



CiOM S2

Diode Pumped Solid State Laser

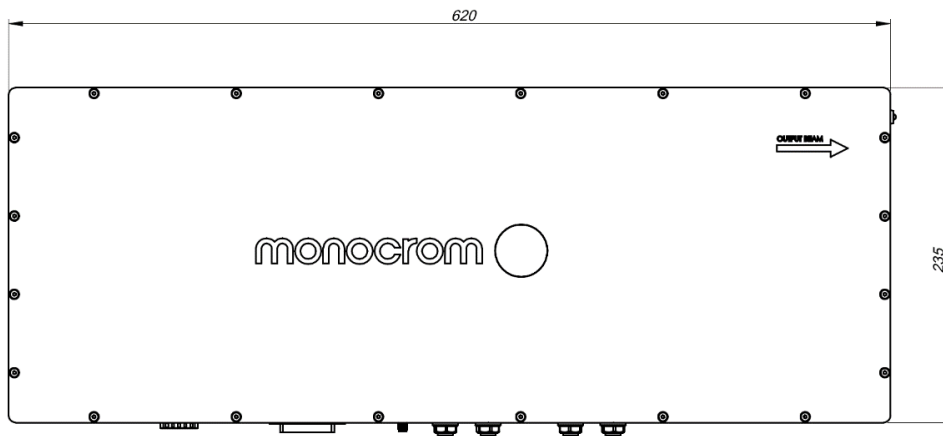
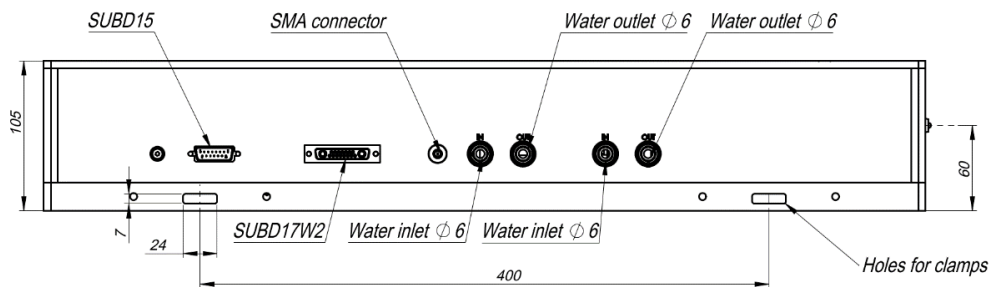
Features:

- Versatile laser system with enlarged parameter space
- Pulses of 10 ns with up to 6 mJ in energy @ 351 nm
- Rep. rate via internal clock: 8 - 12 kHz or remote
- Rep. rate range 1 – 20 kHz is possible with variable pulse lengths

Suitable for:

- Material processing
- 3D printing
- LIBS
- LiDAR
- OPO pumping
- Dye laser pumping

CiOM S2 Outline



CiOM S2

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 S2 | TECH Specifications

Laser Parameters^(1,2,3)

Type	Diode Pumped Solid State Laser
Repetition rate ⁽⁴⁾ [kHz]	up to 10
Wavelength ⁽⁵⁾ [nm]	351
Wavelength tolerance [nm]	± 0.5
Average output power ⁽⁶⁾ [W]	up to 60
Power adjustment range [%]	10 – 100
Pulse energy ⁽⁶⁾ [mJ]	up to 6
Pulse width, FWHM ⁽⁷⁾ [ns]	10
Beam quality [M ²]	< 1.5
Far field beam divergence [mrad]	2 – 3
Beam diameter, 1/e ² [mm]	2 – 3
Laser beam pointing 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 25
Operating voltage, oscillator [V]	12
Operating current, amplifier [A]	up to 50
Operating voltage, amplifier [V]	36
Repetition rate selection	internal (8, 9, 10, 11, 12 kHz) or external (stepless)
Colling solution	chiller (optional)
Coolant	90% DI water – 10% entylenglycol
Coolant flow [l/min]	< 4.5
Coolant inlet pressure [bar]	3 - 4
Coolant temperature [°C]	20 – 30
Water connections	6 mm push-in
Warm up time ⁽¹⁰⁾ [min]	< 2

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Module

Operating temperature [°C]	non-condensing - 40
Storage temperature [°C]	between 5 and 60
Laser head dimensions (L × W × H)	620 × 235 × 108
Electronics dimensions (L × W × H)	19-inch – 3 HU
Injection current for oscillator	variable via potentiometer and remote
External trigger	IN/OUT (2 × 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. 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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