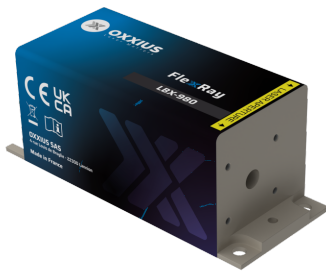


# FlexxRay

By Oxxius

|                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product range</b> | CW & Modulated Lasers                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Product name</b>  | FlexxRay 980 nm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Reference</b>     | LBX-980                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Description</b>   | <p>The FlexxRay LBX-980 is a compact 980 nm laser source built for demanding imaging and analytical applications, combining a diffraction-limited TEM<sub>00</sub> beam, ultra-low optical noise, and modulation speeds up to 150 MHz. Its integrated control electronics and robust design suit both laboratory and industrial use.</p> <p>Precision, stability, and versatility make it a trusted solution for optical pumping and photoluminescence where beam quality and fast switching matter more than raw output power.</p> <p>Key features</p> <ul style="list-style-type: none"> <li>• TEM<sub>00</sub> spatial mode</li> <li>• ±0.5% 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         | Power |
|---------------------|-------|
| LBX-980-250-CSB-PPA | 250mW |

## Optical Characteristics

|                                                                          |                                                |
|--------------------------------------------------------------------------|------------------------------------------------|
| <b>Emission wavelength</b>                                               | 980 nm                                         |
| <b>Tolerance</b>                                                         | ( $\pm 10$ nm tolerance)                       |
| <b>Control modes</b>                                                     | Automated current control                      |
| <b>Optical noise</b>                                                     | $\leq 0.8\%$ rms, 10Hz-20MHz bandwidth         |
| <b>Spectral linewidth</b>                                                | $\leq 1.2$ nm                                  |
| <b>Digital modulation function - Rise / fall time</b>                    | $\leq 2$ ns                                    |
| <b>Digital modulation function - Bandwidth</b>                           | $\geq 150$ MHz                                 |
| <b>Analog modulation function - Rise / fall time</b>                     | $\leq 150$ ns                                  |
| <b>Analog modulation function - Bandwidth</b>                            | $\geq 3$ MHz                                   |
| <b>Beam diameter, 1/e<sup>2</sup> level, 50mm from the beam aperture</b> | 0.9 $\pm$ 0.2mm                                |
| <b>Beam divergence, 1/e<sup>2</sup> level full beam, far field</b>       | $\leq 2.3$ mrاد                                |
| <b>Beam quality factor M<sup>2</sup></b>                                 | $\leq 1.25$                                    |
| <b>Beam circularity, far field</b>                                       | $\geq 90\%$                                    |
| <b>Polarization state</b>                                                | Linear, vertical,extinction ratio $\geq 17$ dB |

## General Specifications

|                                         |                                                         |
|-----------------------------------------|---------------------------------------------------------|
| <b>Power consumption</b>                | 2 W typ. / 10 W 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>                     | $\leq 2$ 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>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>                      | 3B                                                      |
| <b>Warranty</b>                         | 24 months or 5000 hours, whichever occurs first         |

# Options

|                            |
|----------------------------|
| Single-mode fiber coupling |
| Multimode fiber coupling   |
| Heat management            |
| Electromechanical shutter  |
| Band-pass filter           |
| OEM version                |

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