COHERENT®

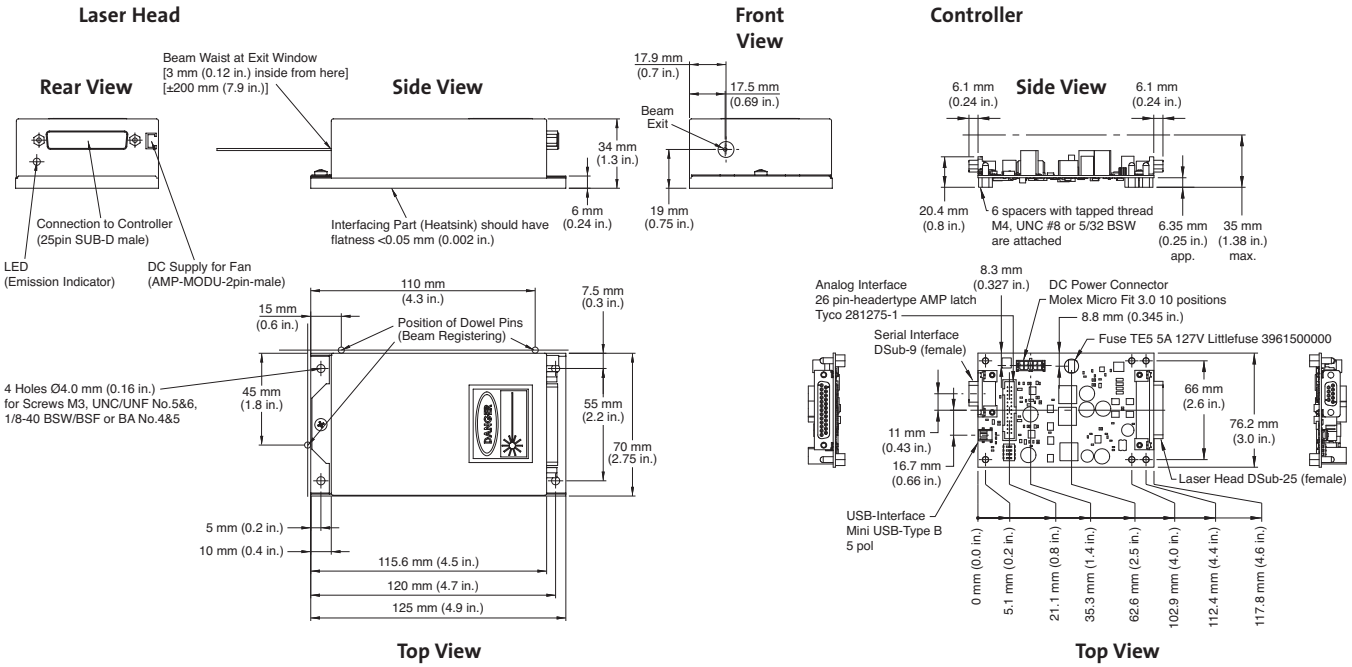
Sapphire 460, 488, 561 and 568

Low Power, CW Blue and Yellow Lasers

Features

- Proven reliability
- Low cost of ownership
- Superior beam quality
- Outstanding power stability
- Analog and digital interface
- 10 mW at 460 nm
- Up to 150 mW at 488 nm
- Up to 200 mW at 561 nm and 568 nm

Mechanical Specifications



Superior Reliability & Performance

Sapphire™ 460, 488, 561 and 568

Low Power, CW Blue and Yellow Lasers

System Specifications

Sapphire	460 LP	488 LP	561 LP	568 LP
Wavelength[1] (nm)	460 ±2	488 ±2	560 ±2	567 ±2
Output Power[2] (mW)	10	10, 20, 25, 30, 40, 50, 75, 100, 150	50, 75, 100, 150, 200	
Spatial Mode	TEM_{00}, M^2 <1.1			
Beam Asymmetry	0.9 to 1.1			
Beam Diameter at $1/e^2$	0.70 ±0.05 mm			
Beam Divergence (mrad)	<1.2		<1.3	
Pointing Stability (over 2 hours after warm-up and ±3°C)(µrad)	<30			
Noise				
20 Hz to 2 MHz, rms	<0.25%			
20 Hz to 20 kHz, peak-to-peak	<1%			
Long-Term Power Stability (2 hours, ±3°C)	<2%			
Warm-Up Time	<5 min.			
Polarization Ratio	>100:1, vertical			
Static Alignment Tolerances[3]				
Beam Position	±0.25 mm			
Beam Angle	±2.5 mrad			
Beam Waist Position at Exit Window	±200 mm[4]			

Utility and Environmental Requirements

Operating Voltage[5]	+10.8 to 15 VDC	
Power Consumption	<60W	
Maximum Laser Head Baseplate Temp.[6]	+55°C (131°F), +50°C (122°F)[7]	+50°C (122°F)
Maximum Heat Dissipation of Head	25W (baseplate at 55°C)	25W (baseplate at 50°C)
Ambient Temperature		
Operating Conditions	10 to 40°C (50 to 104°F) non-condensing	
Non-Operating Condition	-30 to 60°C (-22 to 140°F)	
Shock Tolerance (6 ms)	7g laterally, 15g vertically	
Dimensions (L x W x H)		
Laser Head	125 x 70 x 34 mm (4.9 x 2.8 x 1.3 in.)	
Controller	117.8 x 76.2 x 30 mm (4.6 x 3.0 x 1.2 in.)	
Heat Sink (optional)	200 x 80 x 50 mm (7.9 x 3.2 x 2 in.)	
DC Power Supply (optional)	171 x 104 x 55 mm (6.7 x 4.1 x 2.2 in.)	
Cable — Laser Head to Controller	2m (6.56 ft.), optional 5m (16.4 ft.)	
Weights		
Laser Head	0.35 kg (0.77 lbs.)	
Controller	0.25 kg (0.55 lbs.)	
Heat Sink (optional)	0.75 kg (1.65 lbs.)	
DC Power Supply (optional)	0.95 kg (incl. line cable) (2.1 lbs.)	
Packaged System (head+controller+cable+manual)	1.7 kg (3.7 lbs.)	
Cable — Laser Head to Controller	0.3 kg (0.66 lbs.)	

Measurement Tools

		Part Number
Meter	FieldMax™II-TO	1098579
Sensor	PS10Q	1098400

[1] Laser-to-laser tolerance. With residual IR emission less than 0.1 mW.
[2] Output power is variable via RS-232 or analog interface from 10% to 110%. Specifications are valid for 100% power. Recommended power range is 70 to 110% power.
[3] Static alignment tolerances are relative to the right bottom edge (in beam direction).
[4] 200 mm is ~30% of Raleigh Range at 561/568 nm; 200 mm is ~25% of Raleigh Range at 460/488 nm.
[5] If user-supplied, the DC power supply has to meet the following requirements: Power >60W; ripple <5% peak-to-peak; line regulation <0.5%.
[6] With factory-provided or other adequate heat sink.
[7] Sapphire 488-40, 50, 75, 100 and 150 mW models limited to baseplate temperature of +50°C (+122°F).

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

Coherent's scientific and industrial lasers are certified to comply with the Federal Regulations (21 CFR Subchapter J) as administered by the Center for Devices and Radiological Health on all systems ordered for shipment after August 2, 1976.

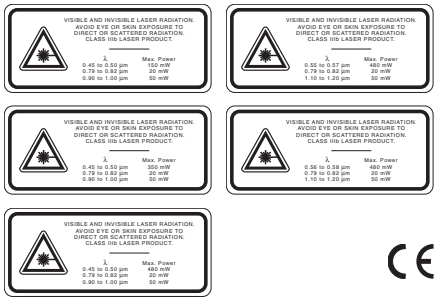
Coherent offers a limited warranty for all Sapphire lasers. For full details of this warranty coverage, please refer to the Service section at www.Coherent.com or contact your local Sales or Service Representative.

COHERENT®

www.Coherent.com

Coherent, Inc.
5100 Patrick Henry Drive
Santa Clara, CA 95054
phone (800) 527-3786
(408) 764-4983
fax (800) 362-1170
(408) 988-6838
e-mail tech.sales@Coherent.com

Benelux +31 (30) 280 6060
China +86 (10) 6280 0209
France +33 (0)1 6985 5145
Germany +49 (6071) 968 333
Italy +39 (02) 34 530 214
Japan +81 (3) 5635 8700
Korea +82 (2) 460 7900
UK +44 (1353) 658 833



CE

Printed in the U.S.A. MC-042-09-0M0609