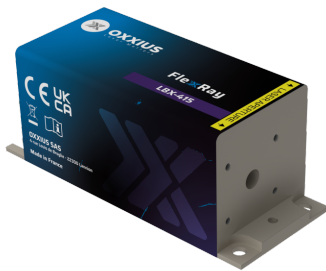


# FlexxRay

By Oxxius

<b>Product range</b>	CW & Modulated Lasers
<b>Product name</b>	FlexxRay 415 nm
<b>Reference</b>	LBX-415
<b>Description</b>	<p>The FlexxRay LBX-415 is a compact 415 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 atom cooling, lithography or polymer curing. <b>Key features</b></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-415-120-CSB-PPA	120 mW

## Optical Characteristics

<b>Emission wavelength</b>	415 nm
<b>Tolerance</b>	(±5 nm tolerance)
<b>Power stability over 8 hours, temperature within ±3°C</b>	±0.5 %
<b>Control modes</b>	Automated power control, Automated current control
<b>Optical noise</b>	≤0.2% rms, 10 Hz-20 MHz bandwidth
<b>Spectral linewidth</b>	≤1.5 nm
<b>Digital modulation function - Rise / fall time</b>	≤2 ns
<b>Digital modulation function - Bandwidth</b>	≥150 MHz
<b>Analog modulation function - Rise / fall time</b>	≤150 ns
<b>Analog modulation function - Bandwidth</b>	≥3 MHz
<b>Beam diameter, 1/e<sup>2</sup> level, 50mm from the beam aperture</b>	0.7 ±0.2 mm
<b>Beam divergence, 1/e<sup>2</sup> level full beam, far field</b>	≤1.4 mrad
<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 ≥20 dB

## General Specifications

<b>Power consumption</b>	10 W max.
<b>Supply voltage</b>	5 V to 12 V
<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>	
<b>Warranty</b>	24 months or 10000 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.*