COHERENT®

Genesis MX STM-Series

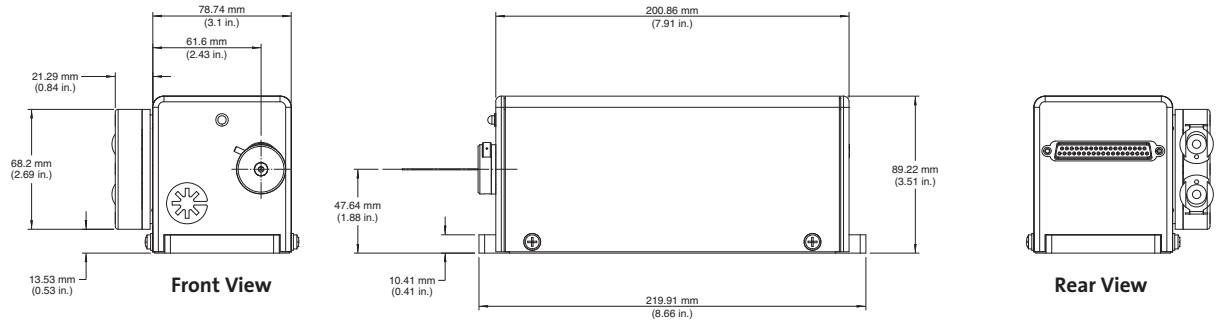
High-Power Optically Pumped Semiconductor Lasers (OPSL)

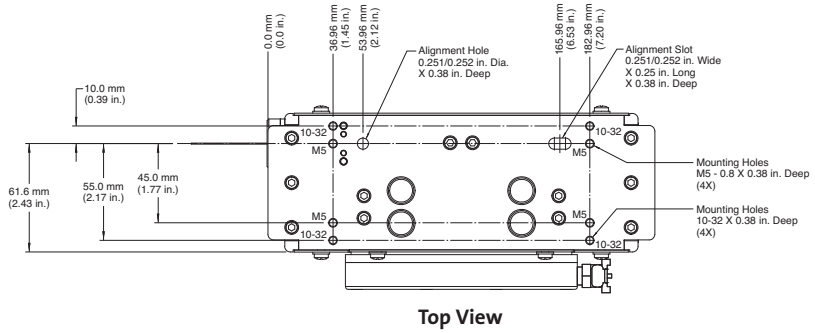
Features

- End user, turn key solution
- Choice of air or water-cooled solutions
- OPSL reliability
- Compact, efficient design
- Optimum wavelengths and power for superior results
  - 500 mW at 460 nm
  - 500 mW at 480 nm
  - 500 mW and 1W at 488 nm
  - 500 mW and 1W at 514 nm
  - 500 mW and 1W at 532 nm
  - 500 mW at 561 nm
  - 500 mW and 1W at 577 nm

Mechanical Specifications

MX-Series STM
Water-cooled version





Superior Reliability & Performance

Genesis™ MX STM-Series

High-Power Optically Pumped Semiconductor Lasers (OPSL)

	Genesis	Preliminary MX 460-500	Preliminary MX 480-500	Preliminary MX 488-500/1000
Optical Specifications[1]	Wavelength (nm)	460 ±3	480 ±3	488 ±3
	FWHM Linewidth (GHz)		<30	
	Pulse Format		CW	
	Spectral Purity (%)		>99	
	Output Power (mW)	500	500	500, 1000
	Spatial Mode		TEM00	
	Beam Quality (M^2)		<1.1	
	Beam Circularity[2]		1.0 ±0.1	
	Beam Waist Diameter (mm)(FW, $1/e^2$)		1.0 ±0.1	
	Beam Divergence (mrad)(FW, $1/e^2$)		0.7 ±0.1	
	Beam Waist Location[3] (m)		±0.25	
	Beam Pointing Stability[4,5] (µrad/°C)		<5	
	Horizontal Beam Position Tolerance[5] (mm)		±<1.0	
	Vertical Beam Position Tolerance[5] (mm)		±<1.0	
	Beam Pointing Tolerance[5] (mrad)		<5	
	Polarization Ratio		Linear, >100:1	
	Polarization Direction		Vertical, ±5°	
	Noise (%, rms)(10 Hz to 10 MHz)		<0.1	
	Power Stability[6] (%)(pk-pk)		±<1	
	Warm-Up Time (minutes)		<10	
	CDRH Compliant		Yes	
Electrical Specifications	Operating Voltage (VAC)		100 to 240	
	Frequency (Hz)		50 to 60	
	Power Consumption (W)		500	
Environmental Conditions	Ambient Temperature (°C)			
	Operating		10 to 40	
	Non-Operating		-10 to 60	
	Relative Humidity[7] (%)		5 to 95	
	CE Marking		IEC 61010-1/EN 61010-1	
	Dimensions (L x W x H)			
	Laser Head[8]		220 x 79 x 90 mm (8.66 x 3.1 x 3.51 in.)	
	Cables (laser head to controller)		2m (6.5 ft.)	

1 Optical parameters measured at the output plane of the laser head. Unless noted all parameters valid for the lifetime of the unit.
2 Circularity defined as vertical diameter divided by horizontal diameter.
3 Negative value corresponds to a location inside head.
4 After 2-hour warm-up.
5 Measured at the output window.
6 Measured over 8 hrs.
7 Non-condensing.
8 Back connector not included in laser head length dimension.

Genesis™ MX STM-Series

High-Power Optically Pumped Semiconductor Lasers (OPSL)

	Genesis	PRELIMINARY MX 514-500/1000	PRELIMINARY MX 532-500/1000
Optical Specifications[1]	Wavelength (nm)	514 ±3	532 ±3
	FWHM Linewidth (GHz)	<30	
	Pulse Format	CW	
	Spectral Purity (%)	>99	
	Output Power (W)	500, 1000	500, 1000
	Spatial Mode	TEM00	
	Beam Quality	<1.1	
	Beam Circularity[2]	1.0 ±0.1	
	Beam Waist Diameter (mm)(FW, 1/e²)	1.0 ±0.1	
	Beam Divergence (mrad)(FW, 1/e²)	0.7 ±0.1	
	Beam Waist Location[3] (m)	±0.25	
	Beam Pointing Stability[4,5] (µrad/°C)	<5	
	Horizontal Beam Position Tolerance[5] (mm)	±<1.0	
	Vertical Beam Position Tolerance[5] (mm)	±<1.0	
	Beam Pointing Tolerance[5] (mrad)	<5	
	Polarization Ratio	Linear, >100:1	
	Polarization Direction	Vertical, ±5°	
	Noise (%, rms)(10 Hz to 10 MHz)	<0.1	
	Power Stability[6] (%)(pk-pk)	±<1	
	Warm-Up Time (minutes)	<10	
	CDRH Compliant	Yes	
Electrical Specifications	Operating Voltage (VAC)	100 to 240	
	Frequency (Hz)	50 to 60	
	Power Consumption (W)	500	
Environmental Conditions	Ambient Temperature (°C)		
	Operating	10 to 40	
	Non-Operating	-10 to 60	
	Relative Humidity[7] (%)	5 to 95	
	CE Marking	IEC 61010-1/EN 61010-1	
	Dimensions (L x W x H)		
	Laser Head[8]	220 x 79 x 90 mm (8.66 x 3.1 x 3.51 in.)	
	Cables (laser head to controller)	2m (6.5 ft.)	

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4 After 2-hour warm-up.
5 Measured at the output window.
6 Measured over 8 hrs.
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8 Back connector not included in laser head length dimension.

Genesis™ MX STM-Series

High-Power Optically Pumped Semiconductor Lasers (OPSL)

	Genesis	PRELIMINARY MX 561-500	PRELIMINARY MX 577-500/1000
Optical Specifications[1]	Wavelength (nm)	561 ±3	577 ±3
	FWHM Linewidth (GHz)	<30	
	Pulse Format	CW	
	Spectral Purity (%)	>99	
	Output Power (W)	500	500, 1000
	Spatial Mode	TEM00	
	Beam Quality	<1.1	
	Beam Circularity[2]	1.0 ±0.1	
	Beam Waist Diameter (mm)(FW, 1/e²)	1.0 ±0.1	
	Beam Divergence (mrad)(FW, 1/e²)	0.7 ±0.1	
	Beam Waist Location[3] (m)	±0.25	
	Beam Pointing Stability[4,5] (µrad/°C)	<5	
	Horizontal Beam Position Tolerance[5] (mm)	±<1.0	
	Vertical Beam Position Tolerance[5] (mm)	±<1.0	
	Beam Pointing Tolerance[5] (mrad)	<5	
	Polarization Ratio	Linear, >100:1	
	Polarization Direction	Vertical, ±5°	
	Noise (%, rms)(10 Hz to 10 MHz)	<0.1	
	Power Stability[6] (%)(pk-pk)	±<1	
	Warm-Up Time (minutes)	<10	
	CDRH Compliant	Yes	
Electrical Specifications	Operating Voltage (VAC)	100 to 240	
	Frequency (Hz)	50 to 60	
	Power Consumption (W)	500	
Environmental Conditions	Ambient Temperature (°C)		
	Operating	10 to 40	
	Non-Operating	-10 to 60	
	Relative Humidity[7] (%)	5 to 95	
	CE Marking	IEC 61010-1/EN 61010-1	
	Dimensions (L x W x H)		
	Laser Head[8]	220 x 79 x 90 mm (8.66 x 3.1 x 3.51 in.)	
	Cables (laser head to controller)	2m (6.5 ft.)	

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6 Measured over 8 hrs.
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8 Back connector not included in laser head length dimension.

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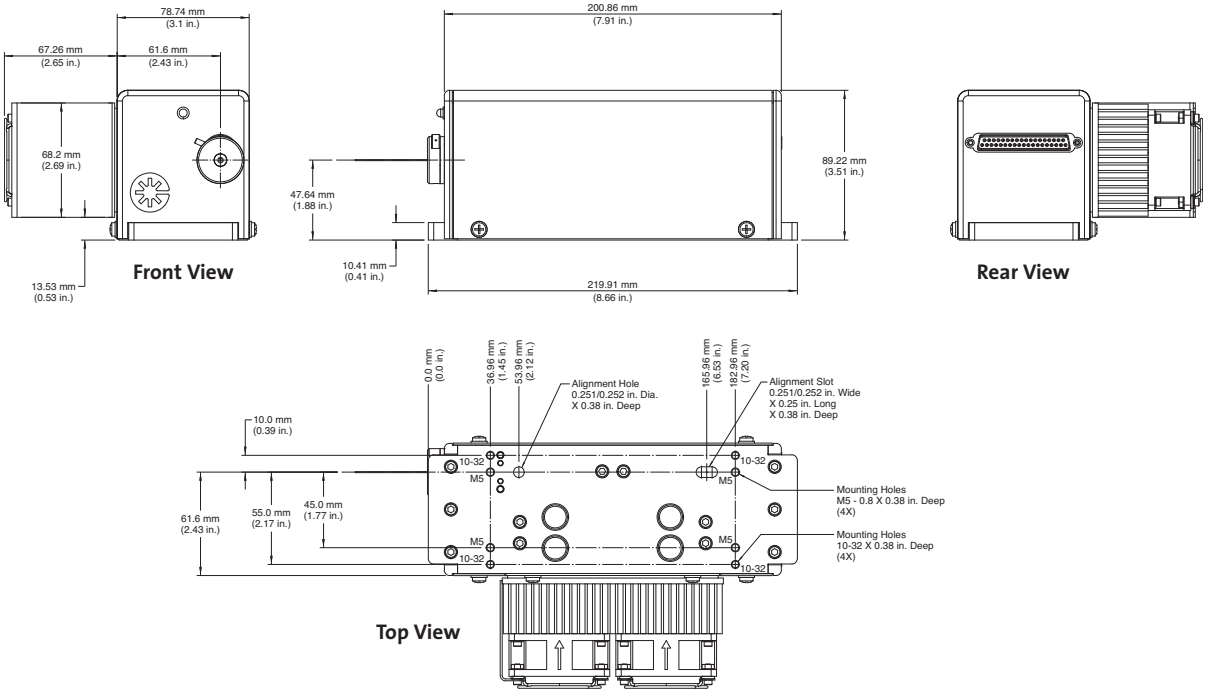
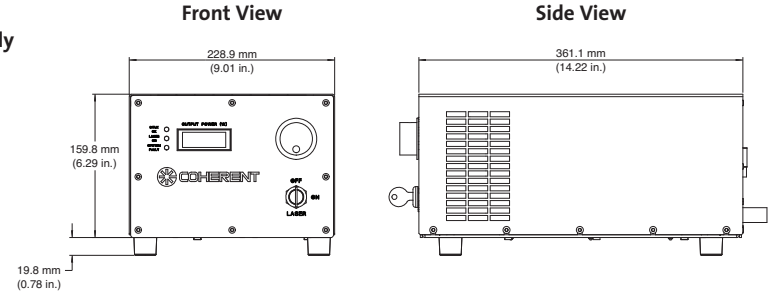
High-Power Optically Pumped Semiconductor Lasers (OPSL)

Mechanical Specifications

MX-Series STM
Air-cooled version



Genesis MX-Series
Benchtop Power Supply



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.

COHERENT

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