

COMPACT-EVOLUTION Diode Laser System

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 not require industrial water cooling (no DI water).



Device Specification

Optical Parameters	Units			
Optical Output Power (at the end of the fiber)	W	300	450	600
Stability Over 24-hour (Cooling-Water $\Delta T = \pm 0.5$)	%		<1	
Wavelength ¹	nm		976 ²	
Wavelength Tolerance ¹	nm		± 10	

Pilot Laser

Wavelength	nm	650
Output Power	mW	<1

Fiber Parameters

Fiber Connector Type ¹		QBH (Water-Cooled)
Numerical Aperture	NA	0.22
Smallest Fiber Core Diameter ³	μm	200

Electrical Parameters

Operating Voltage	V	200-240 Single Phase
Frequency	Hz	50/60
Power Consumption	kVA	760 1090 1420
Overall Efficiency (Without Cooling Unit)	%	>35
Max. Repetition Rate	Hz	1000
Modulation Pulse Width (Min. Value)	μs	>500
Modulation Rise/Fall Time (Min. Value)	μs	<200

Thermal Parameters

Thermal Parameters		
Temperature Ambient in Operation (100% Duty Cycle)	$^{\circ}\text{C}$	15 to 40 (Non-Condensing)
Storage Temperature	$^{\circ}\text{C}$	5 to 50
Cooling Water Temperature	$^{\circ}\text{C}$	22
Cooling Water Flow Rate (Min. Value)	l/min	5 7.5 10
Cooling Water Pressure (Water Inlet, Max. Value)	bar	<3
Water Connector Type		Hose Fitting 10mm

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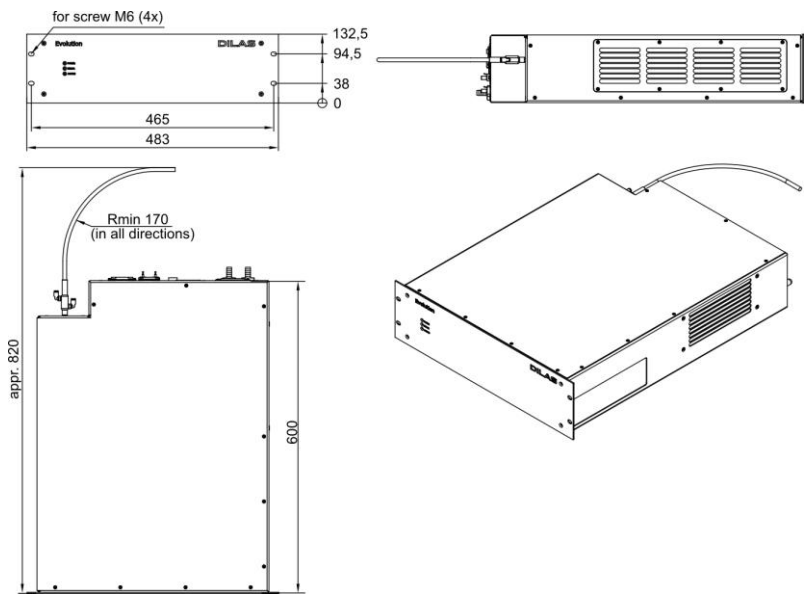
Interfaces		
Standard Configurations - Analog/Digital Interface	V	0-10V Analog Power Setting 24V Digital Signals
Options		CanOpen ⁴

Mechanical Parameters		
Dimension [w x h x d]	inch x mm x mm	19 inch x 132.5 x 600 19 inch x 132.5 x 820 (Incl. Bending Radius of Fiber)
Weight (Without Chiller)	kg	<30

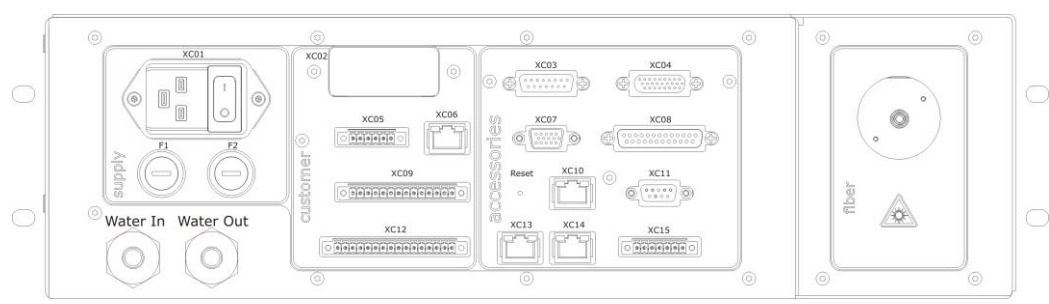
Package Includes
 COMPACT-EVOLUTION Diode Laser System Unit and 2 warning lights. Consult the COMPACT (EVOLUTION) Operating Instruction Manual for additional information.

¹Consult DILAS Industrial Laser Systems for other available options.
²Smaller wavelength tolerance on request.
³Additional fiber core diameters available: 300µm, 400µm, 600µm, 800µm. Larger diameter than listed can be used.
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.

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