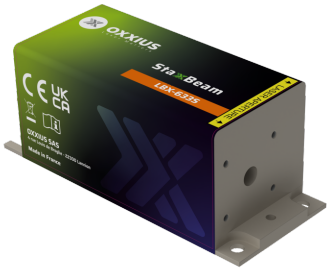
OXXIUS
Laser Matters

StaxxBeam
By Oxxius

Product range	Single Frequency Lasers
Product name	StaxxBeam 633 nm
Reference	LBX-633S
Description 	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. Its proven performance, stability, and versatility make it a trusted solution for laser Raman spectroscopy, interferometry, and dynamic light scattering. **Key features:** • Single frequency emission, ≤ 100 MHz linewidth • ≤ 10 pm wavelength stability • ≥ 1 m coherence length • ±1.0 % long-term power stability; low optical noise • Integrated control electronics Fully compatible with Oxxius' AOM option, or with MixxWave combiners, in combination with other laser lines.

Product Variations

Part Number	Power
LBX-633S-40-CIR-PPF	40 mW

Optical Characteristics

Emission wavelength	633 nm
Tolerance	0.5 nm
Power stability over 8 hours, temperature within ±3°C	±1 %
Control modes	Automated current control
Optical noise	≤ 0.2 % rms, 10 Hz-20 MHz bandwidth
Spectral linewidth	≤ 100 MHz
Wavelength stability over 8 hours, temperature within ±3°C	≤ 10 pm
Wavelength drift over consecutive on/off cycles, temperature within ±3°C	≤ 10 pm
Coherence length	≥ 1 m
Side mode suppression ratio, +/- 0.5nm from the main peak	≥ 40 dB
Side mode suppression ratio, +/- 5nm from the main peak	≥ 50 dB
Beam diameter, 1/e² level, 50mm from the beam aperture	0.4 ±0.2 mm
Beam divergence, 1/e² level full beam, far field	≤ 7.7 mrad
Beam quality factor M²	≤ 1.9
Beam circularity, far field	≥ 65 %
Polarization state	Linear, vertical, extinction ratio ≥ 17 dB

General Specifications

Power consumption	10 W max.
Supply voltage	5 V to 12 V
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
Controler 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

Single-mode fiber coupling
Multimode fiber coupling
Heat management
Electromechanical shutter
Flange
OEM version

Oxxius has a policy of continuous product improvement. Specifications may change without notice.