

# Genesis MX 607/639 STM

High-Power Optically Pumped Semiconductor Lasers (OPSL)



#### **Features**

- End user, turn key solution
- OPSL reliability
- Compact, efficient design
- Optimum wavelengths and power for superior results
- 500 mW at 607 nm
- 1W at 639 nm
- Choice of air or water-cooled solutions

## **Mechanical Specifications MX-Series STM** Water-cooled version Side View 360.02 mm (14.17 in.) o[..... **© ⊕** 10.41 mm (0.41 in.) **Front View Rear View** Д © 0 0 180.58 mm (7.11 in.) 131.85 mm (5.19 in.)

**Top View** 

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| Optical Specifications <sup>1</sup> | Genesis  | MX 607-500      | MX 639-1000                                 |  |
|-------------------------------------|--|-----------------|---|--|
|                                     | Wavelength (nm)  | 607 ±3          | 639 ±3                                      |  |
|                                     | Bandwidth (nm)   | nat CW          |   |  |
|                                     | Pulse Format   |                 |   |  |
|                                     | Spectral Purity (%)  |                 |   |  |
|                                     | Output Power (mW)  | 500             | 1000  |  |
|                                     | Spatial Mode   | TEMO            | TEMoo                                       |  |
|                                     | Beam Quality (M²)  | <1.2            |   |  |
|                                     | Beam Circularity <sup>3</sup>                                | 1.1 ±0.1        |   |  |
|                                     | Beam Waist Diameter <sup>2</sup> (mm)(FW, 1/e <sup>2</sup> ) | 1.0             |   |  |
|                                     | Beam Divergence <sup>2</sup> (mrad)(FW, 1/e <sup>2</sup> )   | <1.5            |   |  |
|                                     | Beam Waist Location <sup>4</sup> (m)                         | 0.25 ±0.5       |   |  |
|                                     | Beam Pointing Stability <sup>5,6</sup> (µrad/°C)             | <10             | <10   |  |
|                                     | Horizontal Beam Position Tolerance <sup>6</sup> (mn          | n) ±<1.0        | ±<1.0                                       |  |
|                                     | Vertical Beam Position Tolerance <sup>6</sup> (mm)           | ±<1.0           |   |  |
|                                     | Beam Pointing Tolerance <sup>6</sup> (mrad)                  | <10             | <10<br>Linear, >100:1                       |  |
|                                     | Polarization Ratio   | Linear, >1      |   |  |
|                                     | Polarization Direction                                       | Horizontal, ±5° |   |  |
|                                     | Noise  |                 |   |  |
|                                     | RMS (%)(10 Hz to 10 MHz) <sup>10</sup>                       | <5              |   |  |
|                                     | RMS (%)(10 Hz to 100 kHz) <sup>10</sup>                      | <1              |   |  |
|                                     | Power Stability <sup>7</sup> (%)(pk-pk)                      | ±<1             |   |  |
|                                     | Warm-Up Time (minutes)                                       | <10             |   |  |
|                                     | CDRH Compliant   | Yes             | Yes   |  |
| Electrical Specifications           | Operating Voltage (VAC)                                      | 100 to 2        | 100 to 240                                  |  |
|                                     | Frequency (Hz)   | 50 to 6         | 50 to 60                                    |  |
|                                     | Power Consumption (W)  | 500             | 500   |  |
| Environmental Conditions            | Ambient Temperature (°C)                                     |                 |   |  |
|                                     | Operating  | 10 to 4         | 10 to 40                                    |  |
|                                     | Non-Operating  | -10 to 6        | -10 to 60                                   |  |
|                                     | Relative Humidity <sup>8</sup> (%)                           | 5 to 9          | 5 to 95                                     |  |
|                                     | CE Marking   | IEC 61010-1/EN  | IEC 61010-1/EN 61010-1                      |  |
|                                     | Dimensions (L x W x H)                                       |                 |   |  |
|                                     | Laser Head <sup>9</sup>                                      |                 | 360 x 120 x 96 mm (14.17 x 4.69 x 3.75 in.) |  |
|                                     | Cables (laser head to controller)                            | 2m (6.5 ft.)    |   |  |

<sup>2</sup> Typical value

<sup>3</sup> Circularity defined as vertical diameter divided by horizontal diameter.

<sup>4</sup> Negative value corresponds to a location inside head.

<sup>5</sup> After 2-hour warm-up.

<sup>6</sup> Measured at the output window.

<sup>7</sup> Measured over 8 hrs.

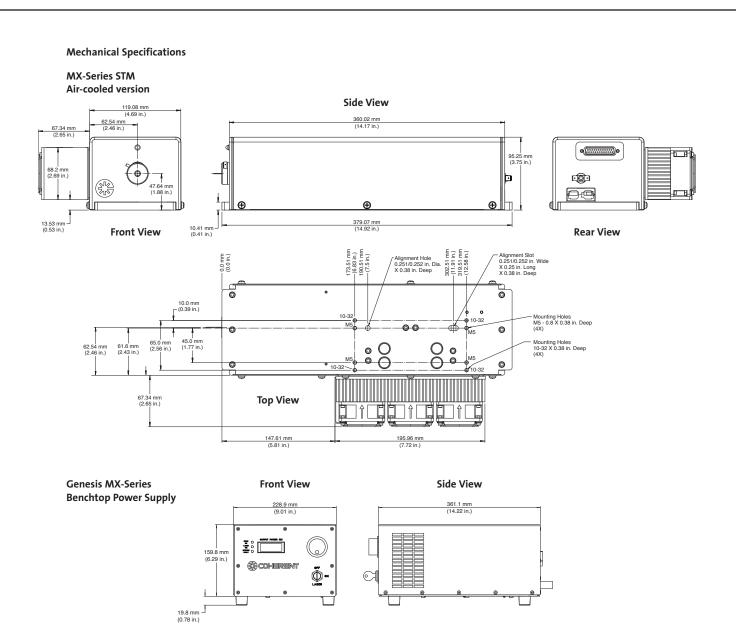
<sup>8</sup> Non-condensing.

<sup>9</sup> Back connector not included in laser head length dimension.

<sup>&</sup>lt;sup>10</sup> At rated power.

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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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