monocrom

UNE-EN ISO 9001 Registered Company

DAE-20050

Driver for High Power Laser Diodes

Compact design
Output current: ≤200A
QCW or CW operation mode
USB communication
Water cooling circuit included
Up to 45V compliance Voltage
No extra supply voltage required
Differential current input signal available
Laser temp sensor & PHD input signals
Reverse current protected.

Technical data

Specifications	
Output current	≤ 200 A
Max. compliance voltage	45 V
Min. compliance voltage	10 V
Supply voltage [1]	≤ 50 V
Max. output power [2]	9000 W
Max. power dissipation allowed[4]	250W
Rise time [3]	< 22 us
Fall time [3]	< 22 us
Max. pulse width [4]	CW
Output signals	
Current monitor	10 mV/A
Trigger out	TTL 5V
Trigger out delayed	TTL 5V
Laser on out	TTL 5V
Input signals	
Trigger input	TTL 5V
External current input signal [5]	TBD
Emergency stop	TTL 5V
Laser on external	TTL 5V
Interlock	TTL 5V
Flow meter [5]	I2C / TTL
Connectivity	USB 2.0 / RS485 [5]
Laser temperature sensor	NTC, 10kΩ @25ºC
Mechanics	
Input water cooling tube [6]	4 x 6 mm
Water cooling temp	> 14 ºC
Weight	500 g
Dimensions	130x75x35 mm
Operating temperature [7]	15 to 60ºC

1. Aprox. 6V above the compliance voltage. The minimum feeding voltage is 14V.
2. Instant Power. Maintaining the Heat Sink temperature below 45ºC.
3. Test conditions: VLD-=6V, I=200A. Lower rise and fall time available. Please, contact us.
4. The CW operation is allowed ≤ 60A, VLD- ≤ 4V, with 21° water refrigeration.
5. Under development.
6. Internal x external tube diameter.
7. Temperature measured by internal sensor.

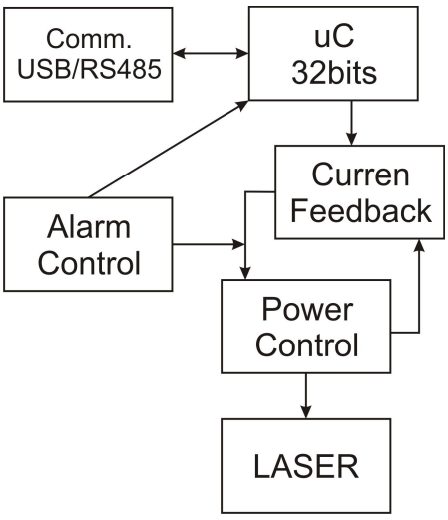
Description

The DAE-20050 is a compact and powerful laser diode driver. Current waveforms can be CW, modulated or pulsed up to 200A.

This driver includes a 32bit µC with an USB 2.0 communication port. Commands allow the full control of the driver features (pulse generation, current level, temperature limits, pulse's counter…) while keeping a great amount of information thanks to all the signals available (current level, voltage, photodiode, temperatures, delayed trigger for syncs…).

The DAE-20050 has been designed thinking in high power applications. An internal water circuit is embedded in the bases for high demanding applications.

Block diagram



C.Vilanoveta, 6
08800 Vilanova i la Geltrú
Barcelona I Spain

info@monocrom.com
T. +34 938 149 450