

# COMPACT-EVOLUTION Diode Laser System (1.2kW)

## Features

- Easy-to-integrate fiber-coupled system
- Compact 19" rack-mountable unit (6HU)
- High beam quality of 33mm mrad
- Diode laser control unit (DLC)

## Applications

- Brazing
- Heat treatment
- Thin metal welding
- Scientific

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	1200
Stability Over 24-hour (Cooling-Water $\Delta T = \pm 0.5$ K)	%	< $\pm 1$
Wavelength	nm	976
Wavelength Tolerance <sup>2</sup>	nm	$\pm 10$

## Pilot Laser

Wavelength	nm	650
Output Power	mW	<1

## Fiber Parameters

Fiber Connector Type <sup>1</sup>		QBH (Water-Cooled)
Numerical Aperture	NA	0.22
Smallest Fiber Core Diameter <sup>3</sup>	$\mu\text{m}$	300

## Electrical Parameters

Operating Voltage	V	200-240 Single Phase
Frequency	Hz	50/60
Power Consumption	kVA	2.5
Overall Efficiency (Without Cooling Unit)	%	>40
Max. Repetition Rate	Hz	1000
Modulation Pulse Width (Min. Value)	$\mu\text{s}$	>500
Modulation Rise/Fall Time (Min. Value)	$\mu\text{s}$	<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	20
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 <sup>4</sup>

## Mechanical Parameters

Dimension [w x h x d]	inch x mm x mm	19 inch x 267 x 610 (Incl. Bending Radius of Fiber)
Weight (Without Chiller)	kg	<40
Protection Class		IP21

## Package Includes

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

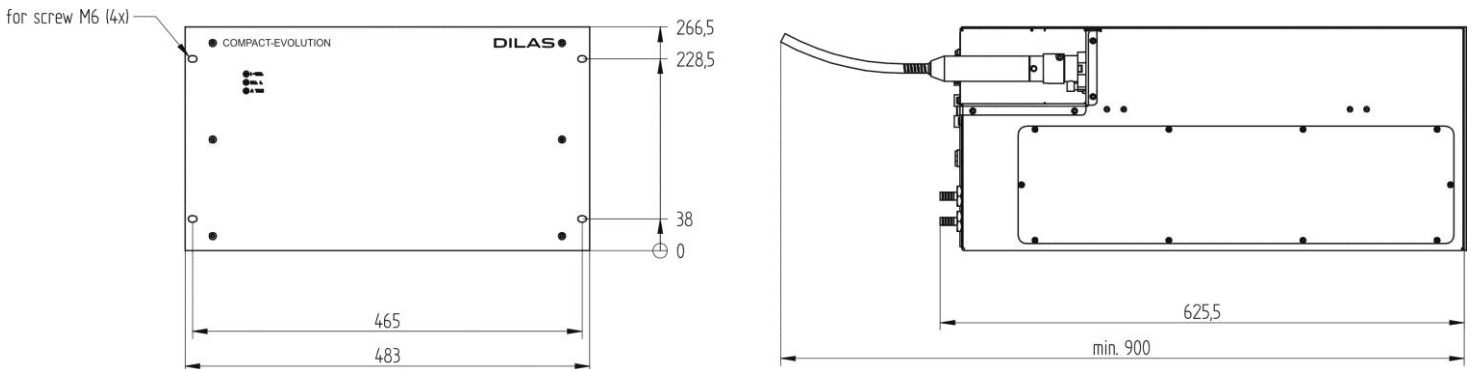
<sup>1</sup>Consult DILAS Industrial Laser Systems for other available options.

<sup>2</sup>Smaller wavelength tolerance on request.

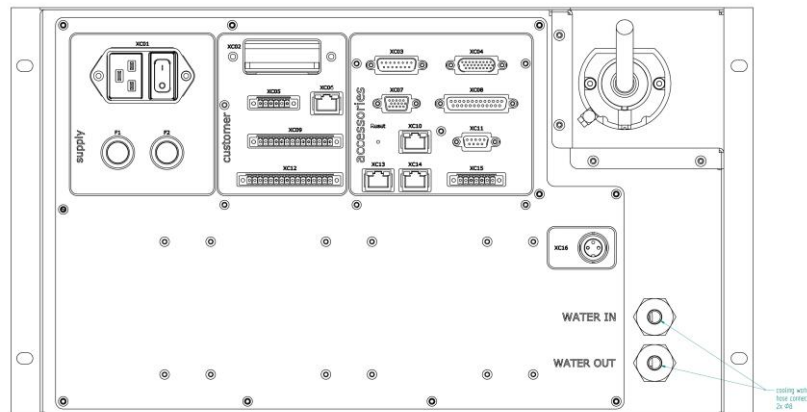
<sup>3</sup>Additional fiber core diameters available at 400µm, 600µm, 800µm. Larger diameter than listed can be used.

<sup>4</sup>Other 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](http://www.DILAS-ILS.COM).

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