

STACCATO

Ultra-Short Pulse Laser



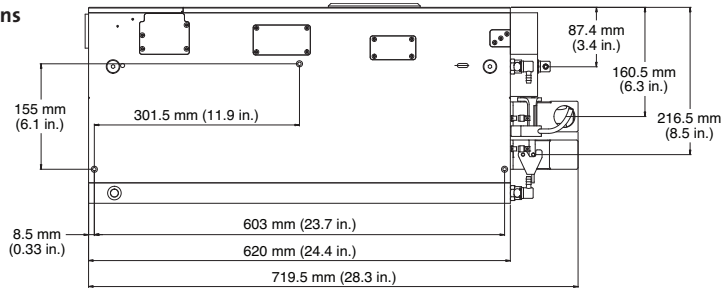
Features

- 1.5 ps pulse duration
- >30 μ J
- High beam quality $M^2 < 1.3$
- Superior stability
- Compact and rugged design
- For most demanding medical applications
- Low maintenance

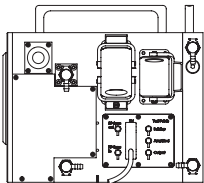
Mechanical Specifications

Laser Head

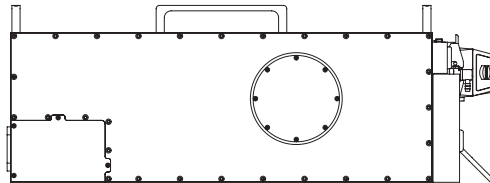
Top View



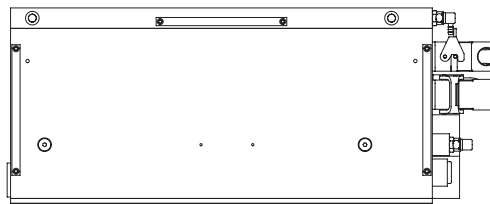
Front View



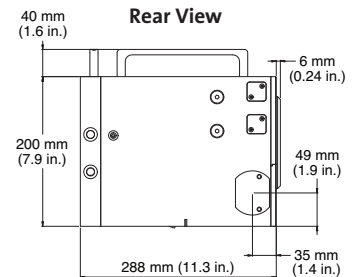
Side View



Bottom View



Rear View



Superior Reliability & Performance

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Optical Specifications

	STACCATO
Wavelength (nm)(center)	1030 ±2
Average Power (W)	≥2.4 at 80 kHz
Pulse Energy (μJ)	≥30
Pulse Duration t (FWHM, sech ²)	1300 fs <t < 2000 fs
Pulse Energy Stability (%)(Peak-to-Peak over 1000 Pulses)	<5 RMS (1σ)
Pulse Repetition Rate of Amplifier (kHz)	80 ±0.5
Pulse Repetition Rates after Pulse Picker (kHz)	80 divided by integers, single pulse
Laser Beam Quality Parameter ¹ (M ²)	TEM00 (<1.3)
Laser Beam Diameter ¹ at Position -100 mm [(x+y)/2]	1.3 mm ±0.1 mm
Laser Beam Circularity ¹ (%)(Asymmetry)	>85 (<1.15)
Beam Waist Astigmatism ¹ (Z _{0x} - Z _{0y})/Average Z _R	<0.2 (2m from exit)
Laser Beam Position (Positional) Accuracy	±0.5 mm from nominal
Laser Beam Pointing (Angular) Accuracy	<5 mrad from nominal
Laser Beam Pointing Drift ² (max. temp. drift °C/h)	<50 μrad + 50 μrad/°C ambient temp.
Laser Beam Polarization Ratio	≥100:1 linear
Laser Beam Polarization Direction	Horizontal, ±2°
940 nm Pump Leakage Power (mW)	<10 avg.
Amplified Pulse Energy to Unamplified Pulse Energy Ratio	≥1000:1
Amplified Pulse Energy to Pre-Pulse Energy Ratio	≥200:1
Amplified Pulse Energy to Post-Pulse Energy Ratio	≥50:1
Average Power Stability (%)	±1.5 over 8 hours RMS (1σ)
Day to Day Power Stability %(after warm-up)	<2
Warm-Up Time, from warm start	<30 minutes

Electrical Specifications

AC Connection	Inlet receptacle IEC 320-C14
Power Cable Connection	IEC 320-C13
Supply Voltage (VAC)	230, 50 to 60 Hz
Power Consumption (W)	<650
Current Draw at 230VAC (A)	
Typical	1.9
Maximum	2.8
Fusing at 230VAC	F12A HRC (5 x 20 mm)
Power Factor (Harmonic) Correction	PF ≥0.90 (EN61000-3-2)

¹ With Ophir-Spiricon M2-2005 (measured at 90/10 knife edged, 2m from exit).

² With Ophir-Spiricon SP620U and 3x beam reducer (measured at 90/10 knife edged, 1.0 m from exit).

Coherent follows a policy of continuous product improvement. Specifications are subject to change without notice.

Coherent offers a limited warranty for all STACCATO 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.



www.Coherent.com

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