

FlexxRay

By Oxxius

Gamme	CW & Modulated Lasers
Title	FlexxRay 405 nm
Reference	LBX-405
	<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. Performance, stability, and versatility make it a trusted solution for fluorescence-based microscopy, flow cytometry, polymer curing, and photoluminescence analysis.</p>
Description	<p>Key features</p> <ul style="list-style-type: none">• TEM₀₀ 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 <p>Fully compatible with Oxxius MixxWave combiners for single-mode fiber delivery alongside other laser lines.</p>



Product Variations

Part Number	Puissance
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

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

General Specifications

Power consumption	10W 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
Controller 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