



Offered by  
**LASER LAB SOURCE**

manufactured by **AeroDiODE**

## 976nm VBG Stabilized Laser Diode, 140W Fiber-Coupled Output Turn-Key Source System



### 976NM VOLUME BRAGG GRATING STABILIZED LASER DIODE SOURCE

- o Output Power: 140 W
- o Spectral Width (FWHM): 1 nm
- o Turn-Key Laser System, Tested and Calibrated
- o 105 $\mu$ m Fiber Core
- o SMA Connector Fiber Termination



## CW LASER SOURCE SYSTEM -- 976LD-6-4-2 / LASER-DIODE / CCM1

This 140 Watt, 976nm, CW source system is built around a highly reliable, volume Bragg grating-stabilized laser diode. The system is preconfigured and pretested, and is delivered ready-to-run.

The CCM1 laser source system features closed-case construction: the laser, heat-sink, and controller electronics are contained in an enclosed case to help protect the laser diode and direct the cooling air from the automatic fan. The source system is easily operated using the included GUI over USB interface, and multiple systems can be operated by the same computer.

### LASER DIODE CONTROLLER SPECIFICATIONS

- Current Range: 0 - 21 Amps
- Compliance Voltage Range: 0 - 36 Volts
- Current Stability: < 0.05%
- Laser Diode Set-Point Adjustment Resolution: 0.05 Amps
- Max. Modulation Rate: 100 kHz

### TEC CONTROLLER

- Temperature Control Range (typ): 15 - 40°C
- Temperature Stability (typ): 10 mK
- TEC Power: > 150 Watts

### MODULATION SPECIFICATIONS

- Pulse Duration: 10  $\mu$ s to CW (External Source)
- Trigger: External Only
- Externally Adjustable CW Offset in Pulse Mode

### USER INTERFACE AND POWER INPUT

- USB with GUI Software
- Includes Control Software Libraries : DLLs, Hexa, Labview VI
- Power Supply \*: 24 VDC (input 110/230 VAC, 50/60 Hz)
- \* Power Supply Not Included. Inquire for Recommendations.

### DIMENSIONS

- 238 mm x 146 mm x 142.5 mm

### LASER OUTPUT SPECIFICATIONS

- Wavelength: 976nm ( $\pm$  1 nm)
- Spectral Width: 1 nm
- Output Power: 140 W
- Fiber: 105 $\mu$ m, NA 0.22

### Calibrated and Tested CW Laser Diode Source

Armored Fiber Jacket, SMA Fiber Termination  
Integrated Closed-Case Construction  
Multi-Mode Fiber-Coupled Output  
Adjustable Output Power





## 976NM MULTIMODE FIBER-COUPLED LASER DIODE

These lasers deliver up to 140 Watts of CW output power. The typical emission bandwidth is 1 nm, and the laser is coupled to multimode 105  $\mu\text{m}$  fiber with  $\text{NA} = 0.22$ .

The specifications below are for the laser diode module that is integrated into the controller.

### OPTICAL AND ELECTRICAL SPECIFICATIONS

- Wavelength: 976 nm ( $\pm 1$  nm)
- Emission Bandwidth: 1.0 nm
- CW Output Power: 140 W
- Wavelength Shift w Temperature: 0.02 nm/ $^{\circ}\text{C}$
- Wavelength Current w Temperature: 0.03 nm/A
- Slope Efficiency: 11 W / A
- Feedback Isolation: 30 dB from 1020 - 1200 nm

### ELECTRICAL SPECIFICATIONS

- Threshold Current: 0.9 A
- Typical Drive Current: 13 A \*
- Typical Forward Voltage: 22.5 V
- \* For operating currents above 6 Amps, the electrical connections must be soldered.
- Narrow Wavelength Current Range: 11 - 14 A



Offered by  
**LASER LAB SOURCE**

manufactured by **AeroDIODE**

## **PRODUCT SALES AND SERVICE:**

Orders for this product are fulfilled by Laser Lab Source in North America and select international regions. It is manufactured by Aerodiode, Talence, France.

## **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.



Laser Lab Source, a division of Research Lab Source Inc.  
670 S. Ferguson St., Suite 3  
Bozeman, MT 59718 USA

Phone: 406-219-1472

[www.LaserLabSource.com](http://www.LaserLabSource.com)

**AeroDIODE**

Rue François Mitterrand Institut d'Optique d'Aquitaine  
33400 Talence FRANCE