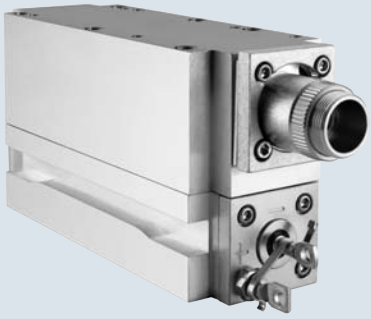
COHERENT®

Genesis MX STM-Series (OEM)

High-Power Optically Pumped Semiconductor Lasers (OPSL)

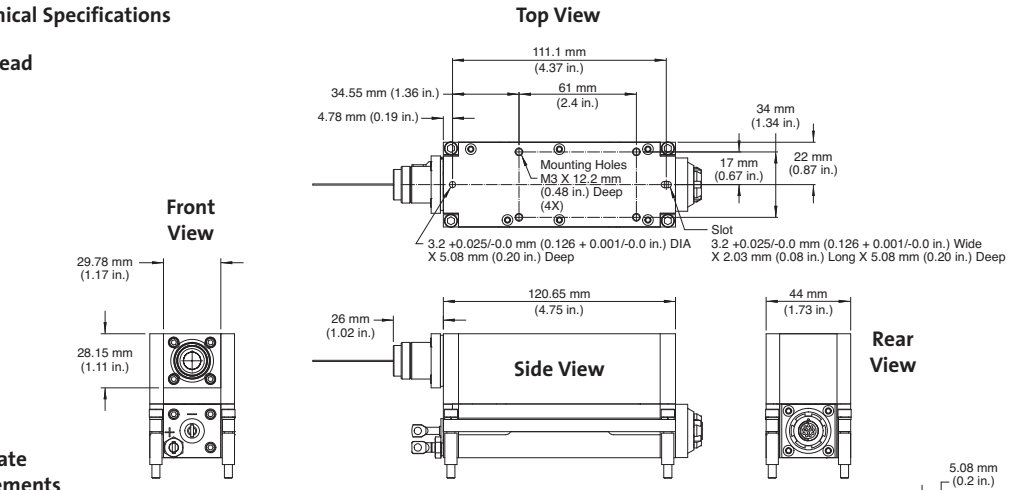


Features

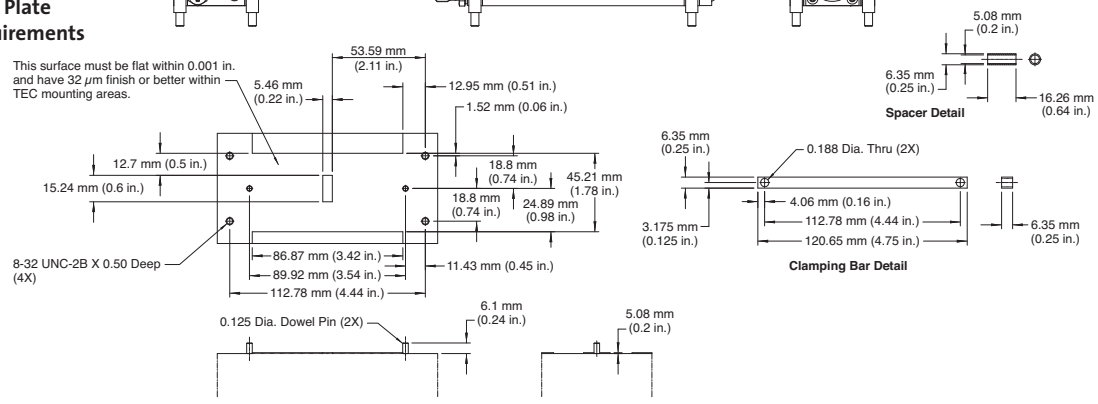
- OEM laser head designed for easy integration
- OPSL reliability
- Compact, efficient design
- Optimum wavelengths and power for superior results
  - 500 mW at 460 nm
  - 500 mW at 480 nm
  - 500 mW and 1W at 488 nm
  - 500 mW and 1W at 514 nm
  - 500 mW and 1W at 532 nm
  - 500 mW at 561 nm
  - 500 mW and 1W at 577 nm

Mechanical Specifications

Laser Head



Base Plate Requirements



Superior Reliability & Performance

Genesis™ MX STM-Series (OEM)

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
	Output Power (mW)	500	500	500, 1000
	Spatial Mode		TEM00	
	FWHM Linewidth (GHz)		<30	
	Pulse Format		CW	
	Beam Circularity		1.0 ±0.1	
	Beam Position Tolerance (mm)			
	Horizontal		±<1.0	
	Vertical		±<1.0	
	Beam Waist Diameter (mm)(FW, 1/e²)		1.0 ±0.1	
	Beam Divergence (mrad)(FW, 1/e²)		0.7 ±0.1	
	Beam Waist Location[6,7] (m)		±0.25	
	M^2			
	Horizontal		<1.1	
	Vertical		<1.1	
	Pointing Stability[2] (µrad/°C)		<5	
	Noise			
	10 Hz to 10 MHz (%, rms)		<0.1	
	10 Hz to 5 kHz[5] (%, peak-to-peak)		<1	
	Polarization Ratio		Horizontal, >100:1	
	CDRH Compliance		No	
	Warm-Up Time (minutes)		<10	
	Direct Modulation[3]		Available	
Utility and Environmental Requirements	Operating Diode Current (A)	<10	<10	<10, <12
	Maximum Diode Current (A)	<12	<12	<12, <15
	Diode Voltage (V)		1.5 to 2.2	
	Cooling Requirements[4]		Active cooling required	
	Case Temperature (°C)		25 ±2	
	Humidity		Non-condensing	
	Dimensions (L x W x H)			
	Laser Head		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] Measured at the output window: tolerance relative to the nominal center of the output window and perpendicular to the mounting plane.

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

[4] Contact integration support for options on air-cooling TEC or waterplate.

[5] Over 8 hours.

[6] Measured at the output of the laser head.

[7] Negative value corresponds to a location within the head.

Genesis™ MX STM-Series (OEM)

High-Power Optically Pumped Semiconductor Lasers (OPSL)

	Genesis	Preliminary MX 514-500/1000	MX 532-500/1000
Optical Specifications[1]	Wavelength (nm)	514 ±3	532 ±3
	Output Power (mW)	500, 1000	500, 1000
	Spatial Mode	TEM00	
	FWHM Linewidth (GHz)	<30	
	Pulse Format	CW	
	Beam Circularity	1.0 ±0.1	
	Beam Position Tolerance (mm)		
	Horizontal	±<1.0	
	Vertical	±<1.0	
	Beam Waist Diameter (mm)(FW, 1/e²)	1.0 ±0.1	
	Beam Divergence (mrad)(FW, 1/e²)	0.7 ±0.1	
	Beam Waist Location[6,7] (m)	±0.25	
	M^2		
	Horizontal	<1.1	
	Vertical	<1.1	
	Pointing Stability[2] (µrad/°C)	<5	
	Noise		
	10 Hz to 10 MHz (%, rms)	<0.1	
	10 Hz to 5 kHz[5] (%, peak-to-peak)	<1	
	Polarization Ratio	Horizontal, >100:1	
	CDRH Compliance	No	
	Warm-Up Time (minutes)	<10	
	Direct Modulation[4]	Available	
Utility and Environmental Requirements	Operating Diode Current (A)	<10	
	Maximum Diode Current (A)	<12	
	Diode Voltage (V)	1.5 to 2.2	
	Cooling Requirements[4]	Active cooling required	
	Case Temperature (°C)	25 ±2	
	Humidity	Non-condensing	
	Dimensions (L x W x H)		
	Laser Head	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] Measured at the output window: tolerance relative to the nominal center of the output window and perpendicular to the mounting plane.

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

[4] Contact integration support for options on air-cooling TEC or waterplate.

[5] Over 8 hours.

[6] Measured at the output of the laser head.

[7] Negative value corresponds to a location within the head.

Genesis™ MX STM-Series (OEM)

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
	Output Power (mW)	500	500, 1000
	Spatial Mode	TEM00	
	FWHM Linewidth (GHz)	<30	
	Pulse Format	CW	
	Beam Circularity	1.0 ±0.1	
	Beam Position Tolerance (mm)		
	Horizontal	±<1.0	
	Vertical	±<1.0	
	Beam Waist Diameter (mm)(FW, 1/e²)	1.0 ±0.1	
	Beam Divergence (mrad)(FW, 1/e²)	0.7 ±0.1	
	Beam Waist Location[6,7] (m)	±0.25	
	M^2		
	Horizontal	<1.1	
	Vertical	<1.1	
	Pointing Stability[2] (µrad/°C)	<5	
	Noise		
	10 Hz to 10 MHz (%, rms)	<0.1	
	10 Hz to 5 kHz[6] (%, peak-to-peak)	<1	
	Polarization Ratio	Horizontal, >100:1	
	CDRH Compliance	No	
	Warm-Up Time (minutes)	<10	
	Direct Modulation[3]	Available	
Utility and Environmental Requirements	Operating Diode Current (A)	<10	
	Maximum Diode Current (A)	<12	
	Diode Voltage (V)	1.5 to 2.2	
	Cooling Requirements[4]	Active cooling required	
	Case Temperature (°C)	25 ±2	
	Humidity	Non-condensing	
	Dimensions (L x W x H)		
	Laser Head	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] 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 STM-Series (OEM)

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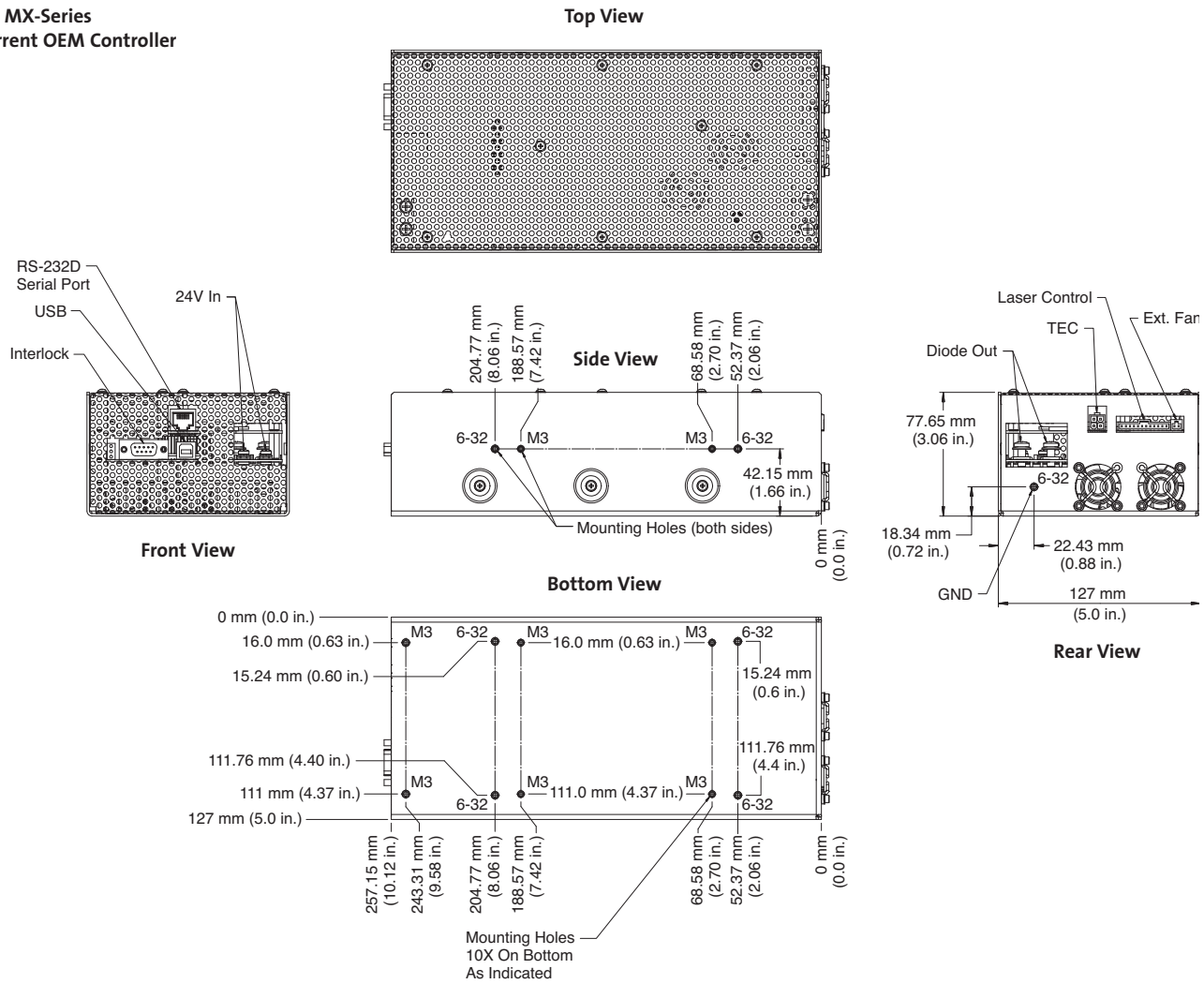
Mechanical Specifications

Genesis MX-Series
Low Current OEM Controller



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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