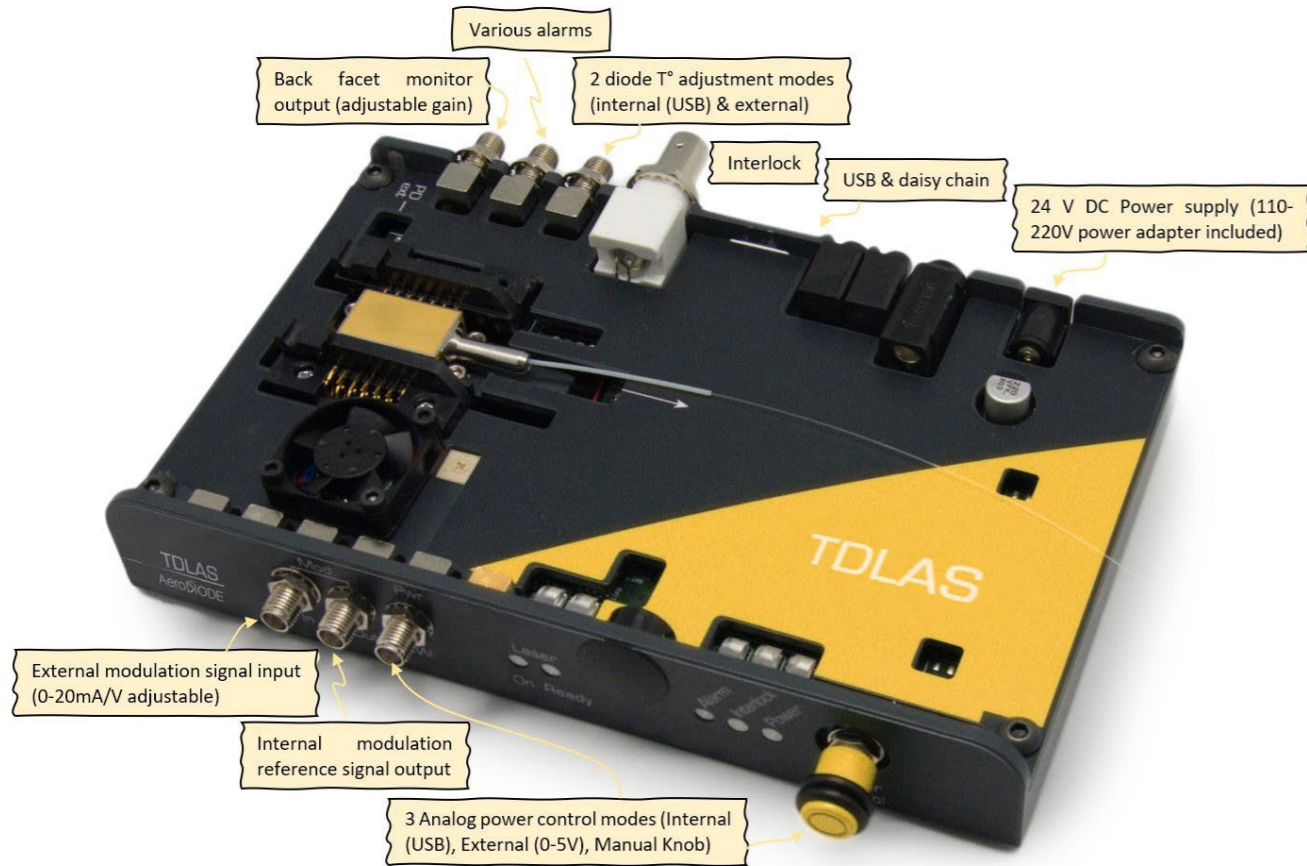# TDLAS
Laser diode driver for gaz sensing R&D

AeroDIODE

TDLAS

Laser diode driver for gas sensing R&D
with integrated butterfly mounting sockets and USB

Various alarms

Back facet monitor output (adjustable gain)

2 diode T° adjustment modes (internal (USB) & external)

Interlock

USB & daisy chain

24 V DC Power supply (110-220V power adapter included)

External modulation signal input (0-20mA/V adjustable)

Internal modulation reference signal output

3 Analog power control modes (Internal (USB), External (0-5V), Manual Knob)

Key features:

- Very low current noise with low setpoint drift and noise close to measurement instrument ground level
- Ideal for laser diodes such as **NTT, Eagleyard, Nanoplus, Eblana** etc.
- External current modulation with adjustable modulation transfer function (0 to 20 mA/V)
- Sinus, triangular or square wave internal modulation
- High resolution current level adjustment
- 1 mK precision integrated TEC Temperature Controller
- USB Interface with GUI & Programming Tools, Software Suite, DLL & LabVIEW Library
- Contains many functionalities for gas sensing techniques such as TDLAS, CAES, ICOS, CEAS, PS-CRDS, NICE-OHMS etc.
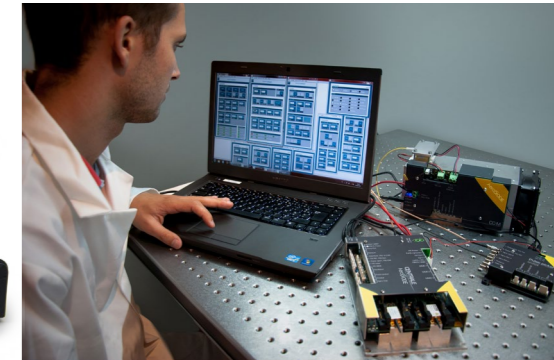- Safe start-up and operations, with safe shut-offs

Technical Specifications
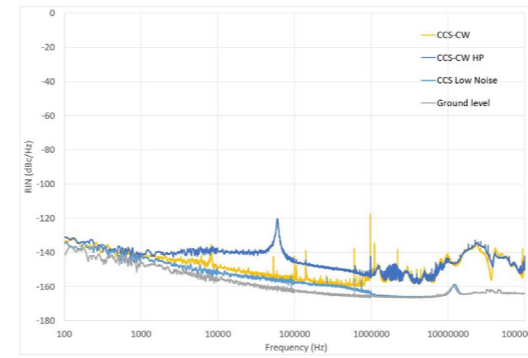
Noise level close to instrument ground level (TDLAS/CCS-low noise is light blue curve)


Front and back pannels

All Aerodiode products can be connected together and controlled by a single GUI

Electronic and Optical:

|	TDLAS
Output Current	0 - 1500 mA (special 0-2500 - contact us)
Set point resolution (@ 100 mA)	2.5 µA
Current Modulation	Internal : sin/sqr/triang External : 0-20mA/V (adjustable); Mod. bandwidth : 100kHz (500 kHz prov.)
Output compliance voltage	0 - 24 V (5V max for ultra low noise operation) - contact us for QCLs
Laser diode T° regulation	0 - 90°C
Temperature stability (typ)	<1 mK
TEC current/voltage	±3 A/4.6 V
BFM (Back Facet Monitor) / External photodiode monitoring	Yes/Yes (variable gain)
Interface/Compatibility/Libraries	USB / Win 7-10 / Hexa, DLLs, LabVIEW, Python
Power Supply	24V (adapt incl)
Dimensions (mm)	170*126.8*32.5

GUI software (modulation part):
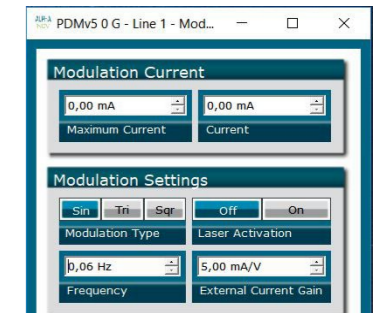
Also available at board level:
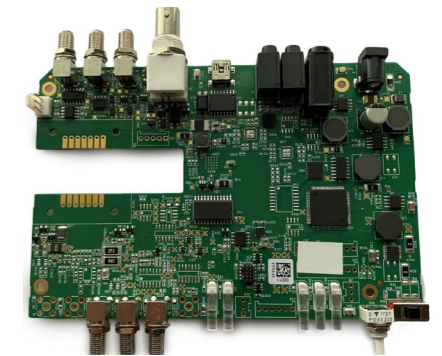
Mechanical:
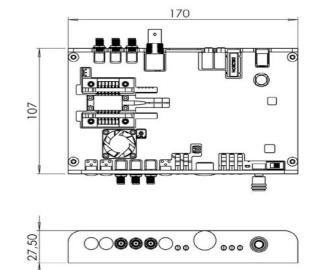
AeroDiODE

Institut d'optique d'Aquitaine
Rue François Mitterrand
33400 Talence - France

Ph. +33 (0)6 27 69 41 52

www.aerodiode.com