



Turn-Key 1480nm, 400mW Single Mode Laser Diode Source and Control Unit



1480LD-3-1-1 / LASER-DIODE / CCS-CW

- o Pre-Tested and Calibrated CW Source System
- o CW Output Power 400 mW
- o Bragg Grating Stabilized, Linewidth ~ 1 nm
- o Polarization Maintaining Fiber
- o User-Replaceable Laser Diode



**LASER
DIODE
SOURCES**



1480NM PRE-CONFIGURED SOURCE SYSTEM

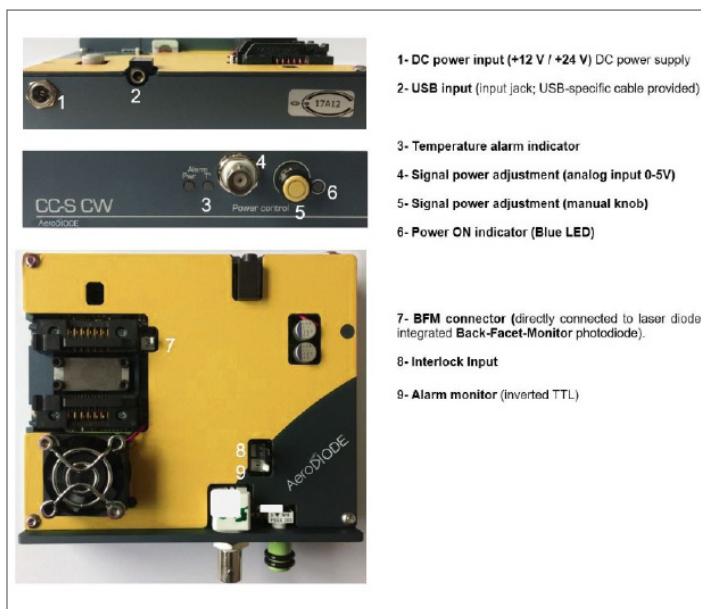
These 1480 nm grating stabilized single mode laser source & control modules offer the user a pre-configured, calibrated bench top source solution. These grating stabilized Fabry-Perot lasers offer a single longitudinal mode emission profile up to 400mW CW output power, and 600mW pulsed output power. Both the chip in the butterfly package and the package itself were designed and optimized to provide excellent long term reliability. The coupling of the laser light into the fiber is based on proprietary techniques and manufacturing processes that provide high peak output power.

The control electronics and mounting module for these laser diodes delivers high stability bias current, a precision TEC controller and a pre-configured ZIF mounting socket. These control modules offer multiple mechanical, thermal and electronic protection features.

The on-board TEC controller incorporates a fast feedback PID control loop to provide high temperature set-point stability. A user-set temperature limit keeps the source from thermal damage. Additionally, multiple bias current / voltage protection features are designed to keep the source safe from ESD, power outages, and reverse voltage. A user-controlled current limit clamps the current at the set limit level.

USB CONTROL SOFTWARE

The user can set and monitor all of the control parameters of the DFB source laser using the USB input and the supplied GUI software. These units ship with the USB cable to connect your PC to the connector on the side panel. A simple to use single page graphical user interface allows you to control all of the CW parameters as well as set current and temperature limits. Other features of these control modules include a daisy chain output, sync output, and alarm.





SPECIFICATIONS

LASER DIODE SPECIFICATIONS

- Center Wavelength: 1480 nm (± 1 nm)
- CW Output Power (typ): 400 mW
- Emission Bandwidth (typ): 1 nm
- Wavelength Temp. Coefficient: 0.015 nm/ $^{\circ}$ C
- SMSR: > 35 dB (50 dB typ)
- Laser Type: Grating Stabilized FP

CCS-CW LASER DIODE CONTROL AND MOUNT UNIT

- Output Current CW Mode: 0.00 mA - 1500.00 mA
- Output Compliance Voltage: 4.8 Volts
- Current Noise and Ripple (100Hz to 10 MHz): < 0.03% of Full Scale
- Current Set-Point Resolution (ie @ 200 mA): 0.05mA
- External Modulation Bandwidth: 100 Hz
- External Modulation Signal: 0 - 5 V

TEC TEMPERATURE CONTROL ELECTRONICS

- TEC Current Range: 0.0 - 3.0 Amps
- TEC Voltage Range: 0.0 - 4.6 Volts
- TEC Controller Compatible with NTC Thermistors: 1k Ω - 100 k Ω
- Mounting Socket Base Material: Anodized Aluminum
- Mounting Socket: Zero Insertion Force Socket

USER INTERFACE , DIMENSIONS AND POWER INPUT

- Current Adjustment through Side Panel Control Knob or USB
- Remote Interface: USB
- Control Software: Control Software Windows GUI Included
- Input Power Supply: 12 VDC (220V / 110V adapter included)
- Module Dimensions: 130mm (W) 110mm (L) 37mm (H)
- Libraries: DLLs - Hexa/Linux - Labview - Python
- Analog Interface (0 - 3.3V): Peak Power Adjustment
- OS Compatibility: Windows XP / Windows 7

LASER DIODE FIBER AND CONNECTOR

- Polarization Maintaining PM1550, Fiber Core 9 μ m
- Buffer Diameter: 250 μ m
- PM Aligned FC/APC Connector



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**LASER
DIODE
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PRODUCT SALES AND SERVICE:

Unlimited phone and email support is provided for products purchased through Laser Lab Source. 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.



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