

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**

Genesis CX SLM-Series

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

Optical Specifications²

Genesis
CX 355¹

Wavelength (nm)	355 ±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 ±0.1
Beam Waist Diameter (mm)(FW, 1/e ²)	
Horizontal	0.975 ±0.2
Vertical	0.915 ±0.2
Beam Divergence (mrad)(FW, 1/e ²)	<1.2
Beam Waist Location ⁴ (mm)	±325
Beam Pointing Stability ⁵ (μrad/°C)	<6
Horizontal Beam Position Tolerance (mm)	±<1.0
Vertical Beam Position Tolerance (mm)	±<1.0
Beam Pointing Tolerance (mrad)	<5
Polarization Ratio	Linear, >100:1
Polarization Direction	Vertical, ±5°
Noise (% rms)(10 Hz to 1 MHz)	<0.1
Power Stability (%)(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 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.

Genesis CX SLM-Series

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 ±3	480 ±3	488 ±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 Circularity 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			
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 ⁸ (%)		5 to 95	
CE Marking		IEC 61010-1/EN 61010-1	
Dimensions (L x W x H)			
Laser Head ⁹		281 x 156 x 85 mm (11.06 x 6.14 x 3.35 in.)	
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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 Circularity 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					
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 ⁸ (%)			5 to 95		
CE Marking			IEC 61010-1/EN 61010-1		
Dimensions (L x W x H)					
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⁶ Measured at the output window.

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⁹ Back connector not included in laser head length dimension.

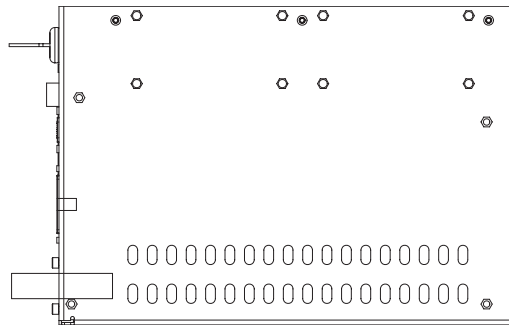
Genesis CX SLM-Series

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

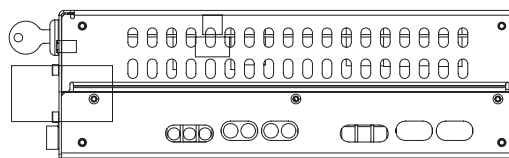
Mechanical Specifications

Genesis CX-Series
High Current OEM Power Supply

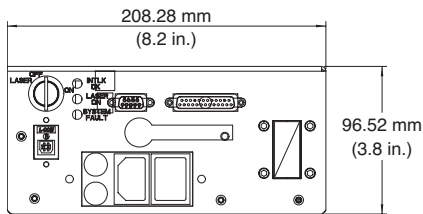
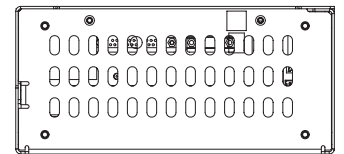
Top View



Side View

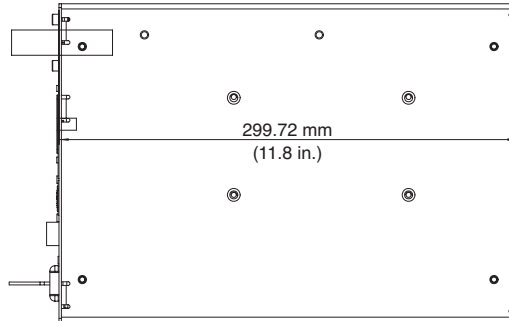


Rear View



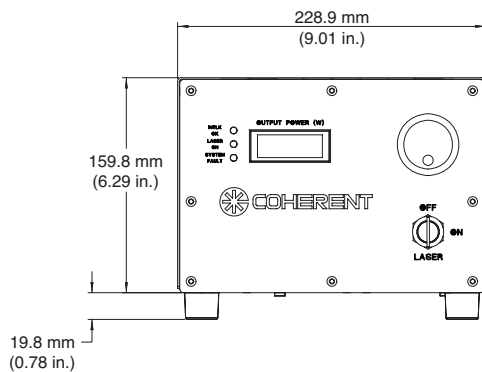
Front View

Bottom View

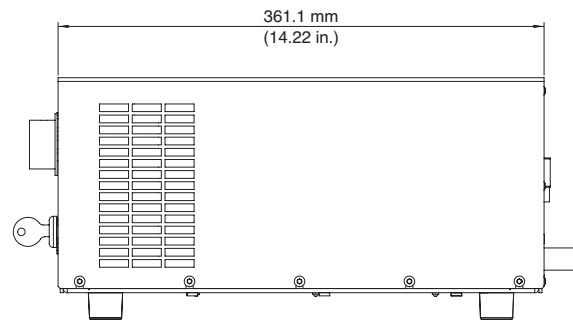


Genesis CX-Series
Benchtop Power Supply

Front View



Side View

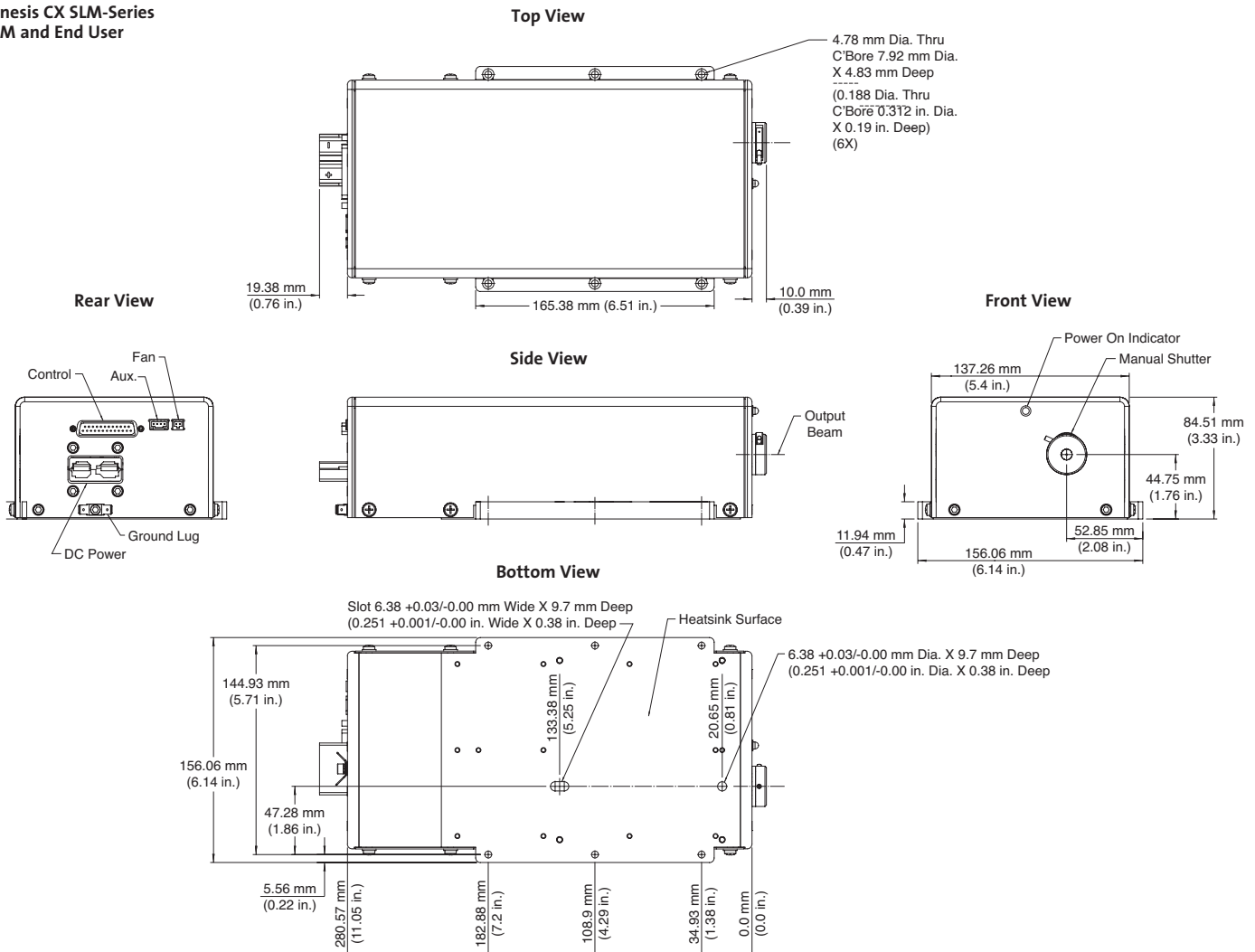


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Single Frequency UV and Visible OEM and End-User OPS Laser Systems

Mechanical Specifications

Genesis CX SLM-Series
OEM and End User



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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 CX SLM-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.