



CiOM S1

Diode Pumped Solid State Laser

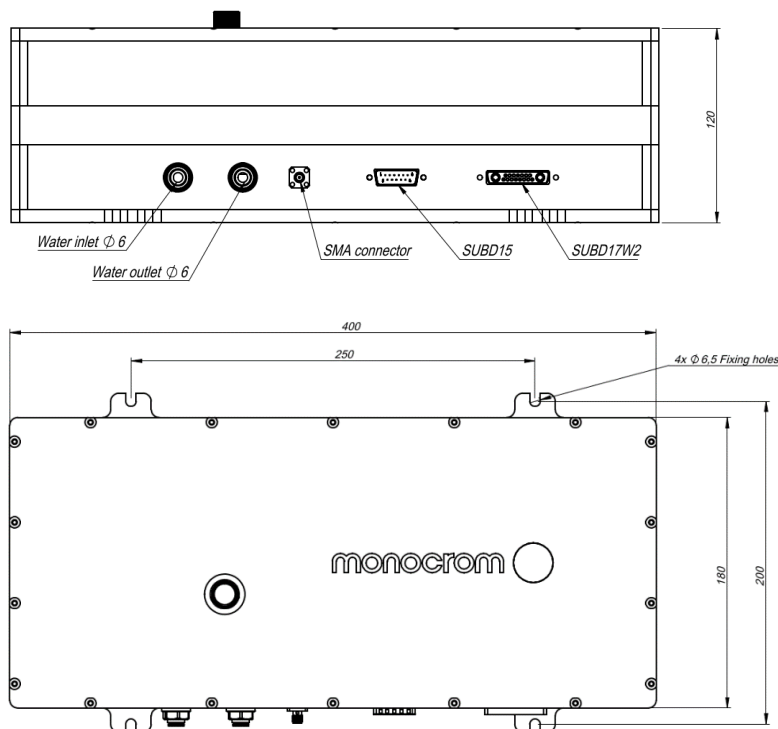
Features:

- Versatile laser system with enlarged parameter space
- Pulses of 100 – 200 ns with up to 100 μ J in energy
- Separated beam, orthogonal polarizations: 1053 & 527 nm
- Rep. rate on demand: 8 – 12 kHz
- Rep. rate range 1 – 20 kHz is possible with variable pulse length

Suitable for:

- Scientific Research

CiOM S1 Outline



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Product specification are subject to change without notice.
For complete details, please contact your local MONOCROM sales representative.

UNE EN ISO 9001:2015

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CiOM S1 | TECH Specifications

Laser Parameters^(1,2,3)

Type	Diode Pumped Solid State Laser
Repetition Rate ⁽⁴⁾ [kHz]	8 – 12
Wavelength ⁽⁵⁾ [nm]	1053 + 527 (orthogonal polarization beam)
Wavelength Tolerance [nm]	±1
Output Power ⁽⁶⁾ [W]	> 0.75 per wavelength
Pulse Energy [μJ]	up to 100
Pulse Width, FWHM ⁽⁷⁾ [ns]	100 – 200
Beam Quality, 1053 nm / 527 nm [M ²]	1.5
Far Field Beam Divergence [mrad]	1 – 2
Beam Diameter @ Exit, 1053 nm / 527 nm, FW95 [mm]	1.0
Laser Beam Point Stability [μrad]	< 50
Power Stability	< 1% @ 8 h
Pulse to Pulse Stability	< 1% rms

Operating parameters⁽⁸⁾

Diode Lifetime ⁽⁹⁾ [h]	20000
Operating Current, Oscillator [A]	up to 20
Operating Voltage, Oscillator [V]	2
Coolant	90% DI water – 10% entylenglycol
Coolant Flow [l/min]	< 1.5
Coolant Inlet Pressure [bar]	3
Coolant Temperature [°C]	20 – 30
Water Connections	6 mm push-in
Warm Up Time ⁽¹⁰⁾ [min]	< 1

Module

Operating Temperature [°C]	non-condensing - 40
Storage Temperature [°C]	between 5 and 60
Laser Head Dimensions (L x W x H) [mm]	400 x 180 x 120
Electronics Dimensions	19-inch – 3 HU
Injection Current for Oscillator	variable via potentiometer
External Trigger	IN/OUT (2 x BNC)
Electrical Supply	110 – 250 VAC @ 50/60 Hz
Laser class product (EN-60825)	4

1. This is a preliminary specification sheet; validation of specification is in process.
2. Specifications at 25 °C, at the beginning of the lifetime.
3. If any other requirements are needed, please contact us.
4. Other operational frequencies are feasible. Pulse energy may change.
5. Other wavelengths on request.
6. Value varies with rep. rate.
7. Can be adjusted within certain limits by setting different driver currents for master and amplifier. Pulse shape will be a Gaussian-Lorentzian mixture.
8. Cooling requirements are recommendations. An external chiller is needed.
9. Reduced lifetime if use in conflict to the nominal operational conditions.
10. Reaching 90% of output power.

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