

# MaxxPower

By Oxxius

<b>Gamme</b>	High-Power Diode Modules
<b>Title</b>	MaxxPower 450 nm
<b>Reference</b>	LBX-450
<b>Description</b>	<p>The MaxxPower LBX-450 is a compact 450 nm laser source that exhibits the highest optical power over an industry-standard 100×40 mm footprint. Its robust design, complete with readily available safety features makes it well-suited for both laboratory and industrial use. This model is a trusted solution for illumination, atom pumping or wide-field microscopy.</p> <p><b>Key features</b></p> <ul style="list-style-type: none"><li>• <math>\pm 1.0\%</math> long-term power stability; low optical noise</li><li>• Modulation up to 1 MHz</li><li>• Integrated control electronics</li></ul> <p>Fully compatible with Oxxius MixxWave combiners for multi-mode fiber delivery in conjunction with other laser lines.</p>



## Product Variations

Part Number	Puissance
LBX-450-650-HPE-PPA	650mW
LBX-450-1200-HPE-PPA	1200mW

## Optical Characteristics

<b>Emission wavelength</b>	450 nm
<b>Tolerance</b>	( $\pm 5\text{nm}$ tolerance)
<b>Control modes</b>	Automated power control (APC), Automated current control (ACC)
<b>Optical noise</b>	$\leq 0.2\%$ rms, 10Hz-20MHz bandwidth

<b>Spectral linewidth</b>	$\leq 2\text{nm}$
<b>Analog modulation function - Rise / fall time</b>	$\leq 200\text{ns}$
<b>Analog modulation function - Bandwidth</b>	$\geq 1\text{MHz}$
<b>Beam diameter, 1/e<sup>2</sup> level, 50mm from the beam aperture</b>	2.6 x 0.7mm
<b>Beam divergence, 1/e<sup>2</sup> level full beam, far field</b>	0.2 x 4.0mrad

## General Specifications

<b>Supply voltage</b>	9V to 12V
<b>Operating temperature</b>	10°C to 50°C
<b>Storage temperature and humidity</b>	0°C to 60°C
<b>Warm up time</b>	$\leq 2$ minutes
<b>Interfaces</b>	USB, RS-232, direct modulation inputs
<b>Dimensions (laser head)</b>	100x40x40 mm
<b>Weight (laser head)</b>	$\leq 330$ g
<b>Controller dimensions</b>	106x126x56 mm
<b>Compliance</b>	CE (incl. IEC 60825-1) and FDA 21 CFR 1040.10 / 1040.11
<b>Laser class</b>	4
<b>Warranty</b>	24 months or 10000 hours, whichever occurs first

## Options

<b>Option 1</b>	Multimode fiber coupling
<b>Option 2</b>	Heat management
<b>Option 3</b>	Band-pass filter
<b>Option 4</b>	OEM version