



SUPER RAPID-HE

Industrial, High Repetition Rate Picosecond Laser

Features

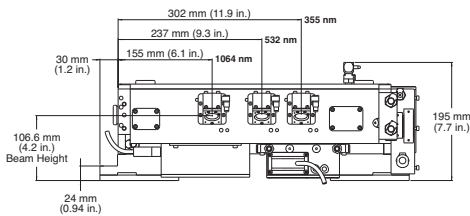
- 10W average power at 1000 kHz
- 0 kHz to 1000 kHz repetition rate, pulse on demand
- Ps-pulses with up to 200 μ J energy, 10 MW-range peak power, and high contrast versus background
- High power stability in a high quality beam, $M^2 < 1.3$ at all rep rates
- Compact mono-block laser head, sealed, temperature controlled
- Intuitive software on industrial PC, interface and dll-software for external control
- Easy integration into work station
- Low maintenance and low cost of ownership



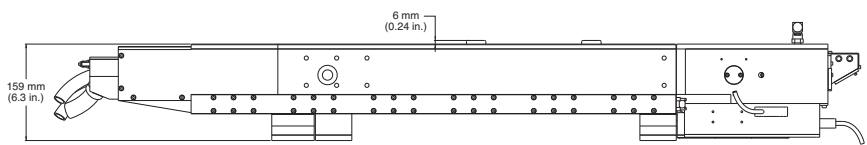
Mechanical Specifications

Laser Head

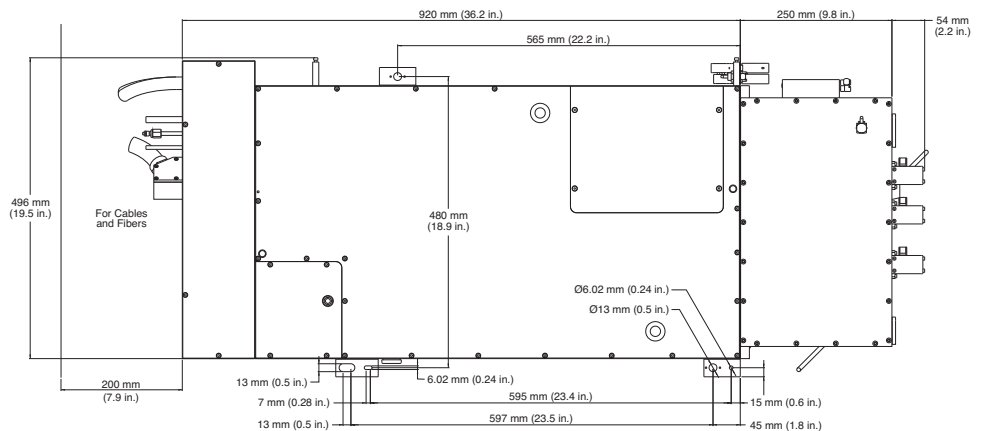
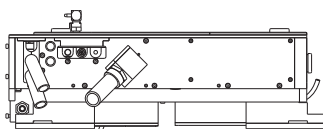
Front View



Side View



Rear View



Top View

Superior Reliability & Performance

SUPER RAPID-HE

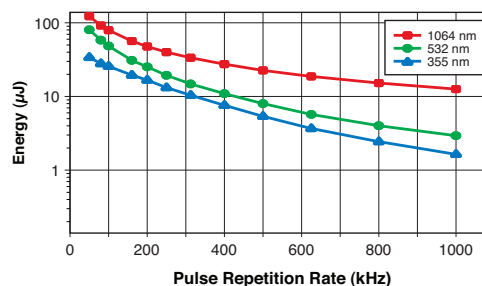
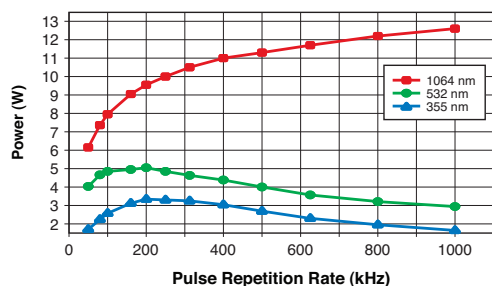
Industrial, High Repetition Rate Picosecond Laser

System Specifications

Laser Material	Nd:Vanadate (Nd:YVO ₄)		
Wavelength (nm)	1064		
Pulse Duration ¹ (ps)	<15		
Average Power ¹ (W)	>10 at 1000 kHz		
Pulse Energy ¹	>200 μJ at 0 kHz to 10 kHz, 20 μJ at 1064 nm and 500 kHz		
Pulse Energy Instability (% rms)	<1 at 1064 nm and 500 kHz		
Beam Pointing Instability (μrad/°C)	50		
Pulse Energy Contrast	>1000:1 at 1064 nm and 500 kHz		
Repetition Rate	0 kHz to 1000 kHz, TTL-trigger, pulse on demand		
Beam Quality	M ² <1.3		
Polarization	>>100:1		
Electric Supply	100 to 230 V, 50/60 Hz, 2 kW		
Control Unit			
Dimensions (W x D x H)	555 x 600 x 685 mm ³		
Weight	108 kg (238 lbs.)		
Warm-Up Time (minutes)	<40 from chiller start		
Repetition Rate (kHz)	Average Power (W)		
	1064 nm	532 nm	355 nm
<10	2	1	contact us
50	4.5	2.5	1
100	6.5	3.2	1.8
200	8	3.5	2.5
500	9	2	1.5
1000	10	2	1.5
Repetition Rate (kHz)	Pulse Energy (μJ)		
	1064 nm	532 nm	355 nm
<10	200	100	contact us
50	90	50	20
100	65	32	18
200	40	17.5	12.5
500	18	4	3
1000	10	2	1.5

¹ Depends on pulse repetition rate.

Typical Data



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

Coherent offers a limited warranty for all RAPID 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.



www.Coherent.com

Coherent, Inc.
 5100 Patrick Henry Drive
 Santa Clara, CA 95054
 phone (800) 527-3786
 (408) 764-4983
 fax (408) 764-4646
 e-mail tech.sales@Coherent.com

Benelux +31 (30) 280 6060
 China +86 (10) 8215 3600
 France +33 (0)1 8038 1000
 Germany +49 (6071) 968 333
 Italy +39 (02) 31 03 951
 Japan +81 (3) 5635 8700
 Korea +82 (2) 460 7900
 Taiwan +886 (3) 505 2900
 UK +44 (1353) 658 833

