

Compact SE Series

Industrial High Power Diode Laser

The Compact SE consists of single emitter, fiber-coupled diode lasers delivering up to 100 W output power. Air-cooled design, easily integrated into production machines or lab environments with no additional chiller and tubing components required. Ideal for space constraint environments, the modular design can be used as a standalone or easily integrated for mounting into a 19" rack unit.

Available with various accessories, the Compact SE subsystem offers an extensive range of options which provide the flexibility for integration into a wide range of laser-based manufacturing systems.

FEATURES & BENEFITS

- Output power: up to 100 Watts
- Air-cooled solution
- Designed with industrial reliability
- Remote service capability
- Highest safety performance level
- Optional mounting kit for 19" rack

APPLICATIONS

- Plastics Welding
- Selective Soldering
- Heat Treatment
- Scientific Applications



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SPECIFICATIONS	Compact SE		
Nominal Power (W)	50	50	100
Power Range (%)	5 to 100		
Laser Beam Quality (BPP) (mm * mrad)	44	22	22
Power Stability Over 24-hour (%)	±2		
Pulse Frequency Range (kHz)	1		
Laser-On Signal (kHz)	1		
Analog Modulation (Hz)	600		
Wavelength (nm)	808	980	980
ELECTRICAL RATINGS			
Voltage	110 to 240 (1P/N/PE) 50/60 Hz		
Connected Load (VA)	550	500	700
Effective Power at Nominal Power (W)	500	450	550
Max. Current Consumption at 230 V (A)	3	2.5	3.6
Fuses Type (A)	4	4	4
FIBER DELIVERY SYSTEM			
Interface	SMA		
Diameter (µm)	800	200	200
Numerical Aperture	0.12	0.22	0.22
Length (m)	≤20		
Accessories (Options)	Fixed Optics, Scanners, Process control via Pyrometer, Radial Optics, Line Optics		
DIMENSIONS & WEIGHTS			
Laser Dimension (L x W x H)	360 x 222 (1/2 19") x 129 mm (3 HU) (14.17 x 8.74 x 5.08 in.)		
Laser Weight	8 kg (17.64 lbs) per unit		
ENVIRONMENTAL CONDITIONS			
Ambient Temperature in Operation	18 to 40°C (64 to 104°F)		
Storage Temperature	5 to 50°C (41 to 122°F)		
CUSTOMER INTERFACE			
Analog Power (V DC)	0 to 10		
Digital Signals (V DC)	24		
Interface for Control via PC	Ethernet via browser		
OPTIONS LASER			
Mounting Kit	19" front plate for 2 laser units or laser unit + converter box		

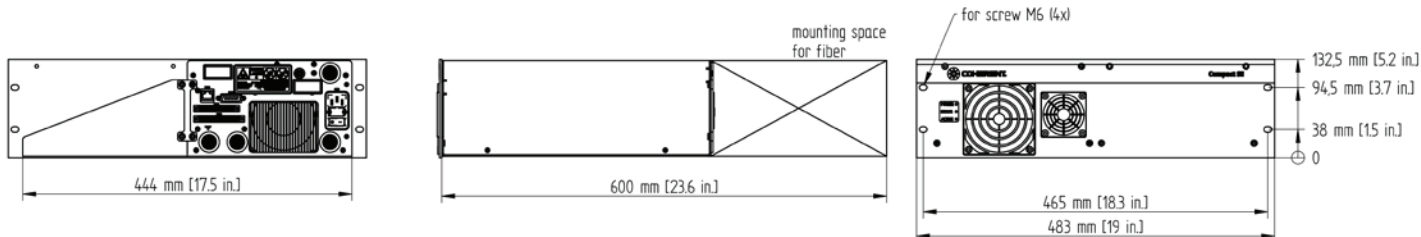
AVAILABLE ACCESSORIES

COLLIMATORS	FIXED OPTICS	FIXED OPTICS WITH INTEGRATED PYROMETER	SCANNER OPTICS
			
<p>The collimator is optimized to the requirements of Compact Series diode laser optical specifications: It is available with different collimating focal length for SMA and QBH fiber connector.</p>	<p>The processing head with fixed spot size is used for soldering or contour welding. Different focal length allow a wide variation of spot sizes to meet the requirements of the application.</p>	<p>The processing head with integrated pyrometer is used for non-contact measuring of the work piece temperature and enables closed loop temperature control. A powerful software package allows processes documentation and optimization.</p>	<p>Scanner optics is used for quasi-simultaneous welding. A broad variation of spot sizes and scanning fields are available to meet the requirements of the application.</p>
SCANNER OPTICS WITH INTEGRATED PYROMETER	OPTICS FOR RADIAL WELDING	OPTICS FOR RADIAL WELDING WITH INTEGRATED PYROMETER	LINE OPTICS
			
<p>The processing head enables quasi-simultaneous welding with the advantage of closed loop temperature control.</p>	<p>The processing head enables simultaneous welding of a radial symmetrical component without rotating part or optics. Customer specific, dimensioning and optical set up can be optimized to the welding geometry.</p>	<p>The processing head enables quasi-simultaneous welding of a radial symmetrical component with the advantage of closed loop temperature control. The programmable servomotor allows the welding without rotating the part.</p>	<p>Line optics are used for applications that require a rectangular or square spot. Customized optical layouts allow a wide variation of different foci.</p>

All processing heads are available with SMA or QBH fiber connector.

MECHANICAL SPECIFICATIONS

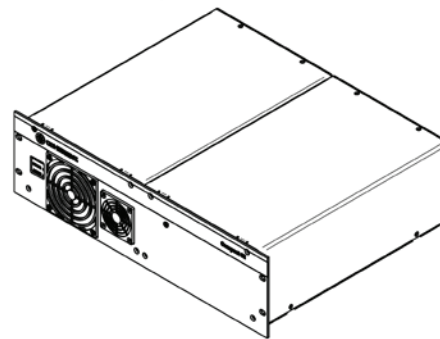
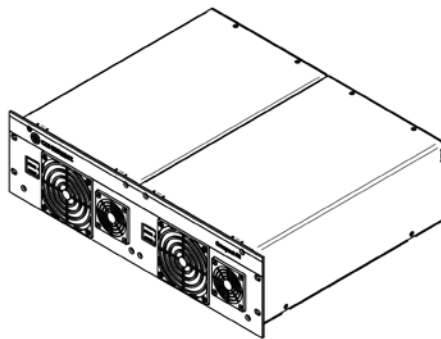
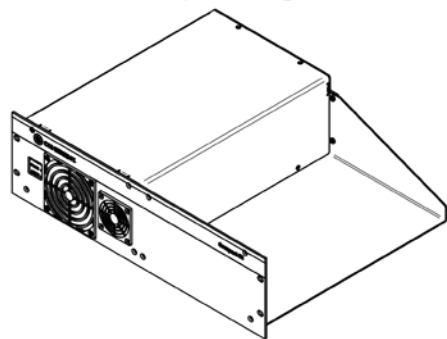
Compact SE Series



Compact SE Single

Compact SE Double

Compact SE + Converter



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Coherent offers a limited warranty for all Diode Laser 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-008-19-0M0519 Copyright ©2019 Coherent, Inc.

