

Compact-Evolution Diode Laser System (Up to 600W)



Features

- Easy-to-integrate fiber-coupled system
- Compact 19" rack-mountable unit (3HU)
- High beam quality of 22mm mrad
- Diode laser control unit (DLC)

Applications

- Heat treatment
- Plastics welding
- Selective soldering and brazing
- Scientific applications
- Thin metal welding



Based on DILAS' tailored bar technology, this system does require industrial water cooling (no DI water).

Device Specification

Optical Parameters	Units					
Optical Output Power (At the End of the Fiber)	W	150	200	300	450	600
Stability Over 24-hour (Cooling-Water $\Delta T = \pm 1.0K$)	%			± 2		
Wavelength ¹	nm			976		
Wavelength Tolerance ¹	nm			± 10		

Pilot Laser						
Wavelength	nm			650		
Output Power	mW			5		

Fiber Parameters						
Fiber Connector Type ¹				QBH (Water-Cooled)		
Numerical Aperture	NA			0.22		
Smallest Fiber Core Diameter ²	μm			200		

Electrical Parameters						
Operating Voltage	V			200-240 Single Phase		
Frequency	Hz			50/60		
Power Consumption	kVA	~0.47	~0.66	~0.87	~1.17	1.42
Overall Efficiency (Without Cooling Unit)	%	>30	>30	>35	>40	>40
Operation Mode	Hz			CW		
Max. Repetition Rate ³	Hz			1000		
Modulation Pulse Width (Min. Value) ³	μs			≥ 500		
Modulation Rise/Fall Time (Min. Value) ³	μs			<200		

Thermal Parameters						
Temperature Ambient in Operation (100% Duty Cycle)	$^{\circ}C$			18 to 40 (Non-Condensing)		
Storage Temperature	$^{\circ}C$			5 to 50		
Cooling Water Temperature	$^{\circ}C$			22		

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Interfaces

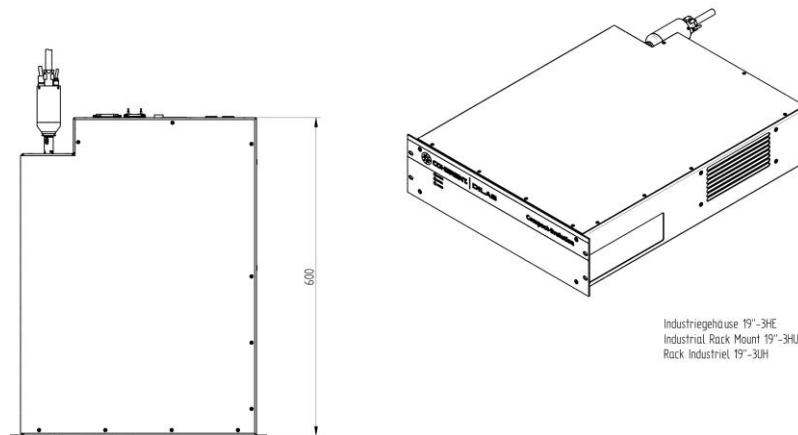
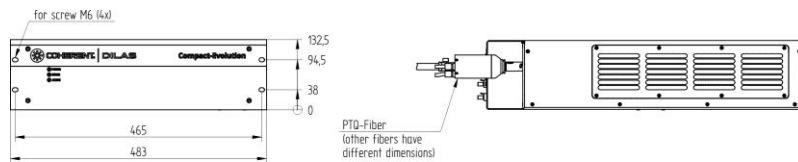
Standard Configurations - Analog/Digital Interface	V	0-10V Analog Power Setting 24V Digital Signals
Standard Configurations - Ethernet		Browser Access to DLC Software
Optional Interface		RS232, CanOpen ⁴

Mechanical Parameters

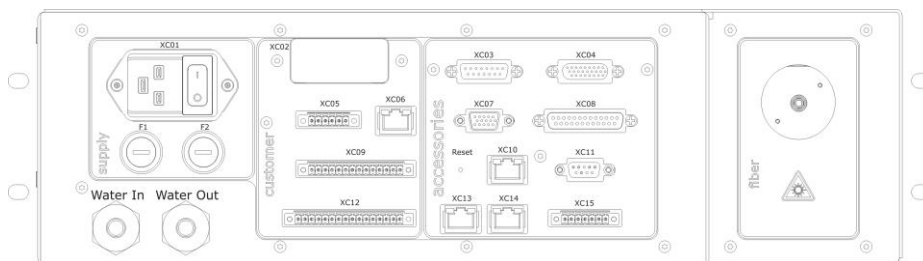
Dimension [w x h x d]	inch x mm x mm	19 inch x 132.5 x 600 (Without Bending Radius of Fiber)
Weight (Without Chiller)	kg	<30
Protection Class		IP21

- ¹Consult Coherent|DILAS for other available options.
- ²Additional fiber core diameters available: 300µm, 400µm, 600µm, 800µm.
- ³Power modulation requires external function generator.
- ⁴Other interface options are available upon request.

Package Dimension



Rear View



U.S. CFR Regulation

The manufacturer and subsequent sale of laser equipment is under the guidelines governed by the U.S. Center for Devices and Radiological Health (CDRH). In accordance to those guidelines, specifically Subchapter J of the Radiation Standards, 21 CFR, the diode laser is registered as a CLASS 4 laser product.

European Commission

In accordance to EN 60825, Safety of Laser Products, the diode laser is registered as a CLASS 4 laser product.

Products specifications are subject to change without notice. For handling precautions, please reference the general handling instruction manual. For additional information, please contact your local sales representative or visit our website at www.DILAS-ILS.COM.

DILAS Diode Laser Systems

a division of DILAS Diodenlaser GmbH
Galileo-Galilei-Straße 10
55129 Mainz
Germany

Phone: +49 (6131) 9226 400
Fax: +49 (6131) 9226 444
Email: sales.mainz@coherent.com
Web : www.DILAS-ILS.com