

Genesis CX SLM-Series

Single Frequency UV and Visible OEM and End-User OPS Laser Systems

Applications like Flow Cytometry, Particle Counting, DNA Sequencing and Microscopy are enabled by true CW lasers with low noise in the UV and visible. The Genesis CX SLM-Series provides up to 100 mW of UV laser light or up to 4W of visible laser light from either a simple, CDRH-compliant turn-key system or an easy-to-integrate air-cooled or water-cooled package.

Based on Coherent's unique Optically Pumped Semiconductor Laser (OPSL) technology, the Genesis CX SLM-Series features single-frequency operation for the most demanding of applications. This, combined with stable beam parameters across output powers, a diffraction limited beam, lowest noise and high stability, provides unparalleled laser performance in a convenient package.

Genesis CX SLM-Series is the perfect match for customers in need of the highest performing CW laser technology for research and instrumentation in life science and biological applications.



Superior Reliability & Performance

Genesis CX SLM-Series Features:

- All Genesis CX advantages with single-frequency output
- OEM or end-user versions
- Air or water-cooled solutions

Genesis CX SLM-Series Applications:

- Flow Cytometry
- Particle Counting
- DNA Sequencing
- Microscopy

www.Coherent.com/GenesisCX_SLM-Series

Genesis CX SLM-Series

Single Frequency UV and Visible OEM and End-User OPS Laser Systems

Optical Specifications²

Genesis CX 355¹

| | |
|--|--------------------|
| Wavelength (nm) | 355 \pm 2 |
| FWHM Linewidth (MHz) | <5 |
| Pulse Format | CW |
| Spectral Purity (%) | >99 |
| Output Power (mW) | 40, 60, 80, 100 |
| Spatial Mode | TEM ₀₀ |
| Beam Quality (M ²) | <1.2 |
| Beam Circularity ³ | 1.0 \pm 0.1 |
| Beam Waist Diameter (mm)(FW, 1/e ²) | |
| Horizontal | 0.975 \pm 0.2 |
| Vertical | 0.915 \pm 0.2 |
| Beam Divergence (mrad)(FW, 1/e ²) | <1.2 |
| Beam Waist Location ⁴ (mm) | \pm 325 |
| Beam Pointing Stability ⁵ (μ rad/°C) | <6 |
| Horizontal Beam Position Tolerance (mm) | \pm 1.0 |
| Vertical Beam Position Tolerance (mm) | \pm 1.0 |
| Beam Pointing Tolerance (mrad) | <5 |
| Polarization Ratio | Linear, >100:1 |
| Polarization Direction | Vertical, \pm 5° |
| Noise (% rms)(10 Hz to 1 MHz) | <0.1 |
| Power Stability (%)(pk-pk) | \pm <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 ⁶ (%) | 5 to 95 |
| CE Marking | IEC 61010-1/EN 61010-1 |
| Dimensions (L x W x H) | |
| Laser Head ⁷ | 281 x 156 x 85 mm (11.06 x 6.14 x 3.35 in.) |
| Cables (laser head to controller) | 2m (6.5 ft.) |

¹ Available in OEM or end user versions.

² Optical parameters measured at the output plane of the laser head. Unless noted all parameters valid for the lifetime of the unit.

³ Circularity defined as vertical diameter divided by horizontal diameter.

⁴ Negative value corresponds to a location inside head.

⁵ After warm-up over 2 hours.

⁶ Non-condensing.

⁷ Back connector not included in laser head length dimension.

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Single Frequency UV and Visible OEM and End-User OPS Laser Systems

| Optical Specifications ² | Genesis CX 460 ¹ | Genesis CX 480 ¹ | Genesis CX 488 ¹ |
|--|-----------------------------|-----------------------------|-----------------------------|
| Wavelength (nm) | 460 \pm 3 | 480 \pm 3 | 488 \pm 3 |
| FWHM Linewidth (MHz) | | <5 | |
| Pulse Format | | CW | |
| Spectral Purity (%) | | >99 | |
| Output Power (mW) | 1000 | 1000 | 2000 |
| Spatial Mode | | TEM ₀₀ | |
| Beam Quality | | <1.1 | |
| Beam Circularit ³ | | 1.0 \pm 0.1 | |
| Beam Waist Diameter (mm)(FW, 1/e ²) | | 2.25 \pm 10% | |
| Beam Divergence (mrad)(FW, 1/e ²) | | <0.5 | |
| Beam Waist Location ⁴ (m) | | \pm 0.5 | |
| Beam Pointing Stability ⁵ (μ rad/°C) | | <2 | |
| Horizontal Beam Position Tolerance ⁶ (mm) | | \pm <1.0 | |
| Vertical Beam Position Tolerance ⁶ (mm) | | \pm <1.0 | |
| Beam Pointing Tolerance ⁶ (mrad) | | <5 | |
| Polarization Ratio | | Linear, >100:1 | |
| Polarization Direction | | Horizontal, \pm 5° | |
| Noise (% rms)(10 Hz to 10 MHz) | | <0.1 | |
| Power Stability ⁷ (%) (pk-pk) | | \pm <1 | |
| Warm-up Time (minutes) | | <10 | |
| CDRH Compliant | | Yes | |

Electrical Specifications

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|-------------------------|------------|
| Operating Voltage (VAC) | 100 to 240 |
| Frequency (Hz) | 50 to 60 |
| Power Consumption (W) | 500 |

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³ Circularit³ defined as vertical diameter divided by horizontal diameter.

⁴ Negative value corresponds to a location inside head.

⁵ After 2-hour warm-up.

⁶ Measured at the output window.

⁷ Measured over 8 hrs.

⁸ Non-condensing.

⁹ Back connector not included in laser head length dimension.

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Single Frequency UV and Visible OEM and End-User OPS Laser Systems

| Optical Specifications ² | Genesis CX 514 ¹ | Genesis CX 532 ¹ | Genesis CX 561 | Genesis CX 577 ¹ | Genesis CX 590 |
|--|-----------------------------|-----------------------------|-------------------|-----------------------------|----------------|
| Wavelength (nm) | 514 ±3 | 532 ±3 | 561 ±3 | 577 ±3 | 590 ±3 |
| FWHM Linewidth (MHz) | | | <5 | | |
| Pulse Format | | | CW | | |
| Spectral Purity (%) | | | >99 | | |
| Output Power (mW) | 2000, 4000 | 2000, 4000 | 1000 | 2000 | 1000 |
| Spatial Mode | | | TEM ₀₀ | | |
| Beam Quality | | | <1.1 | | |
| Beam Circularit ³ | | | 1.0 ±0.1 | | |
| Beam Waist Diameter (mm)(FW, 1/e ²) | | | 2.25 ±10% | | |
| Beam Divergence (mrad)(FW, 1/e ²) | | | <0.5 | | |
| Beam Waist Location ⁴ (m) | | | ±0.5 | | |
| Beam Pointing Stability ⁵ (μrad/°C) | | | <2 | | |
| Horizontal Beam Position Tolerance ⁶ (mm) | | | ±<1.0 | | |
| Vertical Beam Position Tolerance ⁶ (mm) | | | ±<1.0 | | |
| Beam Pointing Tolerance ⁶ (mrad) | | | <5 | | |
| Polarization Ratio | | | Linear, >100:1 | | |
| Polarization Direction | | | Horizontal, ±5° | | |
| Noise (% rms)(10 Hz to 10 MHz) | | | <0.1 | | |
| Power Stability ⁷ (%) (pk-pk) | | | ±<1 | | |
| Warm-up Time (minutes) | | | <10 | | |
| CDRH Compliant | | | Yes | | |

Electrical Specifications

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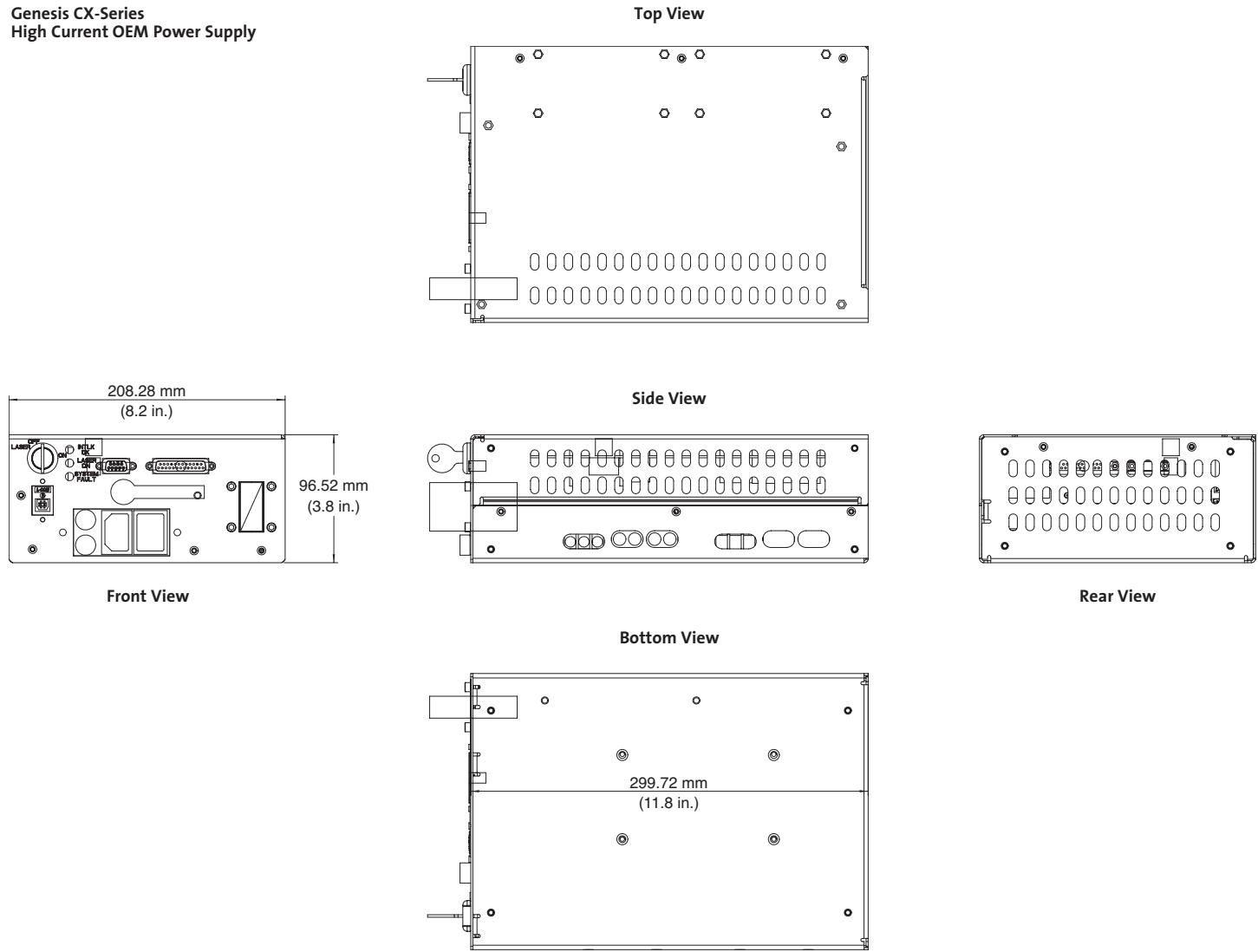
⁹ Back connector not included in laser head length dimension.

Genesis CX SLM-Series

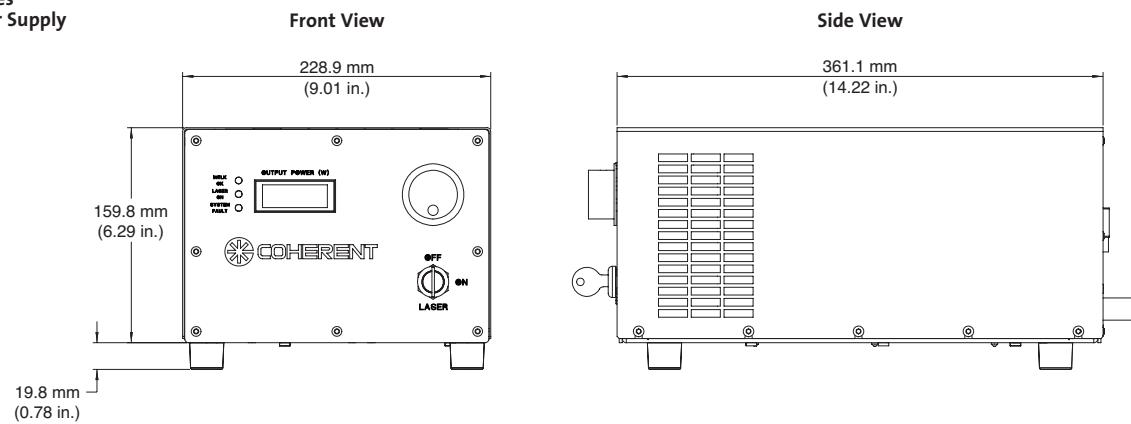
Single Frequency UV and Visible OEM and End-User OPS Laser Systems

Mechanical Specifications

Genesis CX-Series High Current OEM Power Supply



Genesis CX-Series Benchtop Power Supply

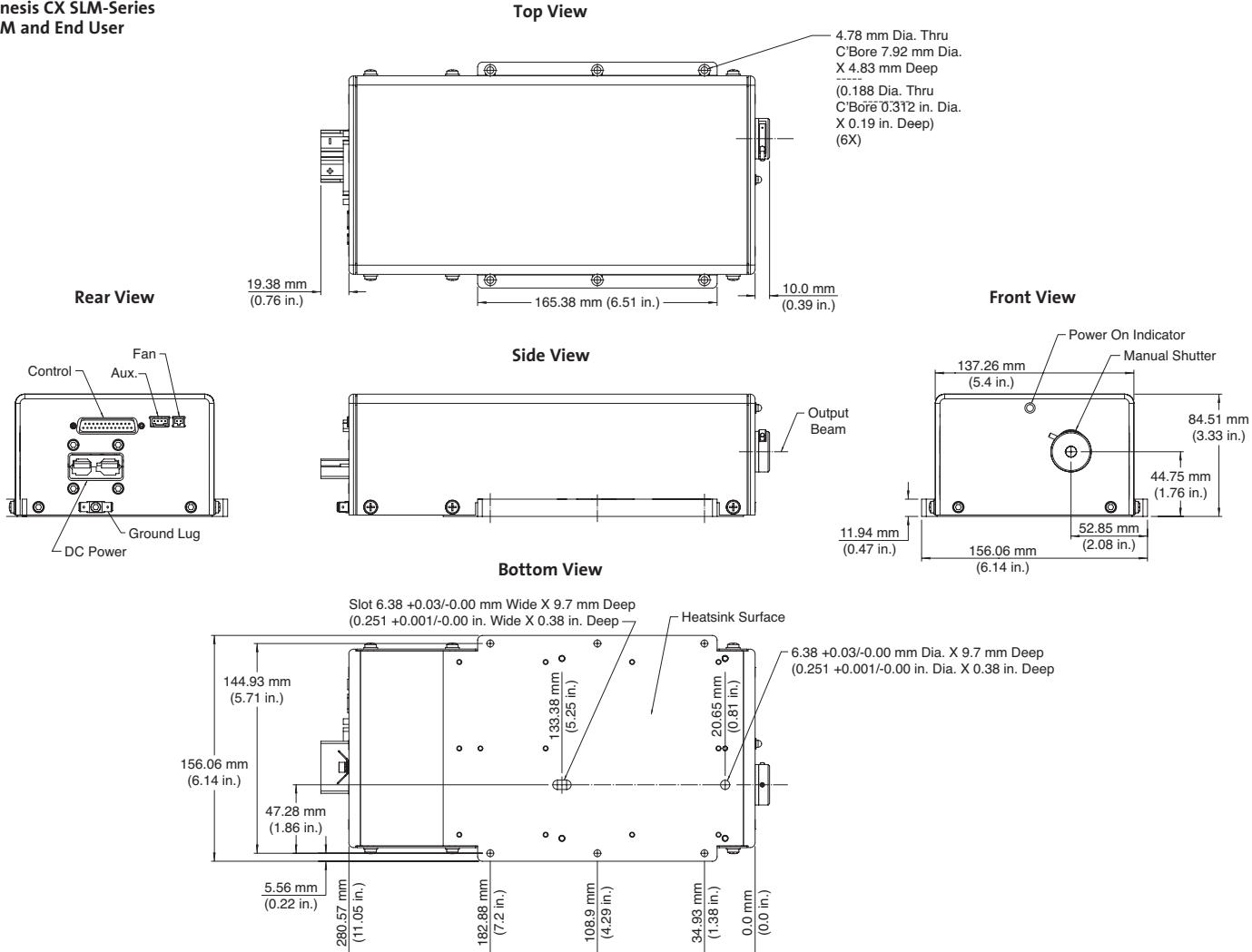


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Mechanical Specifications

Genesis CX SLM-Series OEM and End User



COHERENT®

www.Cohere nt.com

Coherent, Inc.,

5100 Patrick Henry Drive
Santa Clara, CA 95054
phone (800) 527-3786
(408) 764-4983
fax (408) 764-4646
e-mail tech.sales@Coherent.com

Benelux +31 (30) 280 6060
China +86 (10) 8215 3600
France +33 (0)1 8038 1000
Germany/Austria/
Switzerland +49 (6071) 968 333
Italy +39 (02) 31 03 951
Japan +81 (3) 5635 8700
Korea +82 (2) 460 7900
Taiwan +886 (3) 505 2900
UK/Ireland +44 (1353) 658 833