

FlexxRay

By Oxxius

Product range	CW & Modulated Lasers
Product name	FlexxRay 640 nm
Reference	LPX-640L
Description	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. Performance, stability, and versatility make it a trusted solution for super-resolution microscopy, DNA sequencing and illumination. Key features • TEM₀₀ spatial mode • ±1.0% long-term power stability • Modulation up to 1.5 kHz • Integrated control electronics Fully compatible with Oxxius MixxWave combiners for single-mode fiber delivery alongside other laser lines.



Product Variations

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

Optical Characteristics

Emission wavelength	639 nm
Tolerance	(± 0.5 nm tolerance)
Control modes	Automated power control
Optical noise	$\leq 2.0\%$ rms, 10Hz-100kHz bandwidth
Spectral linewidth	≤ 0.5 nm
Digital modulation function - Rise / fall time	$\leq 20\mu\text{s}$
Digital modulation function - Bandwidth	≥ 1.5 kHz
Analog modulation function - Rise / fall time	$\leq 20\mu\text{s}$
Analog modulation function - Bandwidth	≥ 1.5 kHz
Beam diameter, 1/e² level, 50mm from the beam aperture	0.7 $\pm$ 0.1mm
Beam divergence, 1/e² level full beam, far field	≤ 1.5 mrad
Beam quality factor M²	≤ 1.1
Beam circularity, far field	$\geq 90\%$
Polarization state	Linear, vertical, extinction ratio ≥ 30 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

Multimode fiber coupling
Heat management
High rate modulation
OEM version

Oxxius has a policy of continuous product improvement. Specifications may change without notice.