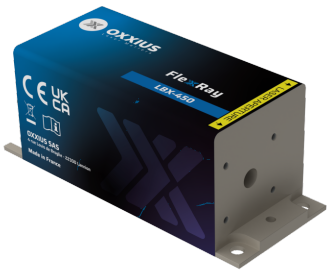
FlexxRay
By Oxxius

Gamme	CW & Modulated Lasers
Title	FlexxRay 450 nm
Reference	LBX-450
Description	The FlexxRay LBX-450 is a compact 450 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. Performance, stability, and versatility make it a trusted solution for fluorescence-based microscopy, flow cytometry and illumination. Key features • TEM_{00} spatial mode • ±0.5% long-term power stability; low optical noise • Modulation up to 150 MHz • Integrated control electronics • 100×40 mm industry-standard footprint Fully compatible with Oxxius MixxWave combiners for single-mode fiber delivery alongside other laser lines.



Product Variations

Part Number	Puissance
LBX-450-100-CSB-PPA	70mW

Optical Characteristics

Emission wavelength	450 nm
Tolerance	(±10nm tolerance)
Control modes	Automated power control, Automated current control

Optical noise	≤ 0.2% rms, 10Hz-20MHz bandwidth
Spectral linewidth	≤ 1.5nm
Digital modulation function - Rise / fall time	≤ 2ns
Digital modulation function - Bandwidth	≥ 150MHz
Analog modulation function - Rise / fall time	≤ 150ns
Analog modulation function - Bandwidth	≥ 3MHz
Beam diameter, 1/e² level, 50mm from the beam aperture	0.55 ±0.2mm
Beam divergence, 1/e² level full beam, far field	≤ 2.1mrad
Beam quality factor M²	≤ 1.25
Beam circularity, far field	≥ 90%
Polarization state	Linear, vertical, extinction ratio ≥ 20dB

General Specifications

Power consumption	2 W typ. / 10 W max.
Supply voltage	5V to 12V
Operating temperature	10°C to 50°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
Warranty	24 months or 10000 hours, whichever occurs first

Options

Option 1	Single-mode fiber coupling
Option 2	Multimode fiber coupling
Option 3	Heat management
Option 4	Electromechanical shutter
Option 5	Band-pass filter
Option 6	OEM version