

# FlexxRay

By Oxxius

<b>Product range</b>	CW & Modulated Lasers
<b>Product name</b>	FlexxRay 405 nm
<b>Reference</b>	LBX-405
<b>Description</b>	<p>The FlexxRay LBX-405 is a compact 405 nm laser source delivering one of the highest power available on the market over a beam of superior quality, and featuring a high-speed modulation. Its integrated control electronics and robust design suit both laboratory and industrial use.</p> <p>Performance, stability, and versatility make it a trusted solution for fluorescence-based microscopy, flow cytometry, polymer curing, and photoluminescence analysis. Key features</p> <ul style="list-style-type: none"> <li>• TEM<sub>00</sub> spatial mode</li> <li>• ±0.5% long-term power stability; low optical noise</li> <li>• Modulation up to 150 MHz</li> <li>• Integrated control electronics</li> <li>• 100×40 mm industry-standard footprint Fully compatible with Oxxius MixxWave combiners for single-mode fiber delivery alongside other laser lines.</li> </ul>



## Product Variations

Part Number	Power
LBX-405-50-CSB-PPA	50mW
LBX-405-100-CSB-PPA	100mW
LBX-405-180-CSB-PPA	180mW
LBX-405-300-CSB-PPA	300mW

## Optical Characteristics

<b>Emission wavelength</b>	405 nm
<b>Tolerance</b>	(±5nm tolerance)
<b>Control modes</b>	Automated power control, Automated current control
<b>Optical noise</b>	≤ 0.2% rms, 10Hz-20MHz bandwidth
<b>Spectral linewidth</b>	≤ 1.5nm
<b>Digital modulation function - Rise / fall time</b>	≤ 2ns
<b>Digital modulation function - Bandwidth</b>	≥ 150MHz
<b>Analog modulation function - Rise / fall time</b>	≤ 150ns
<b>Analog modulation function - Bandwidth</b>	≥ 3MHz
<b>Beam diameter, 1/e<sup>2</sup> level, 50mm from the beam aperture</b>	0.7 ±0.2mm
<b>Beam divergence, 1/e<sup>2</sup> level full beam, far field</b>	≤ 1.3mrad
<b>Beam quality factor M<sup>2</sup></b>	≤ 1.25
<b>Beam circularity, far field</b>	≥ 90%
<b>Polarization state</b>	Linear, vertical, extinction ratio ≥ 20dB

## General Specifications

<b>Power consumption</b>	10W 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>	≤2 minutes
<b>Interfaces</b>	USB, RS-232, direct modulation inputs
<b>Dimensions (laser head)</b>	100x40x40 mm
<b>Weight (laser head)</b>	≤330 g
<b>Controler dimensions</b>	106x126x56 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

Single-mode fiber coupling
Multimode fiber coupling
Heat management
Electromechanical shutter
Band-pass filter
OEM version

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