

StaxxBeam

By Oxxius

Gamma	Single Frequency Lasers
Title	StaxxBeam 633 nm
Reference	LBX-633S
Description	<p>The StaxxBeam 633 is a compact and powerful 633 nm laser source that delivers a narrow linewidth emission. Its robust design, complete with readily available safety features makes it well-suited for both laboratory and industrial use.</p> <p>Its proven performance, stability, and versatility make it a trusted solution for laser Raman spectroscopy, interferometry, and dynamic light scattering.</p> <p>Key features</p> <ul style="list-style-type: none">• Single frequency emission, \approx 100 MHz linewidth• \approx 10pm wavelength stability• \approx 1m coherence length• $\pm 1.0\%$ 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
LBX-633S-40-CIR-PPF	40mW

Optical Characteristics

Emission wavelength	633 nm
Tolerance	(0.5nm tolerance)
Control modes	Automated current control
Optical noise	\approx 0.2% rms, 10Hz-20MHz bandwidth
Spectral linewidth	\approx 100MHz
Wavelength stability over 8 hours, temperature within $\pm 3^\circ\text{C}$	\approx 10 pm
Wavelength drift over consecutive on/off cycles, temperature within $\pm 3^\circ\text{C}$	\approx 10 pm
Coherence length	\approx 1 m
Side mode suppression ratio, +/-0.5nm from the main peak	\approx 40 dB
Beam diameter, $1/e^2$ level, 50mm from the beam aperture	$0.4 \pm 0.2\text{mm}$

Beam divergence, 1/e² level full beam, far field	? 7.7mrad
Beam quality factor M²	? 1.9
Beam circularity, far field	? 65%
Polarization state	Linear, vertical, extinction ratio ? 17dB

General Specifications

Power consumption	10W max.
Supply voltage	5V to 12V
Operating temperature	20°C to 35°C
Storage temperature and humidity	0°C to 60°C
Warm up time	?2 minutes
Interfaces	USB, RS-232, direct modulation inputs
Dimensions (laser head)	100x40x40 mm
Weight (laser head)	?330 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 5000 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	OEM version