

StaxxBeam

By Oxxius

Gamme	Single Frequency Lasers
Title	StaxxBeam 553 nm (fixed power)
Reference	LCX-553S (fixed 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• 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
LCX-553S-100-CSB-PPF	100mW
LPX-553S-200-CSB-PPF	200mW

Optical Characteristics

Emission wavelength	553 nm
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Tolerance	($\pm 0.4\text{nm}$ tolerance)
Control modes	Automated power control, fixed or adjustable power level
Optical noise	$\leq 0.2\%$ rms, 10Hz-20MHz bandwidth
Spectral linewidth	$\leq 1\text{nm}$
Wavelength stability over 8 hours, temperature within $\pm 3^\circ\text{C}$	$\leq 1\text{pm}$
Wavelength drift over consecutive on/off cycles, temperature within $\pm 3^\circ\text{C}$	$\leq 1\text{pm}$
Coherence length	$\geq 100\text{ m}$
Side mode suppression ratio, +/- 0.5nm from the main peak	$\geq 30\text{ dB}$
Side mode suppression ratio, +/- 5nm from the main peak	$\geq 60\text{ dB typ.}$
Beam diameter, $1/e^2$ level, 50mm from the beam aperture	$0.7 \pm 0.1\text{mm}$ ($\pm 0.15\text{mm}$ for 200mW)
Beam divergence, $1/e^2$ level full beam, far field	$\leq 1\text{mrad}$
Beam quality factor M^2	≤ 1.1
Beam circularity, far field	$\geq 90\%$
Polarization state	Linear, vertical, extinction ratio $\geq 20\text{dB}$

General Specifications

Power consumption	20 W max.
Supply voltage	5V 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)	100x40x32 mm
Weight (laser head)	≤ 300 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
Option 2	Multimode fiber coupling

Option 3	Heat management
Option 4	Electromechanical shutter
Option 5	Flange
Option 6	Optical Isolator
Option 7	OEM version