



SLS200 CL Series

Precision Laser Welding Sub-System

The SLS200 CL is a materials processing sub-system that mates a pulsed, flashlamp pumped Nd:YAG laser, beam delivery fiber, and control electronics and software. When paired with a Coherent processing head, it enables high-precision spot and seam welding of thin, delicate or heat-sensitive metals, including brittle or high-carbon steels, and biocompatible materials such as titanium and Nitinol. This particular laser type is utilized because it offers unmatched power control for precise process optimization, over an extremely large dynamic range, as well as production consistency. It also delivers long term operating stability for unit-to-unit production consistency.



FEATURES & BENEFITS

- Stable output, tunable from 1% to 100%
- High pulse-to-pulse stability for process consistency
- Minimal bulk heating for welding thin or heat-sensitive materials
- Large gap bridging reduces fit-up requirements
- Supports time and energy sharing of up to six delivery fibers
- Compact package for easy integration
- FDA approved laser

APPLICATIONS

- Spot and Seam Welding
- Welding Brittle or High-Carbon Steels
- Biocompatible Materials Welding
- Hermetically Pressure-Sealed and Tear-Free Welding

SPECIFICATIONS	SLS200				
	CL8	CL8 LOP	CL16	CL16 LOP	CL60
Wavelength (nm)	1064				
Pulse Peak Power (kW)	0.1 to 2.0	0.02 to 1.0	0.2 to 6.0	0.05 to 1.0	0.2 to 7.0
Maximum Pulse Energy (J)	8.0	8.0	40	10	70
Pulse Length (ms)	0.5 to 100 ¹				
Pulse Frequency (Hz)	0.1 to 500 ¹				
Maximum Average Power (W)	10	10	50	25	220
Fiber Outputs ²	1 port	1 port	6 ports	6 ports	6 ports
Fiber Diameter	Ø 100/200 nm	Ø 50/100/200 nm	Ø 100/200/400 nm	Ø 100/200 nm	Ø 200/400/600 nm
Fiber Length	3/5/10 m – max. 50 m available ³				
Dimensions (H x W x D)	685 x 445 x 1000	685 x 445 x 1000	845 x 450 x 1000	845 x 450 x 1000	845 x 420 x 1000
Weight (kg)	140	140	180	180	230
Power Consumption (kVA)	2.2	2.2	4	4	11
Chiller (kW)	1.25 (air-cooled)		2.5 (air-cooled)		8.5 (water-cooled)

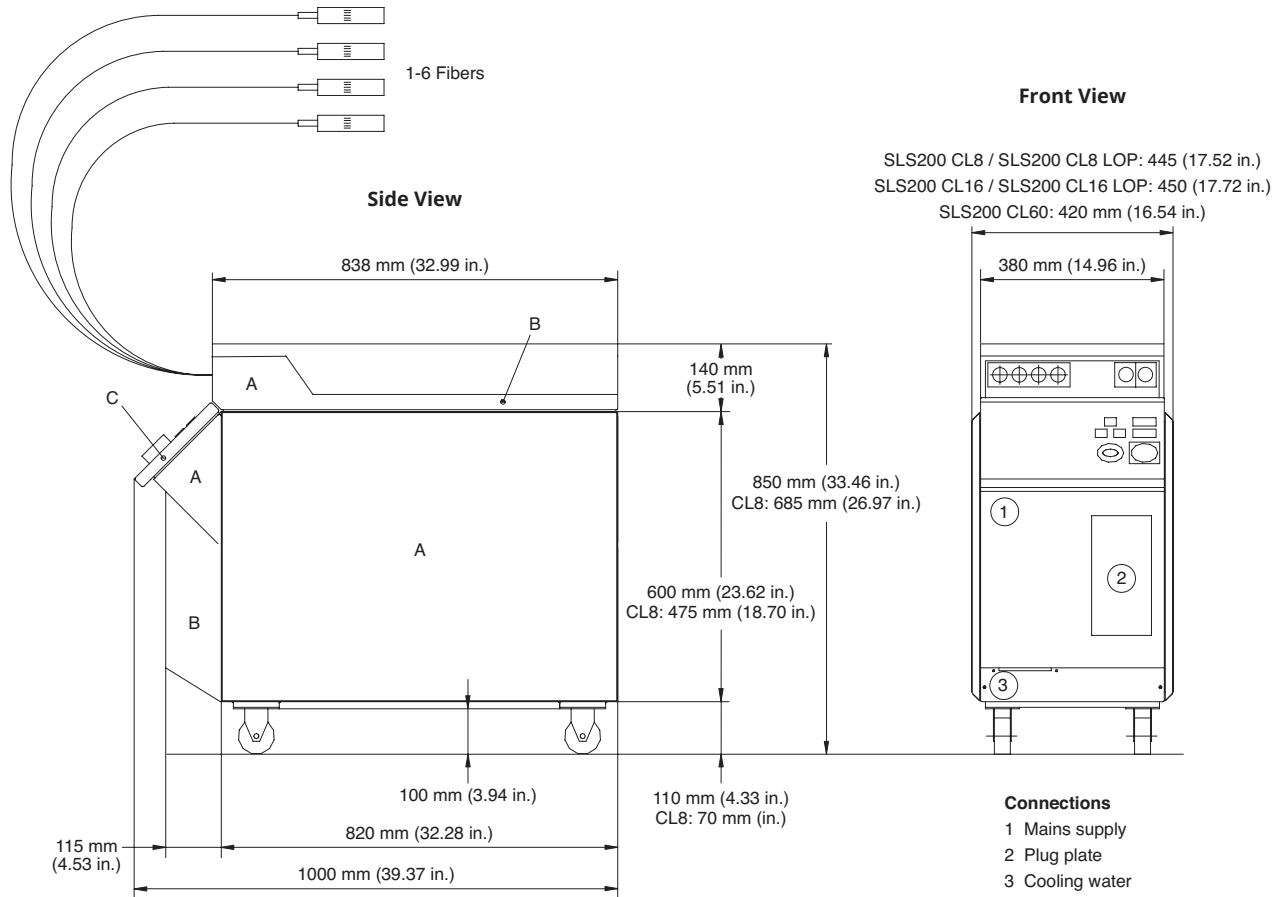
¹ Depends on laser system configuration.

² Fiber can be disconnected (tolerance 3 µm); up to 6 process fibers with numerous power and time sharing configurations.

³ Step index is standard design, several fiber designs available: NA0.22 or NA0.11; flow box flange; flat top.

MECHANICAL SPECIFICATIONS

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Weight

SLS200 CL8 / SLS200 CL8 LOP	140 kg
SLS200 CL16 / SLS200 CL16 LOP	180 kg
SLS200 CL60	210 kg



Coherent, Inc.,
5100 Patrick Henry Drive Santa Clara, CA 95054
p. (800) 527-3786 | (408) 764-4983
f. (408) 764-4646

tech.sales@coherent.com www.coherent.com

Coherent follows a policy of continuous product improvement. Specifications are subject to change without notice. Coherent's scientific and industrial lasers are certified to comply with the Federal Regulations (21 CFR Subchapter J) as administered by the Center for Devices and Radiological Health on all systems ordered for shipment after August 2, 1976.

Coherent offers a limited warranty for all SLS200 CL Series Laser Sub-Systems. For full details of this warranty coverage, please refer to the Service section at www.coherent.com or contact your local Sales or Service Representative. MC-XXX-20-0M-1020 Copyright ©2020 Coherent, Inc.