

# StaxxBeam

By Oxxius

|                    |  |
|--------------------|--|
| <b>Gamma</b>       | Single Frequency Lasers  |
| <b>Title</b>       | StaxxBeam 532 nm (fixed power)   |
| <b>Reference</b>   | LCX-532S (fixed power)   |
| <b>Description</b> | <p>The StaxxBeam 532 is a compact and powerful 532 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.</p> <p>Its proven performance, stability, and versatility make it a trusted solution for laser Doppler anemometry, Raman and Brillouin spectroscopy, interferometry, zeta-potential measurements, and other applications.</p> <p>Key features</p> <ul style="list-style-type: none"><li>• Single frequency emission, <math>\leq 1</math> MHz linewidth</li><li>• <math>\leq 1</math> pm wavelength stability</li><li>• TEM<math>00</math> spatial mode</li><li>• <math>\pm 1.0\%</math> long-term power stability; low optical noise</li><li>• Integrated control electronics</li></ul> <p>Fully compatible with Oxxius' AOM option, or with MixxWave combiners, in combination with other laser lines.</p> |



## Product Variations

| Part Number          | Puissance |
|----------------------|-----------|
| LCX-532S-50-CSB-PPF  | 50mW      |
| LCX-532S-100-CSB-PPF | 100mW     |
| LCX-532S-150-CSB-PPF | 150mW     |
| LCX-532S-200-CSB-PPF | 200mW     |
| LCX-532S-300-CSB-PPF | 300mW     |
| LPX-532S-500-CSB-PPF | 500mW     |
| LPX-532S-800-CSB-PPF | 800mW     |

## Optical Characteristics

|                     |  |
|---------------------|--|
| Emission wavelength | 532 nm   |
| Tolerance           | ( $\pm 0.3$ nm tolerance)                                |
| Control modes       | Automated power control, fixed or adjustable power level |

|   |   |
|---|---|
| <b>Optical noise</b>  | ? 0.2% rms, 10Hz-20MHz bandwidth                    |
| <b>Spectral linewidth</b>   | ? 1nm   |
| <b>Wavelength stability over 8 hours, temperature within <math>\pm 3^\circ\text{C}</math></b>               | ? 1pm   |
| <b>Wavelength drift over consecutive on/off cycles, temperature within <math>\pm 3^\circ\text{C}</math></b> | ? 1pm   |
| <b>Coherence length</b>   | ? 100 m   |
| <b>Side mode suppression ratio, +/-0.5nm from the main peak</b>   | ? 30 dB   |
| <b>Side mode suppression ratio, +/-5nm from the main peak</b>   | ? 60 dB typ.  |
| <b>Beam diameter, 1/e<sup>2</sup> level, 50mm from the beam aperture</b>                                    | 0.7 $\pm$ 0.1mm ( $\pm$ 0.15mm for 500mW and above) |
| <b>Beam divergence, 1/e<sup>2</sup> level full beam, far field</b>  | ? 1.4mrad   |
| <b>Beam quality factor M<sup>2</sup></b>  | 1.1   |
| <b>Beam circularity, far field</b>  | ? 90%   |
| <b>Polarization state</b>   | Linear, vertical, extinction ratio ? 20dB           |

## General Specifications

|   |   |
|---|---|
| <b>Power consumption</b>                | 20 W max.   |
| <b>Supply voltage</b>                   | 5V to 12V   |
| <b>Operating temperature</b>            | 10°C to 50°C  |
| <b>Storage temperature and humidity</b> | 0°C to 60°C   |
| <b>Warm up time</b>                     | ?10 minutes   |
| <b>Interfaces</b>                       | USB, RS-232, direct modulation inputs                   |
| <b>Dimensions (laser head)</b>          | 100x40x32 mm  |
| <b>Weight (laser head)</b>              | ?300 g  |
| <b>Controller dimensions</b>            | 109x84x30 mm  |
| <b>Compliance</b>                       | CE (incl. IEC 60825-1) and FDA 21 CFR 1040.10 / 1040.11 |
| <b>Laser class</b>                      | 3B  |
| <b>Warranty</b>                         | 24 months or 10000 hours, whichever occurs first        |

## Options

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