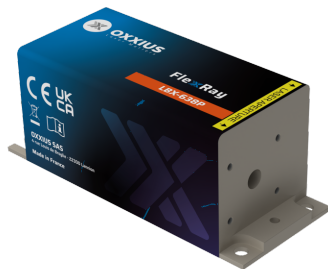


Gamme	CW & Modulated Lasers
Title	FlexxRay 638 nm
Reference	LBX-638
Description	The FlexxRay LBX-638 is a compact 638nm laser source delivering one of the highest power available on the market over a beam of superior quality, and featuring a high-speed modulation. Its integrated control electronics and 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 • TEM₀₀ spatial mode • $\pm 0.5\%$ 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-638-100-CSB-PPA	100mW
LBX-638-150-CSB-PPA	150mW
LBX-638-180-CSB-PPA	180mW

Optical Characteristics

Emission wavelength	638 nm
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Tolerance	(-6/+4nm tolerance)
Control modes	Automated power control, Automated current control
Optical noise	$\leq 0.2\%$ rms, 10Hz-20MHz bandwidth
Spectral linewidth	$\leq 1.2\text{nm}$
Digital modulation function - Rise / fall time	$\leq 2\text{ns}$
Digital modulation function - Bandwidth	$\geq 150\text{MHz}$
Analog modulation function - Rise / fall time	$\leq 150\text{ns}$
Analog modulation function - Bandwidth	$\geq 3\text{MHz}$
Beam diameter, 1/e² level, 50mm from the beam aperture	$0.9 \pm 0.2\text{mm}$
Beam divergence, 1/e² level full beam, far field	$\leq 1.5\text{mrad}$
Beam quality factor M²	≤ 1.25
Beam circularity, far field	$\geq 90\%$
Polarization state	Linear, vertical,extinction ratio $\geq 17\text{dB}$ (except for the LBX-638-180)

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
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 5000 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