measurement, pilot laser, Laser-On Indicator LED, temperature sensor input, and an external cooling fan control.

Optimized for High Voltage Multi-Chip Laser Diodes

nLight Element



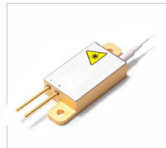
Lumics LuOcean



Lumentum ST Series



II-VI Multimode Pump



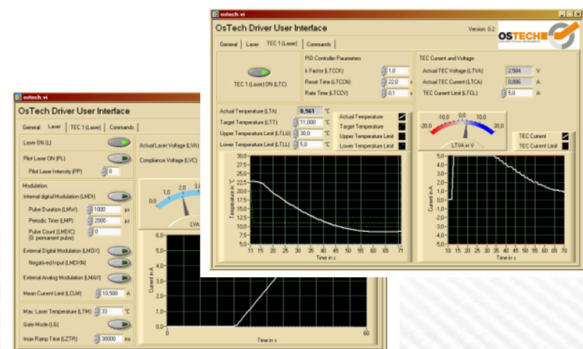
nLight Pearl



Coherent | Dilas Pump



LABVIEW DRIVERS





LDI-880 High Power Laser Diode Driver Specifications

LASER DIODE CURRENT AND VOLTAGE OUTPUT (CW / QCW)

- Current Range: 0.00 - 100.00 Amps
- Compliance Voltage Range: 0.12 - 30.00 Volts
- Current Noise & Ripple (rms): $< \pm 0.5\%$ (of full scale current)
- Current Setpoint Resolution: 25 mA
- Current Setpoint Accuracy: $\pm 0.5\%$
- Current Limit Setpoint Accuracy: $\pm 2\%$

INTEGRATED LASER DIODE PROTECTION FEATURES

- Soft-Start Current Ramp Factory Default Set to 300 Milliseconds; User Adjustable
- User-Programmable Current Limit
- Open Circuit Detection
- ESD and Power Surge Clamp, AC Line Filter
- Reverse Voltage Transient Clamp
- Rear Panel Keylock Switch and Safety Interlock
- Short Circuit when Laser Diode Current Turned OFF
- Front Panel e-Stop Button Emergency Shut-Down

QCW AND MODULATION

- Pulse Width Range: 30 μ s to CW, 10%-90%
- Includes Integrated QCW Pulse Generator
- QCW Trigger: Internal Pulse Generator or External
- Modulation Input: BNC, Digital (TTL) or Analog, 10k Ω Impedance
- External Modulation Input Voltage Range: 0 ~ 4 Volts



LDI-880 High Power Laser Diode Driver Specifications

AUXILIARY FUNCTIONS AND CONNECTIONS

- Interlock Status Indication (12 V, 100 mA)
- Laser On/Off Status Indication (TTL; On = High)
- System OK Status Indication (TTL; Good = High)
- External 5V Reference Output
- Multiple Auxiliary Analog and TTL Signal Ports
- RS232 Connections
- Pilot Laser Output
- External Cooling Fan Output
- External Temperature Sensor Input
- External Safety Interlock Connector

USER INTERFACE AND CONNECTORS

- Front Panel: Alphanumeric LCD with Key Pad
- RS232 Standard, SubD-9, Female
- USB Optional: \$95.00 (Option SVC-USB)
- LabView Drivers Included
- Laser Diode Connector: SubD-13W6, Female Type
- Auxiliary Functions Connector: SubD-25 female
- Safety Interlock: Jack Connector, Stereo 3.5mm

DIMENSIONS AND POWER INPUT

- Power Input: Universal 100V ~ 240 VAC, 50/60 Hz
- Dimensions: 89 mm (H) x 482 mm (W) x 266 mm (L)
- Chassis Height: 2U (Standard Rack-Mount Units)

RECOMMENDED ACCESSORIES

- acc-417 USB-RS232 Converter



Product Sales and Service

Orders for this product are fulfilled by LaserDiodeControl.com, part of the Laser Lab Source group. It is manufactured for Laser Lab Source by OsTech, GmbH.

Product Warranty

This product is sold with a full one-year warranty. It is warranted to be free from defects in material and/or workmanship for a period of one year from the date of shipment.



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