

HighLight DL HPR Series

Rack-mount, Industrial Diode Laser

The Coherent HighLight™ DL HPR lasers are compact, high power, fiber delivered industrial diode laser systems that offers unmatched convenience and economy for metal processing applications such as cladding, heat treating and brazing. With its standard, 19" rack mount form factor and integrated electronics, the laser is easy to incorporate into existing systems, and is well-suited for the space-constrained environments often found in automotive manufacturing and semiconductor fabrication. Also, the HighLight™ DL HPR series uses conduction-cooled diodes which do not require deionized cooling water. Finally, its 45% wall plug efficiency minimizes energy consumption and cost of ownership.

The HighLight™ DL HPR series is available in both turn-key and customized OEM configurations, along with an extensive range of options which provide the flexibility for integration into a wide variety of laser-based manufacturing systems.

FEATURES & BENEFITS

- Output power: 1,000 to 4,000 Watts
- 19" Rack for integration
- Fiber coupled
- Homogenous beam profile
- Comprehensive accessories available

APPLICATIONS

- Heat Treatment
- Cladding
- Brazing



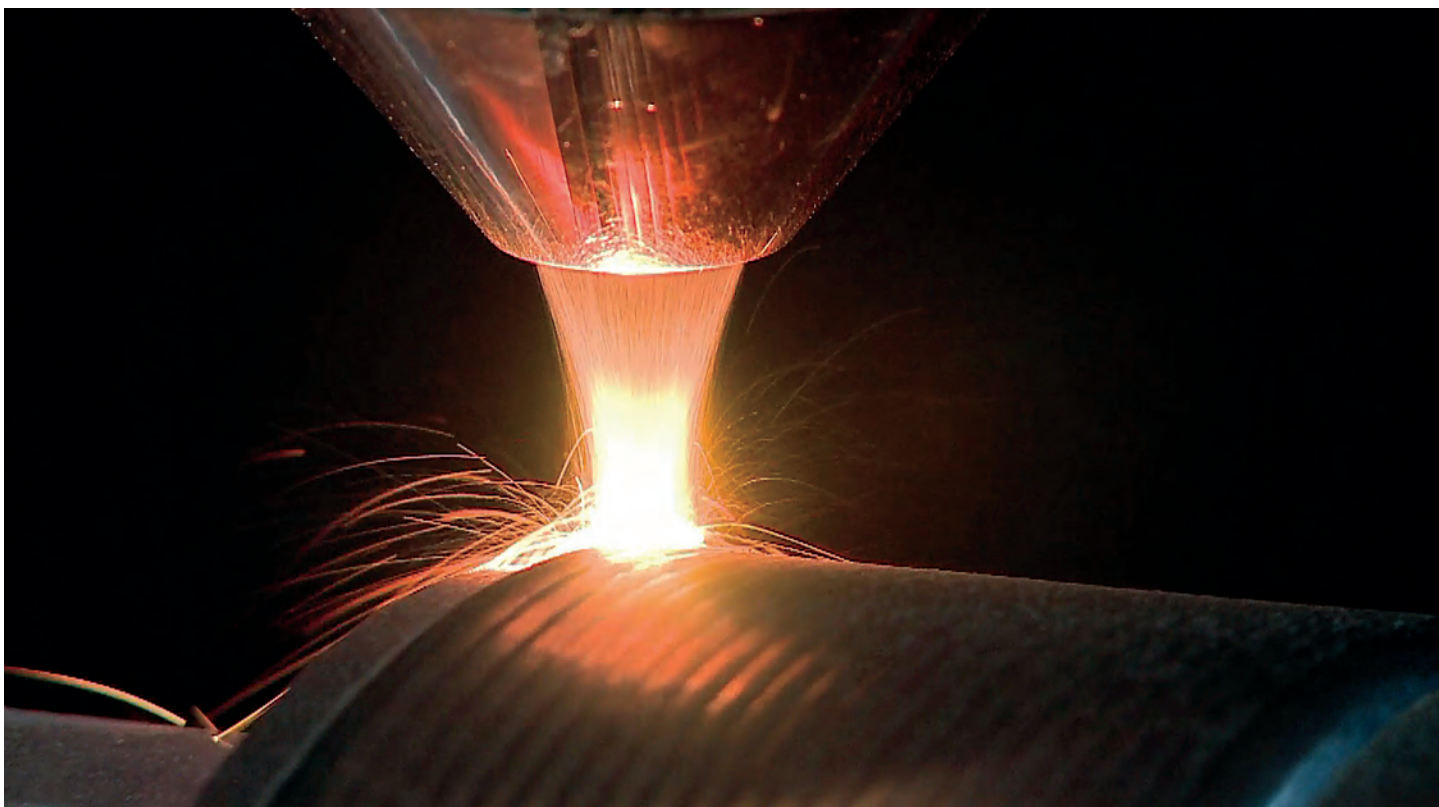
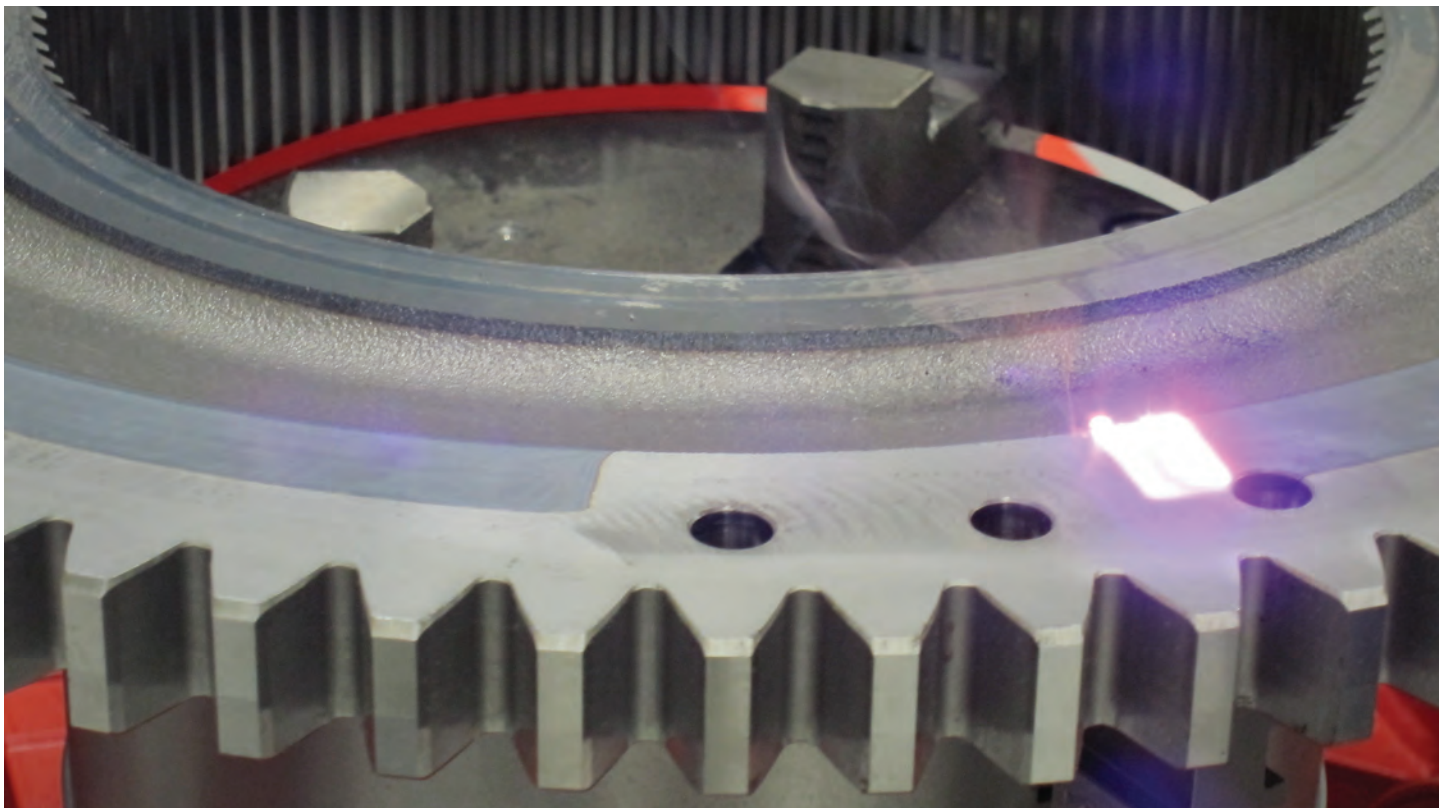
HighLight DL HPR Datasheet

SPECIFICATIONS	HighLight DL1000HPR	HighLight DL2000HPR	HighLight DL3000HPR	HighLight DL4000HPR
Nominal Power, cw (W)	1000	2000	3000	4000
Power Range (%)	10-100			
Laser Beam Quality (BPP) (mm*mrad)	100			
Power Stability Over 24-hour; Cooling Water $\Delta T = \pm 1$ K (%)	± 2			
Pulse Frequency Range LaserOn-Signal (Hz)	1000			
Analog Modulation (Hz)	600			
Wavelength (nm)	980 & 1020		940; 980 & 1020	
Wavelength Tolerance (nm)	± 10			
ELECTRICAL RATINGS				
Operating Voltage	3x AC 230/400 V ± 10 %; 50/60 Hz; PE or 3x AC 277/480 V ± 10 %; 50/60 Hz; PE			
Connected Load (kVA)	approx. 4	approx. 6	approx. 8	approx. 10
Effective Power at Nominal Power (kW)	approx. 2.5	approx. 5	approx. 6.5	approx. 9
Max. Current Consumption at 400 V (A)	< 5	< 10	< 15	< 20
Fuses Type NH (A)	16	16	16	32
COOLING				
Recommended Cooling Capacity* (kW)	2.8	4	5.2	6.5
Cooling Water Pressure (Max. Value) (bar)	< 5			
Cooling Water Temperature ($^{\circ}$ C)	22 ± 1 K			
Cooling Water Flow Rate (Min. Value) (l/min)	10		12	14
Pressure Drop (bar)	< 3.5			
Water connection Laser	2x \varnothing 15 mm hose			
Water connection Optics	2x \varnothing 12 mm hose			
FIBER DELIVERY SYSTEM				
Interface **	QBH, QD			
Diameter (μ m)	1000			
Numerical Aperture (NA)	0.2			
Length (m)	< 35			
Accessories (options)	Collimators, Focusing optics			
DIMENSIONS & WEIGHTS				
Laser Dimension; w/o connectors (L x W x H) (mm)	~652 x ~483 x ~267			
Laser Weight; w/o cooling water (kg)	<70			
ENVIRONMENTAL CONDITIONS				
Ambient Temperature ($^{\circ}$ C)	+5 to +40			
Humidity, Dew Point Temperature ($^{\circ}$ C)	≤ 19			
CUSTOMER INTERFACE				
Analogue Power Control (V DC)	0 to 10 (600 Hz max. modulation frequency)			
Digital Power Control (V DC)	24			
Interface for Control via PC	Ethernet			
OPTIONS LASER				
	Bus Interface (CanOpen, ProfiNet,...)***			

* The recommended cooling capacity covers maximum power dissipation due to diode degradation and 100% laser power absorbed at an internal or external beam dump.

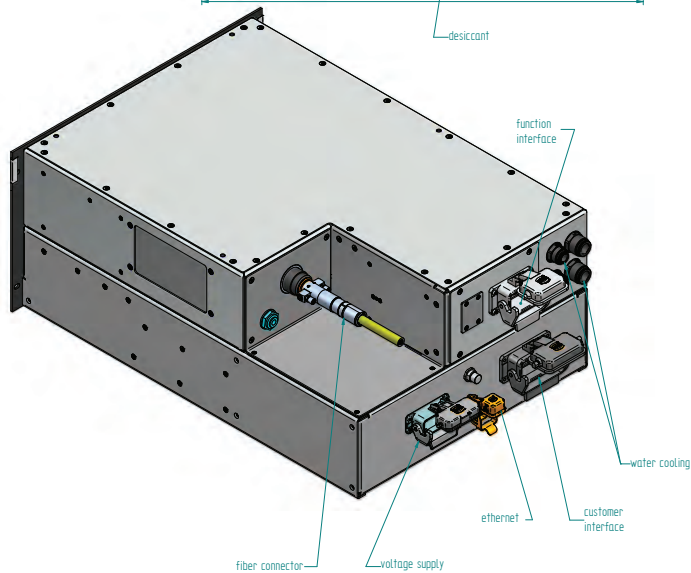
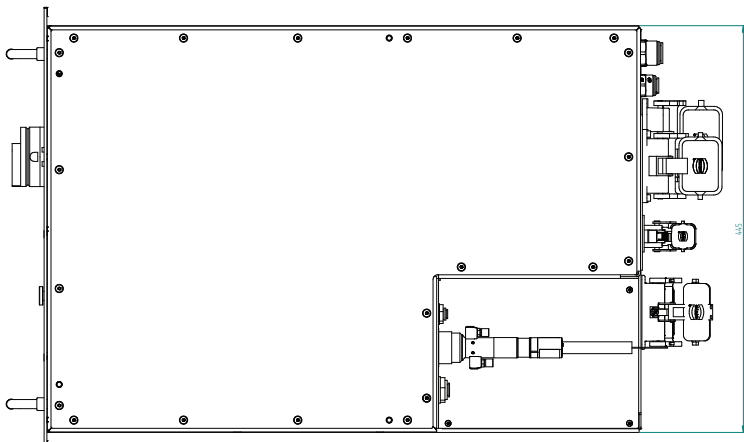
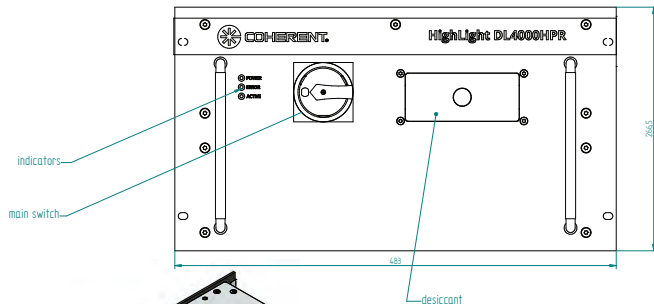
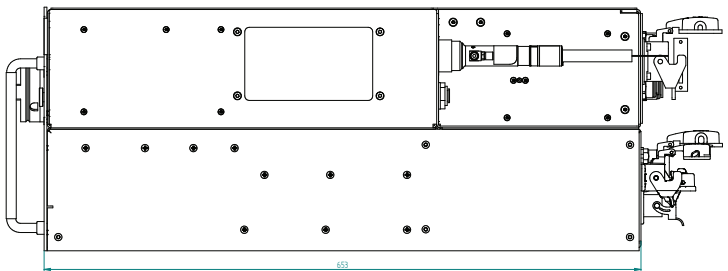
** Others on demand.

*** Other options are available upon request.



MECHANICAL SPECIFICATIONS

HighLight DL HPR Series



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Coherent follows a policy of continuous product improvement. Specifications are subject to change without notice.

Coherent offers a limited warranty for all HighLight Lasers. 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. Printed in the U.S.A. MC-020-18-0M0819 Copyright ©2018 Coherent, Inc.



Coherent-Dilas industrial lasers are designed in strict accordance with the respective safety regulations. We certify that each laser manufactured by our company complies with FDA Radiation Performance Standards, 21 CFR Subchapter J and with IEC 60825. Warning labels as shown in the figure appear on each Coherent-Rofin laser to indicate the respective classification.