

StaxxBeam

By Oxxius

Gamme	Single Frequency Lasers
Title	StaxxBeam 553 nm (adjustable power)
Reference	L1C-553S (adjustable power)
	<p>The StaxxBeam 553 is a compact and powerful 553 nm laser source that delivers a narrow linewidth emission and a spectrum of outstanding purity. Its robust design, complete with readily available safety features makes it well-suited for both laboratory and industrial use. Its proven performance, stability, and versatility make it a trusted solution for laser Doppler anemometry, interferometry, structured illumination microscopy.</p>
Description	<p>Key features</p> <ul style="list-style-type: none">• Single frequency emission, ≤ 1 MHz linewidth• $\leq 1\text{pm}$ wavelength stability• 0%-100% user-adjustable power• TEM_{00} spatial mode• $\pm 1.0\%$ long-term power stability; low optical noise• Integrated control electronics <p>Fully compatible with Oxxius' AOM option, or with MixxWave combiners, in combination with other laser lines.</p>



Product Variations

Part Number	Puissance
L1C-553S-50-CSB-MPA	200mW
L1C-553S-100-CSB-MPA	100mW
L1C-553S-200-CSB-MPA	200mW

Optical Characteristics

Emission wavelength	553 nm
Tolerance	(± 0.4 nm tolerance)
Control modes	Automated power control, fixed or adjustable power level
Optical noise	$\leq 0.5\%$ rms, 10Hz-20MHz bandwidth
Spectral linewidth	≤ 1 nm
Wavelength stability over 8 hours, temperature within $\pm 3^\circ\text{C}$	≤ 1 pm
Wavelength drift over consecutive on/off cycles, temperature within $\pm 3^\circ\text{C}$	≤ 1 pm
Coherence length	≥ 100 m
Side mode suppression ratio, +/- 0.5nm from the main peak	≥ 30 dB
Side mode suppression ratio, +/- 5nm from the main peak	≥ 60 dB typ.
Beam diameter, $1/e^2$ level, 50mm from the beam aperture	0.7 ± 0.1 mm (± 0.15 mm for 200mW)
Beam divergence, $1/e^2$ level full beam, far field	≤ 1 mrad
Beam quality factor M^2	1.1
Beam circularity, far field	$\geq 90\%$
Polarization state	Linear, vertical, extinction ratio ≥ 20 dB

General Specifications

Power consumption	20 W max.
Supply voltage	7V to 12V
Operating temperature	10°C to 50°C
Storage temperature and humidity	0°C to 60°C
Warm up time	≤ 10 minutes
Interfaces	USB, RS-232, direct modulation inputs
Dimensions (laser head)	120x40x32 mm
Weight (laser head)	≤ 1150 g
Controller dimensions	109x84x30 mm
Compliance	CE (incl. IEC 60825-1) and FDA 21 CFR 1040.10 / 1040.11
Laser class	3B
Warranty	24 months or 10000 hours, whichever occurs first

Options

Option 1	Single-mode fiber coupling
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Option 2	Multimode fiber coupling
Option 3	Heat management
Option 4	High rate modulation
Option 5	Optical Isolator
Option 6	OEM version