



## Eight Channel Laser Diode Controller Electronics and Mounting Module



### **CCS-MULTI-8 / Dual LD Controller**

- o Eight Channel Laser Diode Control & Mounting Module
- o Self-Contained and Rack-Mounted
- o Independent Channels Drive up to 2500mA CW Current -or- 4000mA Pulsed Current
- o USB Interface, Includes Programming Tools, Software Suite, DLL Library, and GUI



## EIGHT CHANNEL LASER DIODE CONTROLLER AND MOUNTING SYSTEM

This laser diode driver & temperature controller allows full independent control of up to 8 laser diodes from CW down to very short pulses. It includes several functions including a pulse generator and a precision and very low noise current and modulation driver.

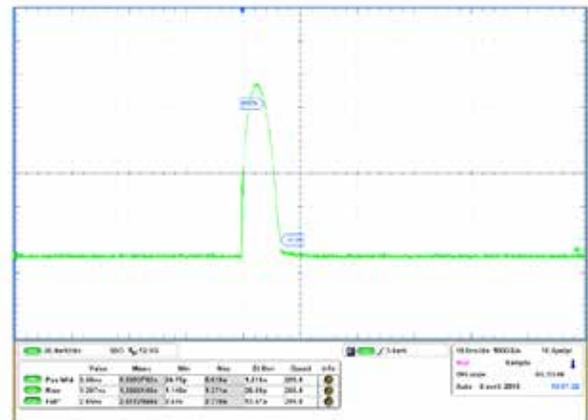


### COMPACT RACK MOUNTED CASE

enclosed case for device and user safety  
front-panel fiber output connectors

## HIGH PERFORMANCE PULSE CONTROL

The CCS-MULTI-8 is a very capable pulsed laser diode driver. The user can program clean pulse widths from 1 ns, all the way to CW, with pulse repetition rate up to 250 MHz. Adjustable pulse overshoot is programmable to 0%, and in pulse-mode lasers can be biased with a CW current.

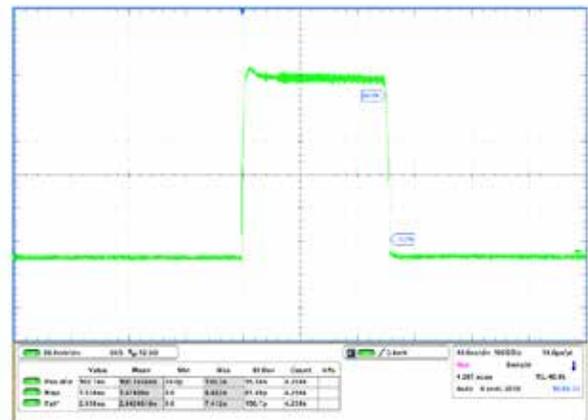


### HIGH QUALITY PULSED CURRENT OUTPUT

data shows 5ns pulse width at 4 A current

## HIGH DENSITY, HIGH PRECISION CONTROL

This Laser Diode Driver is a precision module able to drive simultaneously and independently up to eight laser diodes in CW and Pulsed operating modes. The current level ranges up to 4 A in pulse mode, and 2.5 A in CW with a current resolution down to 0.05 mA. Fiber management fixtures are provided internally, and it is also compatible with any type of laser diode form factor. It is controlled by an easy-to-use graphical interface and contains more than 6 connectors per laser diode for various external analog input/outputs signals.



### HIGH QUALITY PULSED CURRENT OUTPUT

data shows 100ns pulse width at 4 A current

## COMPREHENSIVE LASER DIODE PROTECTION

The integrated laser diode protection circuits protect your device at all times. The user-set current limit and user-set temperature limit clamp both the bias current and the operating temperature to prevent damage to the laser. Soft-start current ramp to the drive current set-point protects the laser from the possibility of thermal shock or current surges.

Finally, the integration of the mounting socket directly with the current source eliminates the need for cables and connectors from the current path, which greatly reduces the likelihood of ESD damage to the laser from plugging and unplugging cables, and prevents external electronic noise affecting the diode drive current signal.

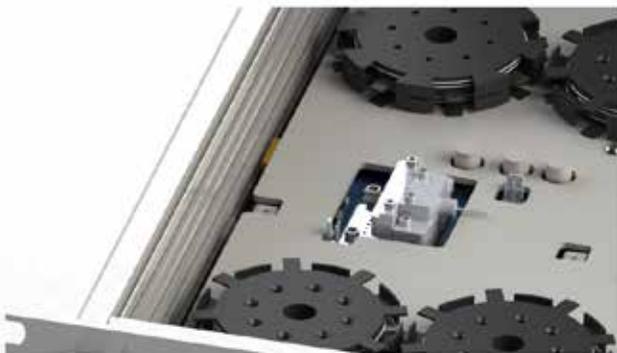
## GRAPHICAL USER INTERFACE INCLUDED

Configuration and operation of the controller is streamlined and simplified by providing control over the critical operating parameters of the controller: peak pulse current, pulse width, frequency, triggering, and other driver parameters are available.

The GUI also provides control over laser diode temperature, and includes operational safety limits to help protect the laser diode from damage.

In addition to providing real-time control over the laser diode, the GUI displays real-time operating status of the controller and laser diode operating parameters.

**Simple User Control of all Laser Diode Parameters through USB Interface and GUI Software**



## FLEXIBLE MOUNTING OPTIONS

butterfly, DIL, TOSA, TO-can  
external temperature sensor and photodiode



## CCS-MULTI-8 / Dual LD Controller Performance Specifications

### LASER DIODE CURRENT SOURCE SPECIFICATIONS

- **Specifications Apply to All Channels Independently**
- CW Output Current: 0 mA - 2500 mA
- Pulsed Current: 0 mA - 4000 mA
- Adjustment Precision: 0.05 mA (@ 200 mA)
- Current Stability: 0.01%
- Compliance Voltage: 1 to 24 V (adjustable)
- Pulse Duration: 1 ns to CW
- Adjustable Pulse Overshoot down to 0%
- External Photodiode Measurement on Each Channel
- Adjustable CW Offset in Pulsed Output Mode
- Internal / External Current Modulation
- Pulsed Repetition Rate: 0 - 250 MHz

### TEC CONTROLLER & MOUNTING SOCKET

- Zero Insertion Force Mounting Socket with Clamping Arms
- Low Thermal Resistance Anodized Aluminum Mount
- Diode Chip Temperature Range: 0°C to 90°C
- Temperature Sensor Compatibility: NTC Thermistors
- TEC Control Loop Type: Bipolar

### LASER DIODE PROTECTION

- User Set Current Limit
- User Set Temperature Limit
- Safety Interlock
- Soft-Start Ramp to Current Set-Point
- Transient and ESD Surge Clamp
- Fiber Management with Optical Power Sink

### GENERAL SPECIFICATIONS

- Dimensions: 2U Rack Height, 400 mm deep
- Power Supply: +24 VDC, 8 A
- PC Interface: USB with GUI and Control Software
- USB Cable: Micro-Connector to Standard PC USB Connector Included



## CCS-FIBER-LASER / Dual LD Controller Performance Specifications

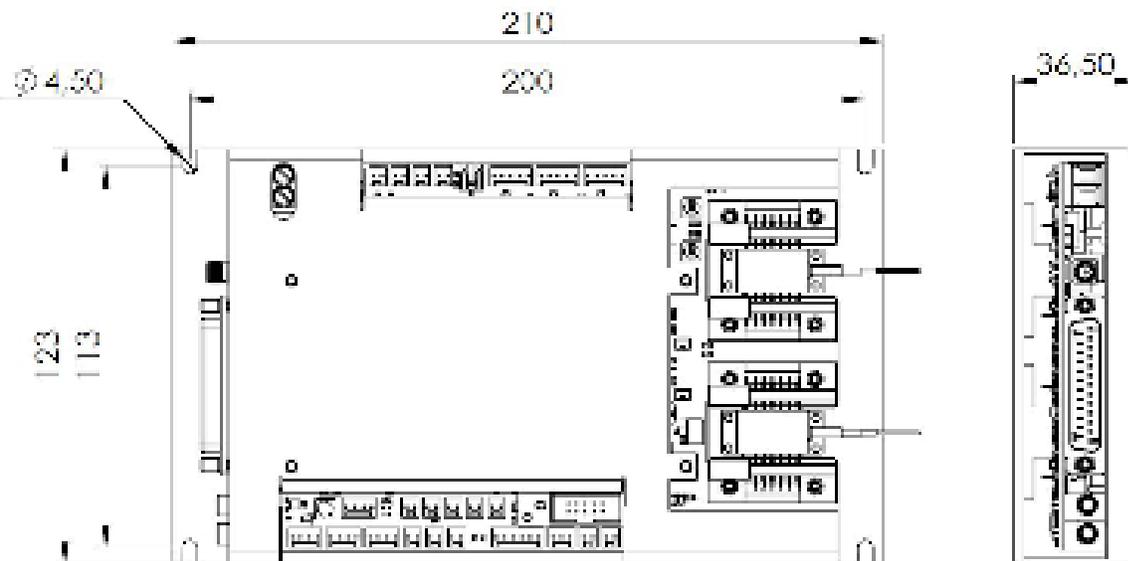
### ADDITIONAL FEATURES

- Pulse Picker Synchronization Tool
- Up to Six Photodiode Inputs (Optional)
- Feature Set Designed for Fiber Laser Architectures
- Interface Capability for up to Three 10 Watt - 200 Watt Multi-Emitter Laser Diode Controllers

### GENERAL SPECIFICATIONS

- Dimensions: 210 mm x 123 mm x 36.5 mm
- Power Supply: +24 VDC, 8 A
- PC Interface: USB with GUI and Control Software
- USB Cable: Micro-Connector to Standard PC USB Connector Included

## CCS-FIBER-LASER Dimensions





Offered by  
**LASER LAB SOURCE**



LASER  
DIODE  
CONTROLLERS



## 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. The warranty does not cover damage to the product due to mishandling or use of the product outside of its specified maximum ratings.



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