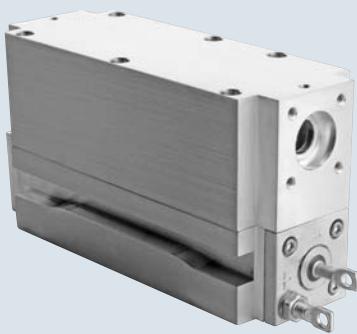




COHERENT®

Genesis MX MTM-Series (OEM)

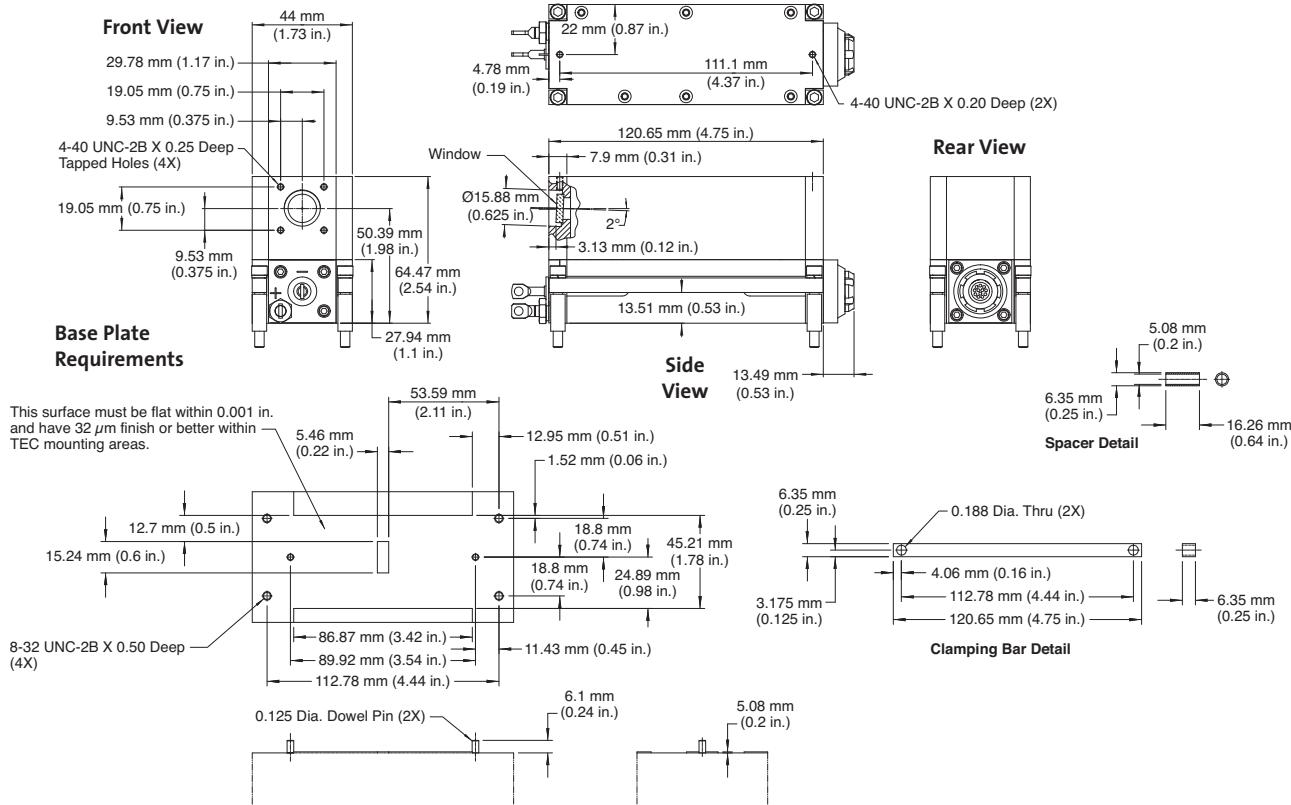
High-Power Optically Pumped Semiconductor Lasers (OPSL)



Features

- OEM laser head designed for easy integration
- OPSL reliability
- Compact, efficient design
- Optimum wavelengths and power for superior results
 - 1W and 2W at 460 nm
 - 2W at 480 nm
 - 3W and 5W at 488 nm and 514 nm
 - 532 nm for strong absorption by retinal pigment epithelium
 - Up to 8W at 532 nm
 - 2W at 561 nm
 - 5W at 577 nm
 - 577 nm matches peak absorption in oxyhemoglobin

Mechanical Specifications



Superior Reliability & Performance

Genesis™ MX MTM-Series (OEM)

High-Power Optically Pumped Semiconductor Lasers (OPSL)

Optical Specifications ¹	Genesis	Preliminary	Preliminary	Preliminary
		MX 460-1000/2000	MX 480-2000	MX 488-3000/5000
	Wavelength (nm)	460 \pm 3	480 \pm 3	488 \pm 3
	Output Power (mW)	1000, 2000	2000	3000, 5000
	Spatial Mode		Multimode	
	Bandwidth (nm)		<0.5	
	Beam Waist Dimensions (mm)			
	Horizontal Size ² (FW, 1/e ² , mm)	0.14	0.17	0.17
	Vertical Size ² (FW, 1/e ² , mm)	0.11	0.13	0.16
	Location ^{2,3} (mm)	-60	-60	-60
	Beam Divergence			
	Horizontal ² (FW, 1/e ² , mrad)	<18	<20	<20
	Vertical ² (FW, 1/e ² , mrad)	<16	<20	<20
	Collimated Version			
	Beam Waist Diameter ² (1/e ² , mm)	1.4	1.6	1.6
	Beam Divergence ² (1/e ² , mrad)	1.3	1.5	1.5
	Beam Waist Location ² (m)		0.25 \pm 0.25	
	M ²			
	Horizontal		<7	
	Vertical		<7	
	Pointing Stability ⁴ (μ rad/°C)		<5	
	Noise			
	10 Hz to 10 MHz (% rms)		<1	
	10 Hz to 5 kHz (% peak-to-peak)		<10	
	Polarization Ratio		Horizontal, >100:1	
	Direct Modulation ⁵		Available	
Utility and Environmental Requirements	Operating Diode Current (A)	<22.5, <27	<27	<30, <33
	Maximum Diode Current (A)	<27, <32	<32	<36, <40
	Diode Voltage (V)		1.5 to 2.2	
	Cooling Requirements ⁶		Active cooling required	
	Case Temperature (°C)		25 \pm 2	
	Humidity		Non-condensing	
	Dimensions (L x W x H)		121 x 44 x 65 mm (4.76 x 1.73 x 2.56 in.)	
	Weight			
	Laser Head (g)		730 \pm 10	

¹ Optical parameters measured at the output plane of the laser head. Unless noted all parameters valid for the lifetime of the unit.

² Typical value.

³ Measured from the output face, negative value corresponds to a location inside the head; positive outside.

⁴ Measured at the output window: tolerance relative to the nominal center of the output window and perpendicular to the mounting plane.

⁵ Theoretical limit is >1 MHz; actual performance will be limited by the diode-driver (not included).

⁶ Contact integration support for options on air-cooling TEC or waterplate.

Genesis™ MX MTM-Series (OEM)

High-Power Optically Pumped Semiconductor Lasers (OPSL)

Optical Specifications ¹	Genesis	PRELIMINARY	MX 514-3000/5000	MX 532-3000/5000/8000
	Wavelength (nm)	514 \pm 3	532 \pm 3	
	Output Power (mW)	3000, 5000	3000, 5000, 8000	
	Spatial Mode	Multimode		
	Bandwidth (nm)	<0.5		
	Beam Waist Dimensions (mm)			
	Horizontal Size ² (FW, 1/e ² , mm)	0.17		
	Vertical Size ² (FW, 1/e ² , mm)	0.13		
	Location ^{2,3} (mm)	-60		
	Beam Divergence			
	Horizontal ² (FW, 1/e ² , mrad)	<20		
	Vertical ² (FW, 1/e ² , mrad)	<20		
	Collimated Version			
	Beam Waist Diameter ² (1/e ² , mm)	1.8		
	Beam Divergence ² (1/e ² , mrad)	1.4		
	Beam Waist Location ² (m)	0.25 \pm 0.25		
	M ²			
	Horizontal	<7		
	Vertical	<7		
	Pointing Stability ⁴ (μ rad/°C)	<5		
	Noise			
	10 Hz to 10 MHz (% rms)	<1		
	10 Hz to 5 kHz (% peak-to-peak)	<10		
	Polarization Ratio	Horizontal, >100:1		
	Direct Modulation ⁵	Available		
Utility and Environmental Requirements	Operating Diode Current (A)	<30, <33	<30, <33, <38	
	Maximum Diode Current (A)	<36, <40	<36, <40, <45	
	Diode Voltage (V)	1.5 to 2.2		
	Cooling Requirements ⁶	Active cooling required		
	Case Temperature (°C)	25 \pm 2		
	Humidity	Non-condensing		
	Dimensions (L x W x H)	121 x 44 x 65 mm (4.76 x 1.73 x 2.56 in.)		
	Weight			
	Laser Head (g)	730 \pm 10		

¹ Optical parameters measured at the output plane of the laser head. Unless noted all parameters valid for the lifetime of the unit.

² Typical value.

³ Measured from the output face, negative value corresponds to a location inside the head; positive outside.

⁴ Measured at the output window: tolerance relative to the nominal center of the output window and perpendicular to the mounting plane.

⁵ Theoretical limit is >1 MHz; actual performance will be limited by the diode-driver (not included).

⁶ Contact integration support for options air-cooling TEC or waterplate.

Genesis™ MX MTM-Series (OEM)

High-Power Optically Pumped Semiconductor Lasers (OPSL)

Optical Specifications ¹	Genesis	PRELIMINARY MX 561-2000	MX 577-3000/5000
	Wavelength (nm)	561 ±3	577 ±3
	Output Power (mW)	2000	3000, 5000
	Spatial Mode	Multimode	
	Bandwidth (nm)	<0.5	
	Beam Waist Dimensions (mm)		
	Horizontal Size ² (FW, 1/e ² , mm)	0.17	0.17
	Vertical Size ² (FW, 1/e ² , mm)	0.13	0.13
	Location ^{2,3} (mm)	-60	0.13
	Beam Divergence		
	Horizontal ² (FW, 1/e ² , mrad)	<20	
	Vertical ² (FW, 1/e ² , mrad)	<20	
	Collimated Version		
	Beam Waist Diameter ² (1/e ² , mm)	1.8	
	Beam Divergence ² (1/e ² , mrad)	1.4	
	Beam Waist Location ² (m)	0.25 ±0.25	
	M ²		
	Horizontal	<7	
	Vertical	<7	
	Pointing Stability ⁴ (μrad/°C)	<5	
	Noise		
	10 Hz to 10 MHz (% rms)	<1	
	10 Hz to 5 kHz (% peak-to-peak)	<10	
	Polarization Ratio	Horizontal, >100:1	
	Direct Modulation ⁵	Available	
Utility and Environmental Requirements	Operating Diode Current (A)	<33	<30, <33
	Maximum Diode Current (A)	<40	<36, <40
	Diode Voltage (V)	1.5 to 2.2	
	Cooling Requirements ⁶	Active cooling required	
	Case Temperature (°C)	25 ±2	
	Humidity	Non-condensing	
	Dimensions (L x W x H)	121 x 44 x 65 mm (4.76 x 1.73 x 2.56 in.)	
	Weight		
	Laser Head (g)	730 ±10	

¹ Optical parameters measured at the output plane of the laser head. Unless noted all parameters valid for the lifetime of the unit.

² Typical value.

³ Measured from the output face, negative value corresponds to a location inside the head; positive outside.

⁴ Measured at the output window: tolerance relative to the nominal center of the output window and perpendicular to the mounting plane.

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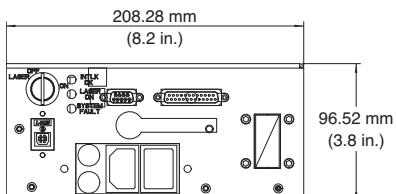
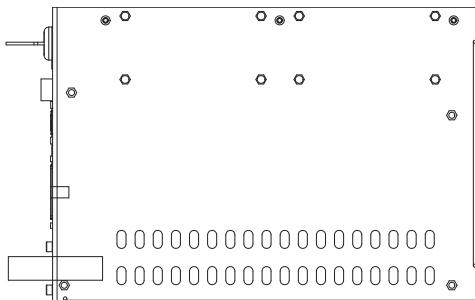
Genesis™ MX MTM-Series (OEM)

High-Power Optically Pumped Semiconductor Lasers (OPSL)

Mechanical Specifications

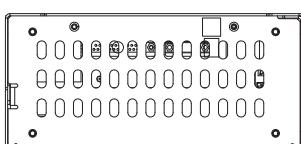
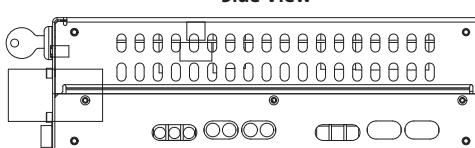
Genesis MX-Series High Current OEM Power Supply

Top View



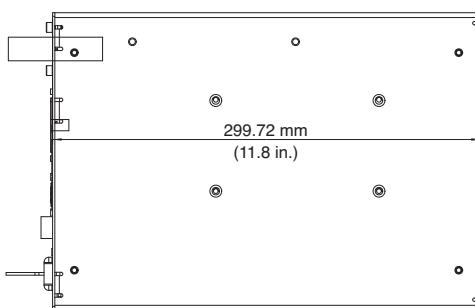
Front View

Side View



Rear View

Bottom View



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 Genesis MX-Series 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.



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