COHERENT

Genesis CX STM-Series

TEM_{00} UV and Visible OEM and End-User OPS Laser Systems

Coherent's unique Optically Pumped Semiconductor Laser (OPSL) technology powers the Genesis CX-STM Series, providing up to 250 mW of UV laser light or up to 10W of visible laser light from either OEM or CDRH-compliant end-user systems.

Ideal for applications such as Flow Cytometery, Particle Counting, DNA Sequencing and Microscopy, these lasers provide a TEM_{00} power invariant beam with low noise and high stability in a convenient package.

The Genesis CX STM-Series is the perfect laser platform for customers requiring high-performing CW laser technology for research and instrumentation in life science and biological applications.

Genesis CX STM-Series Features:

- **Single transverse mode (TEM_{00})**
- **OEM or end-user versions**
- **Air or water-cooled solutions**
- **Power invariant beam quality**

Genesis CX STM-Series Applications:

- **Flow Cytometry**
- **Particle Counting**
- **DNA Sequencing**
- **Microscopy**

Superior Reliability & Performance

www.Coherent.com/GenesisCX_STM-Series

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Optical Specifications[2]	**Genesis CX 355**[1]
Wavelength (nm)	355 ±2
FWHM Linewidth (GHz)	<50
Pulse Format	CW
Spectral Purity (%)	>99
Output Power (mW)	40, 60, 80, 100, 150, 200, 250
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[8]
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.
8 Power consumption for the CX 355-250 is 600W.

Genesis CX STM-Series

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Optical Specifications[2]	Genesis CX 460[1]	Genesis CX 480[1]	Genesis CX 488[1]	Genesis CX 514[1]
Wavelength (nm)	460 ±3	480 ±3	488 ±3	514 ±3
FWHM Linewidth (GHz)	<30			
Pulse Format	CW			
Spectral Purity (%)	>99			
Output Power (mW)	1000	1000, 2000	2000, 4000	2000, 4000
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.)			
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 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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Optical Specifications[2]	**Genesis CX 532**[1]	**Genesis CX 532**	**Genesis CX 561**	**Genesis CX 577**[1]	**Genesis CX 590**
Wavelength (nm)	532 ±3	532 ±3	561 ±3	577 ±3	590 ±3
FWHM Linewidth (GHz)			<30		
Pulse Format			CW		
Spectral Purity (%)			>99		
Output Power (mW)	2000, 4000, 5000, 6000, 7000	8000, 10,000	3000	1000, 2000,	1000, 2000 3000
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	700	700	500	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.)		
Cables (laser head to controller)			2m (6.5 ft.)		

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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 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.

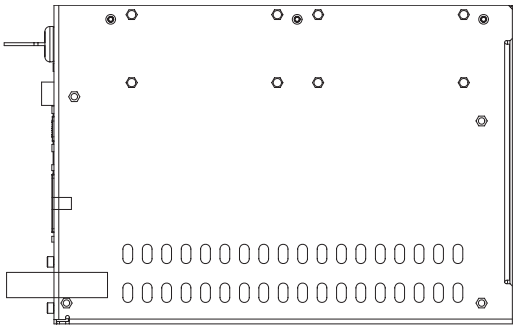
Genesis CX STM-Series

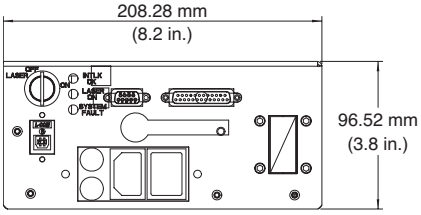
TEM$_{00}$ UV and Visible OEM and End-User OPS Laser Systems

Mechanical Specifications

Genesis CX-Series
High Current OEM Power Supply

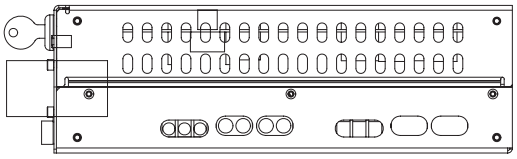
Top View

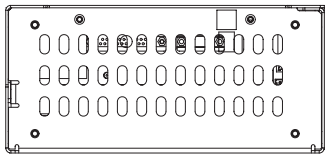




Front View

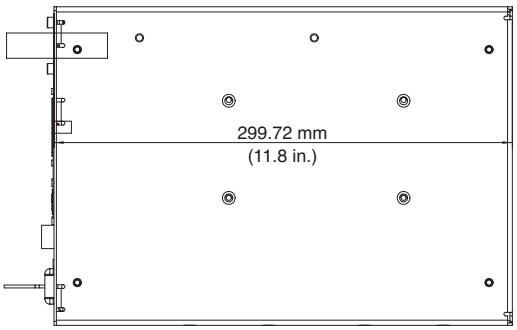
Side View





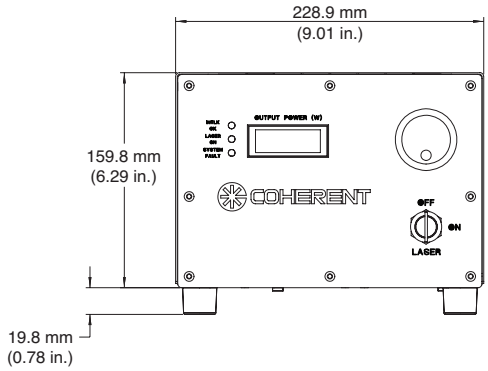
Rear View

Bottom View

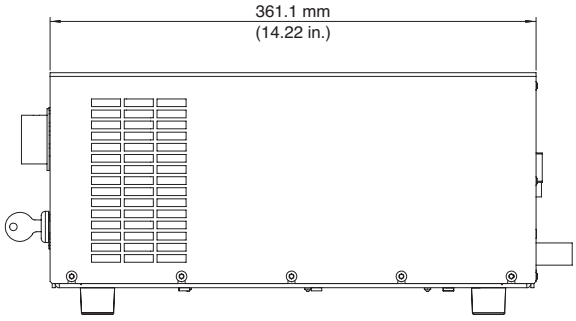


Genesis CX-Series
Benchtop Power Supply

Front View



Side View



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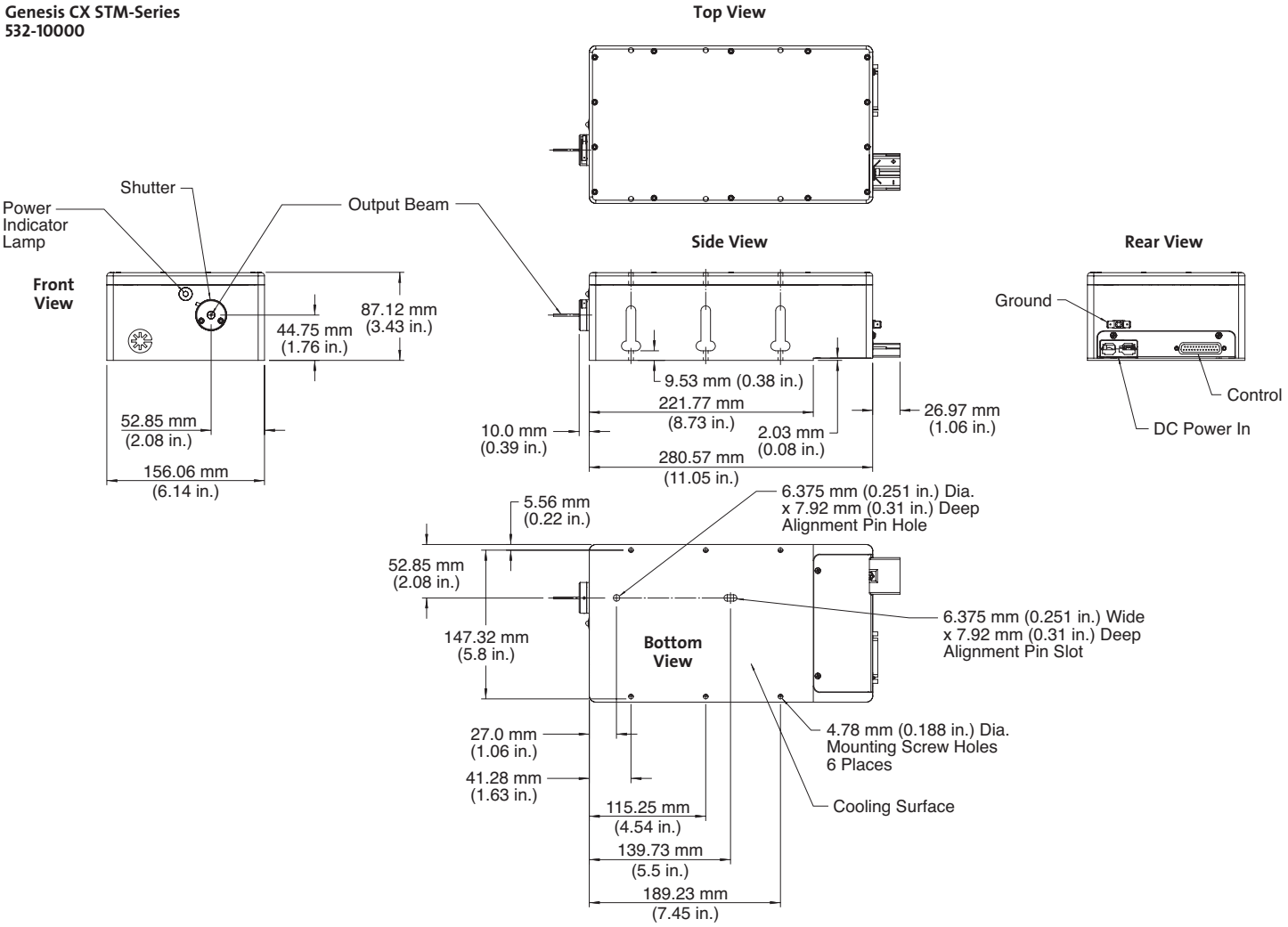
Mechanical Specifications

Genesis CX STM-Series
532-10000



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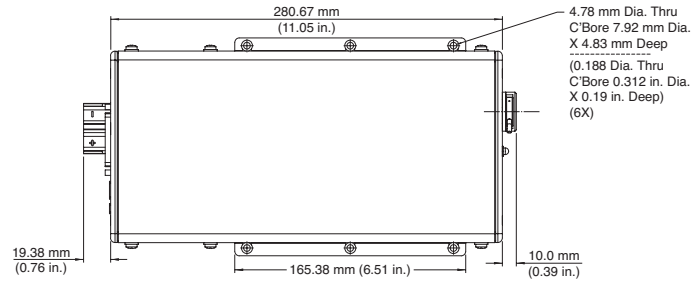
TEM$_{00}$ UV and Visible OEM and End-User OPS Laser Systems

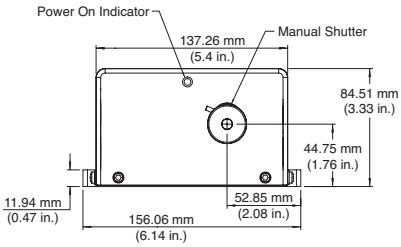
Mechanical Specifications

Genesis CX STM-Series
OEM and End User

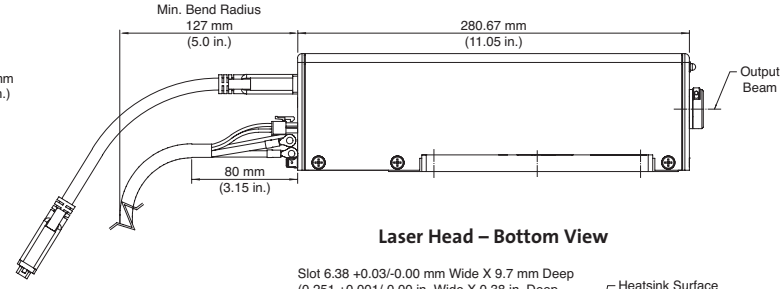
Laser Head – Top View



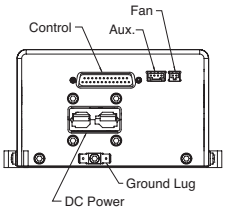
Laser Head – Front View



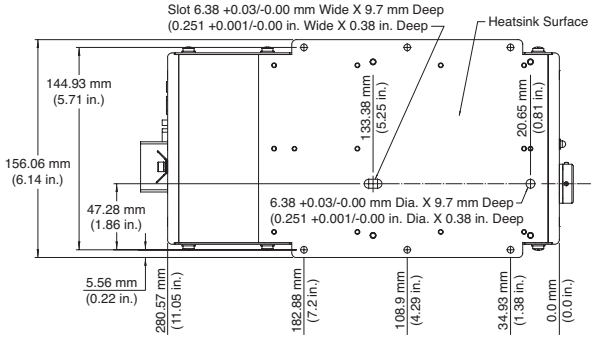
Laser Head – Side View



Laser Head – Rear View



Laser Head – Bottom View



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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 STM-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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