LASER LAB SOURCE
marketplace for **Scientists & Engineers**

manufactured for Laser Lab Source by OSTECH

Benchtop Laser Diode Source System
635nm, 5 Watt Fiber-Coupled Output

635nm Fiber-Coupled Laser Diode Benchtop Turn-Key Source System

- Includes Fiber-Coupled 635nm Laser Diode
- Fully Adjustable Operating Parameters
- CW Mode and Integrated Quasi-CW Pulse Generator; Wide Ranging Pulse Widths
- User-Programmable Soft-Start Current Ramp to Laser Diode Current Setpoint
- Comprehensive Safety Features to Protect the Laser Diode, Controller, and Operator

LASER DIODE SOURCES

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a division of Research Lab Source Corporation

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LDX-635nm-5W Benchtop Laser Diode Source System

The LDX-635nm-5W fiber-coupled laser diode source is a preconfigured, plug-and-play benchtop light-source solution. The system includes the laser diode driver, the Peltier-based mount controller, the mount, interconnect cables, and the laser diode. The system is configured before shipping, with safety limits pre-set, to provide plug-and-play operation upon delivery.

Modulation, Internal Function Generator, and QCW Pulse Modes

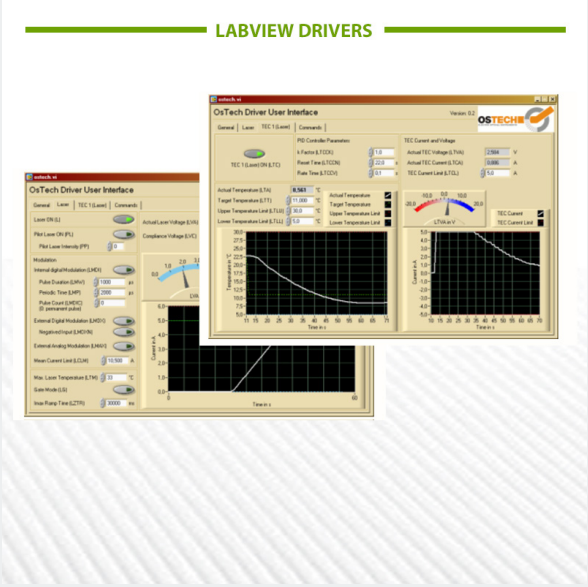
The source system operates in CW (continuous wave) mode, and also provides flexible modulation capabilities and a QCW mode. The controller has an internal function generator which can be used to drive quasi-CW pulses in continuous, single, and burst-mode. There is an input for analog or TTL digital modulation. In QCW mode, the user can also set pulses to trigger from a remote TTL signal source. The modulation bandwidth and pulse widths are based on the laser driver capabilities, defined in the specifications table.

Discrete System Components Deliver Application Flexibility

This benchtop source system is delivers a compact and flexible solution for laboratory and R&D applications. The system is easily operated by the intuitive front-panel and keypad, and can be controlled remotely via RS232 or by the optional USB interface. The open mount and fully accessible laser diode provides added flexibility, and even allows for changing the source laser as application requirements change.

Comprehensive Laser Diode Protection Features

These control systems provide a high degree of laser diode protection to ensure the laser is protected. Soft-start current, pre-programmed and adjustable current and temperature limits, and a fast and safe shut-down sequence keep the laser and the system protected at all times. Additionally, transient filters and AC line filters protect against damage from brown-out or black-out power conditions.



LDX-635nm-5W Benchtop Laser Diode Source Specifications

635NM LASER DIODE SPECIFICATIONS

- Output Power, CW: 0 - 5 Watts, User Adjustable
- Center Wavelength: 635 nm (±5 nm)
- Spectral width, FWHM: < 3 nm

635NM LASER DIODE FIBER SPECIFICATIONS

- Fiber Core Diameter: 105 µm
- Fiber NA: 0.22
- Fiber Connector: SMA905

CONTROL UNIT LASER DIODE PROTECTION FEATURES

- Factory Pre-Set Maximum Current Limit
- Factory Pre-Set Upper Temperature Limit
- Soft-Start Current Ramp Factory Default Set to 300 Milliseconds
- Soft-Start Current Ramp to Setpoint (User Programmable)
- ESD and Power Surge Clamp Reverse Voltage
- Reverse Voltage Transient Clamp
- AC Line Filter
- Keylock Switch and Safety Interlock
- Short Circuit when Laser Diode Current Turned OFF
- Open Circuit Detection

CONTROL UNIT TEC CONTROLLER SPECIFICATIONS

- Cooling Design: Peltier (TEC) Cooled Laser Diode Mounting Plate
- TEC Control Loop Algorithm: Full P.I.D.
- Temperature Range: -25°C to 150°C
- Pre-Set Temperture Control Range: 15 °C - 30 °C

LDX-635nm-5W Benchtop Laser Diode Source Specifications

MOUNTING PLATE, HEAT SINK & CABLES

- Cooling Method: TEC/Peltier Coolers, Fan for Waste Heat Removal
- Laser Mounting Plate Area: 58 mm x 52 mm
- Heat Sink Dissipation Capacity @ 25°C: 38 Watts
- System Includes 1.5 meter Current Interface Cable (20A rated)
- System Includes 1.5 meter TEC Control Interface Cable

USER INTERFACE

- Front Panel LCD, Full Alphanumeric Display with Key Pad
- RS232 Standard, LabView Drivers Included
- USB Optional; Inquire
- GUI Control Software Included

CONTROL UNIT QCW AND MODULATION SPECIFICATIONS

- QCW Pulse Width: 20 µs to CW
- Pulse Time Base Accuracy: ± 1.0%
- QCW Mode 1: User Adjustable Pulse Width and Repetition Rate using Internal Pulse Generator
- QCW Mode 2: External Trigger to Internal Pulse Generator, Rising Edge Triggered
- Modulation Input (BNC): Digital (TTL) or Analog Modulation
- Modulation BNC Input Impedance: 10K ohm
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- Modulation Input Voltage Range: 0 ~ 4 Volts (4V = Max Current)
- Analog Modulation Bandwidth: 1 Hz – 20 kHz

POWER SUPPLY, WEIGHT AND DIMENSIONS

- Power Input: Universal 100 ~ 230 VAC, 50/60 Hz
- System Weight (total): ~ 10 kg
- Controller Dimensions: 275mm x 200mm x 127mm

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 warrantied 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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