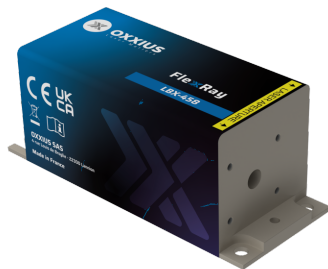


|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Gamme</b>       | CW & Modulated Lasers                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Title</b>       | FlexxRay 458 nm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Reference</b>   | LBX-458                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Description</b> | <p>The FlexxRay LBX-458 is a compact 458 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 and illumination.</p> <p>Key features</p> <ul style="list-style-type: none"> <li>• TEM<sub>00</sub> spatial mode</li> <li>• <math>\pm 0.5\%</math> long-term power stability; low optical noise</li> <li>• Modulation up to 150 MHz</li> <li>• Integrated control electronics</li> <li>• 100×40 mm industry-standard footprint</li> </ul> <p>Fully compatible with Oxxius MixxWave combiners for single-mode fiber delivery alongside other laser lines.</p> |



## Product Variations

| Part Number         | Puissance |
|---------------------|-----------|
| LBX-458-500-CSB-PPA | 500mW     |

## Optical Characteristics

|                            |                                                    |
|----------------------------|----------------------------------------------------|
| <b>Emission wavelength</b> | 458 nm                                             |
| <b>Tolerance</b>           | ( $\pm 5$ nm tolerance)                            |
| <b>Control modes</b>       | Automated power control, Automated current control |

|                                                                          |                                           |
|--------------------------------------------------------------------------|-------------------------------------------|
| <b>Optical noise</b>                                                     | ≤ 0.2% rms, 10Hz-20MHz bandwidth          |
| <b>Spectral linewidth</b>                                                | ≤ 1.5nm                                   |
| <b>Digital modulation function - Rise / fall time</b>                    | ≤ 2ns                                     |
| <b>Digital modulation function - Bandwidth</b>                           | ≥ 150MHz                                  |
| <b>Analog modulation function - Rise / fall time</b>                     | ≤ 150ns                                   |
| <b>Analog modulation function - Bandwidth</b>                            | ≥ 3MHz                                    |
| <b>Beam diameter, 1/e<sup>2</sup> level, 50mm from the beam aperture</b> | 0.7 ±0.2mm                                |
| <b>Beam divergence, 1/e<sup>2</sup> level full beam, far field</b>       | ≤ 1.4mrad                                 |
| <b>Beam quality factor M<sup>2</sup></b>                                 | ≤ 1.25                                    |
| <b>Beam circularity, far field</b>                                       | ≥ 90%                                     |
| <b>Polarization state</b>                                                | Linear, vertical, extinction ratio ≥ 20dB |

## General Specifications

|                                         |                                                         |
|-----------------------------------------|---------------------------------------------------------|
| <b>Power consumption</b>                | 10W max.                                                |
| <b>Supply voltage</b>                   | 5V 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>                     | ≤2 minutes                                              |
| <b>Interfaces</b>                       | USB, RS-232, direct modulation inputs                   |
| <b>Dimensions (laser head)</b>          | 100x40x40 mm                                            |
| <b>Weight (laser head)</b>              | ≤330 g                                                  |
| <b>Controler 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> | Single-mode fiber coupling |
| <b>Option 2</b> | Multimode fiber coupling   |
| <b>Option 3</b> | Heat management            |
| <b>Option 4</b> | Electromechanical shutter  |
| <b>Option 5</b> | Band-pass filter           |
| <b>Option 6</b> | OEM version                |