



## 1.5 Amp CW Laser Diode Driver with TEC Controller and Butterfly Mounting Socket



### **CCS-CW-HP / Control and Mount Module**

- o 1500mA Current Source + TEC Controller + Butterfly Mount
- o User Adjustable Laser Output Power by On-Board Control Knob, Analog Voltage Signal or USB
- o Noise and Ripple < 0.03% full scale
- o USB Interface, Includes Programming Tools Software Suite, DLL Library and GUI
- o Models Available for Type 1 and Type 2 Butterfly Laser Pin Configurations



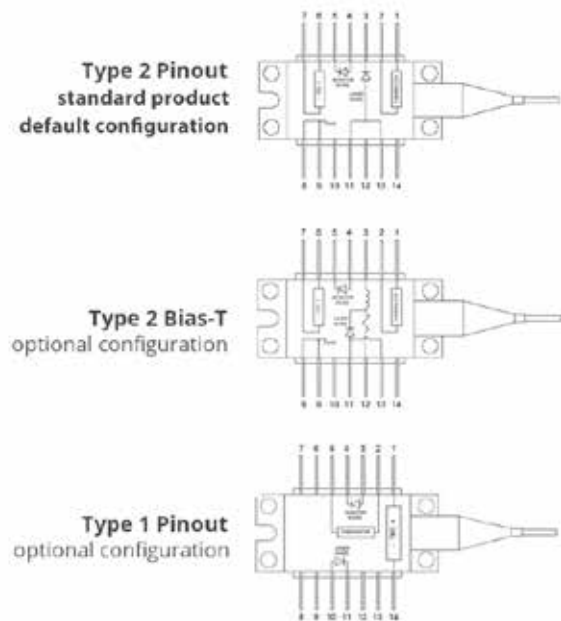
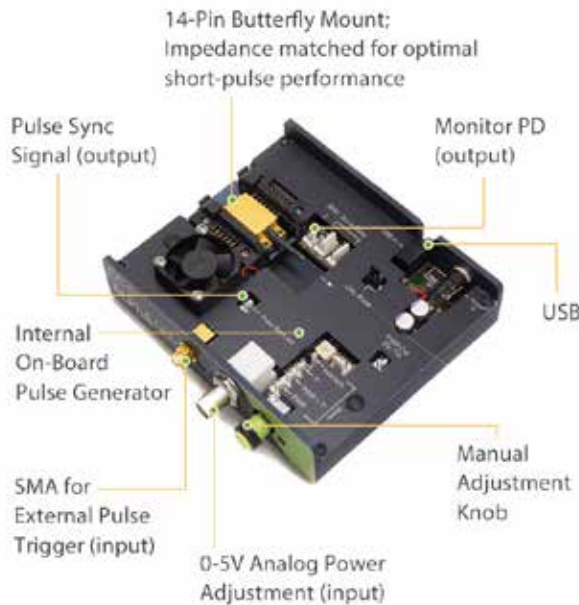
## LASER DIODE CONTROLLER WITH INTEGRATED BUTTERFLY MOUNT

These fully integrated laser diode controller and mounting modules for butterfly packaged pump lasers are designed for cost effective precision control of semiconductor lasers in research labs. These controllers provide a 1,500 mA laser diode current source and a high efficiency 12 watt TEC controller. They include an integrated butterfly mount. The mounting plate for the laser has a high surface flatness and finish to provide a low thermal impedance between the package at the heat sink base. The standard pin configuration is the "Type 1" package style. "Type 2" and other package configurations are available on request. Please note that the Type-2 model is limited to 800mA current range.

current set-point protects the laser from the possibility of thermal shock or current surges. Also, the integration of the mounting socket directly with the current source eliminates the need for cables and connectors from the current path. This greatly reduces the likelihood of ESD damage to the laser which can occur from plugging and unplugging cables. Set-point and limits are set using a simple one screen graphical user interface which is opened when you connect your PC to the USB interface. The GUI control software is included with the purchase price and offers users simple set-up and control.

## PIN CONFIGURATIONS

The CCS-CW-HP can be ordered for any butterfly package pin configuration. The standard default model is for a Type-2 pin configuration.



## INTEGRATED ADVANCED LASER DIODE PROTECTION FEATURES

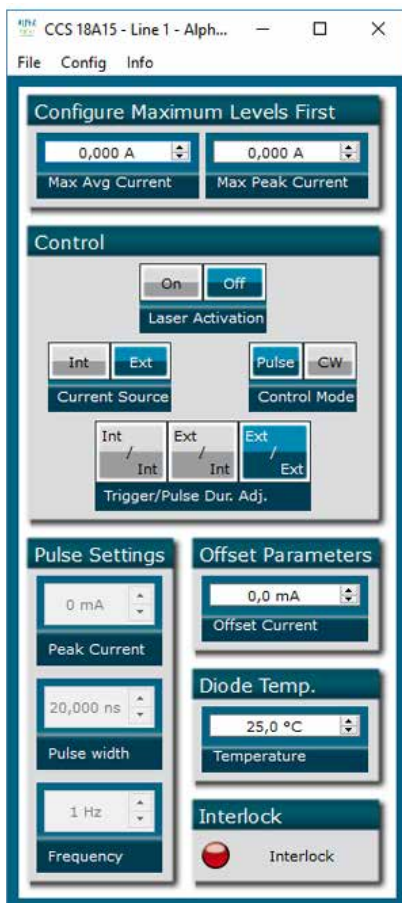
The integrated laser diode protection circuits protect your device under test at all times. A user set current limit and user set temperature limit clamp both the bias current and the operating temperature to prevent damage to the laser. A soft-start current ramp to the user defined

## 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.





## CCS-CW-HP / Control and Mount Module Performance Specifications

### LASER DIODE CURRENT SOURCE

- Output Current: 0.00 mA - 1500.00 mA
- Output Compliance Voltage Maximum: 4.8 Volts
- Current Noise and Ripple: < 0.03% of full scale
- Current Set-Point Resolution (ie @ 200 mA): 0.05mA
- Current Stability (24 hour): Better than 15 ppm

### LASER DIODE TEC CONTROLLER & MOUNTING SOCKET

- TEC Current:  $\pm 3$  A
- TEC Voltage: 4.6V
- TEC Control Loop Type: PID
- Temperature Control Accuracy (min.): 0.01°C
- Temperature Set-Point Resolution: < 0.1 °C
- Butterfly Mount: Zero Insertion Force Mounting Socket with Clamping Arms
- Butterfly Mount: Low Thermal Resistance Anodized Aluminum Butterfly Mount Base Plate
- Butterfly Mount: Standard Pre-Configured Pin Wiring for Type 1 and Type 2 Configurations
- Butterfly Mount: All Pin Configurations Available (request)

### 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
- Closed Short Circuit (when laser OFF)



## CCS-CW-HP / Control and Mount Module Performance Specifications

### USER INTERFACE, MODULATION AND POWER INPUT

- PC Interface: USB with GUI and Control Software
- Analog Voltage Control Input: 0 to 5V (DC to Full Scale Laser Bias Current)
- Side Panel Manual Control Adjustment Knob

### DIMENSIONS AND INCLUDED PARTS

- Dimensions: 130mm (W) 110mm (L) 37mm (H)
- Weight: < 0.5 kgs
- Power Supply: +12VDC Power Supply Included
- USB Cable: Micro-Connector to Standard PC USB Connector Included

### PIN CONFIGURATION MODEL NUMBERS

- CCS-CW-T1 (type 1 pin configuration)
- CCS-CW-T2 (type 2 pin configuration - current range limited to 800mA)



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 to the product due to mishandling or use of the product outside of its specified maximum ratings.



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