

Ultra-Low Noise Laser Diode Control Electronics and Butterfly Package Mount Module Designed for Tunable Diode Laser Absorption Spectroscopy Applications



TDLAS Control Ultra-Low Noise Laser Diode Control Electronics and Mount Module

Optimized for Precision Tunable Diode Laser Absorption Applications

1500 mA Current Source, 14 Watt TEC Controller, plus Butterfly Mounting Socket

USB Interface, Includes Programming Tools

LOW NOISE LASER DIODE CURRENT SOURCE FOR GAS SENSING APPLICATIONS

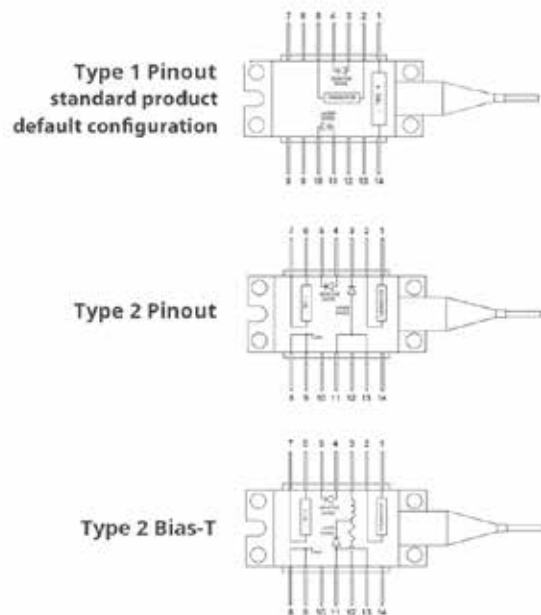
These fully integrated laser diode control and mounting modules are designed for precision control of single mode laser diode modules in research labs and for product integration. The low noise version is offered as a solution with noise performance that is perfectly suited to gas-sensing and TDLAS applications.

PRECISION TEMPERATURE CONTROL FOR MAXIMUM WAVELENGTH STABILITY

The controller is equipped with a high-stability temperature controller to ensure the highest level of power and wave-length stability. The temperature controller delivers up to 14 W power to the TEC. 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 user defined 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.

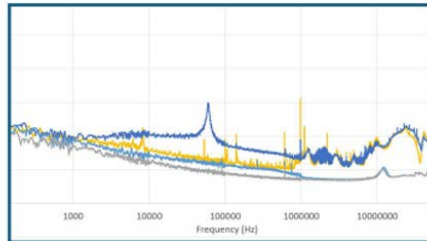
USB INTERFACE AND VERSATILE CONTROLLER SOFTWARE

The controller is equipped with a USB interface, and delivered with easy-to-use GUI software. Several software control libraries are provided for custom control software development, including Labview, DLLs, Hexa, and Python.



Product Version	CCS-CW models		Low Noise Models	
	CCS-CW-std	CCS-CW-HP (High power)	TDLAS (for modulation)	CCS - Low Noise (Ultra-low noise version)
Output Current	0-800 mA	0-1500 mA	0-1500 mA (Contact us for special 2500 mA version)	
Set point resolution (@ 100 mA)	25 μ A			
Current Modulation	External only : 0-5V		Internal : sin/sqr/triang External : 0-20mA/V (adjustable)	
Modulation bandwidth	100 Hz		100 kHz (300 kHz typical)	200 Hz
Output compliance voltage	0 - 4.8 V	0 - 5V [0 - 8 V - contact us]	0-24V	0 - 5 V
Laser diode T* regulation	15 - 50°C		0 - 90°C	
Temperature stability (typ)	<10 mK		<1 mK	
TEC current/voltage	\pm 1.5 A/3.8 V		\pm 3 A/4.6 V	
BFM (Back Facet Monitor) / External photodiode monitoring	BFM output connector only		Yes/Yes (variable gain)	
Interface/Compatibility/Libraries	USB / Hexa, DLLs, LabVIEW, Python (Linux)			
Power Supply	12 V (220 V/110 V adapt. incl)		24V (adapt incl)	
Dimensions (mm)	130*126.8*32.5		170*126.8*32.5	

RELATIVE INTENSITY NOISE PERFORMANCE SPECTRUM





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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