

StaxxBeam

By Oxxius

Product range	Single Frequency Lasers
Product name	StaxxBeam 830 nm
Reference	LBX-830S
Description	<p>The StaxxBeam 830 is a compact and powerful 830 nm laser source that delivers an powerful, narrow linewidth emission over a multimode beam. 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. Key features:</p> <ul style="list-style-type: none"> • Single frequency emission, ≤ 100 MHz linewidth • ≤ 10 pm wavelength stability • ± 1.0 % long-term power stability; low optical noise • Integrated control electronics Fully compatible with MixxWave combiners, in combination with other laser lines.



Product Variations

Part Number	Power
LBX-830S-100-CIR-PPF	100 mW

Optical Characteristics

Emission wavelength	830 nm
Tolerance	0.5 nm
Power stability over 8 hours, temperature within $\pm 3^{\circ}\text{C}$	$\pm 1\%$
Control modes	Automated current control
Optical noise	$\leq 0.2\%$ rms, 10 Hz-20 MHz bandwidth
Spectral linewidth	≤ 100 MHz
Wavelength stability over 8 hours, temperature within $\pm 3^{\circ}\text{C}$	≤ 10 pm
Wavelength drift over consecutive on/off cycles, temperature within $\pm 3^{\circ}\text{C}$	≤ 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, $1/e^2$ level, 50mm from the beam aperture	0.4 ± 0.2 mm
Beam divergence, $1/e^2$ level full beam, far field	≤ 10 mrad
Beam quality factor M^2	≤ 1.9
Beam circularity, far field	$\geq 65\%$
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	106x126x56 mm
Compliance	CE (incl. IEC 60825-1) and FDA 21 CFR 1040.10 / 1040.11
Laser class	3B, 4
Warranty	24 months or 5000 hours, whichever occurs first

Options

Heat management
OEM version

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