

FlexxRay

By Oxxius

Gamme	CW & Modulated Lasers
Title	FlexxRay 640 nm
Reference	LPX-640L
Description	<p>The FlexxRay LBX-640 is a compact 640nm laser source delivering one of the highest power available on the market over a beam of superior quality, and featuring an analogue modulation function. 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 super-resolution microscopy, DNA sequencing and illumination.</p> <p>Key features</p> <ul style="list-style-type: none">• TEM₀₀ spatial mode• ±1.0% long-term power stability• Modulation up to 1.5 kHz• Integrated control electronics <p>Fully compatible with Oxxius MixxWave combiners for single-mode fiber delivery alongside other laser lines.</p>



Product Variations

Part Number	Puissance
LPX-640L-300-CSB-PPA	300mW
LPX-640L-500-CSB-PPA	500mW
LPX-640L-1000-CSB-PPA	1000mW

Optical Characteristics

Emission wavelength	639 nm
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Tolerance	($\pm 0.5\text{nm}$ tolerance)
Control modes	Automated power control
Optical noise	$\leq 2.0\%$ rms, 10Hz-100kHz bandwidth
Spectral linewidth	$\leq 0.5\text{nm}$
Digital modulation function - Rise / fall time	$\leq 20\mu\text{s}$
Digital modulation function - Bandwidth	$\geq 1.5\text{kHz}$
Analog modulation function - Rise / fall time	$\leq 20\mu\text{s}$
Analog modulation function - Bandwidth	$\geq 1.5\text{kHz}$
Beam diameter, $1/e^2$ level, 50mm from the beam aperture	$0.7 \pm 0.1\text{mm}$
Beam divergence, $1/e^2$ level full beam, far field	$\leq 1.5\text{mrad}$
Beam quality factor M^2	≤ 1.1
Beam circularity, far field	$\geq 90\%$
Polarization state	Linear, vertical, extinction ratio $\geq 30\text{dB}$

General Specifications

Power consumption	20 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	≤ 5 minutes
Interfaces	USB, RS-232, direct modulation inputs
Dimensions (laser head)	120x40x32 mm
Weight (laser head)	250 g
Controller dimensions	106x126x56 mm
Compliance	CE (incl. IEC 60825-1) and FDA 21 CFR 1040.10 / 1040.11
Laser class	3B, 4
Warranty	24 months or 10000 hours, whichever occurs first

Options

Option 1	Multimode fiber coupling
Option 2	Heat management
Option 3	High rate modulation
Option 4	OEM version