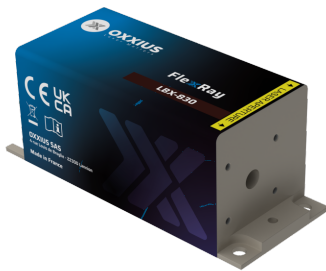


# FlexxRay

By Oxxius

|                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product range</b> | CW & Modulated Lasers                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Product name</b>  | FlexxRay 830 nm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Reference</b>     | LBX-830                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Description</b>   | <p>The FlexxRay LBX-830 is a compact 830 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.</p> <p>Performance, stability, and versatility make it a trusted solution for fluorescence-based microscopy, flow cytometry and illumination. <b>Key features</b></p> <ul style="list-style-type: none"> <li>• TEM<sub>00</sub> spatial mode</li> <li>• <math>\pm 1</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 Fully compatible with Oxxius MixxWave combiners for single-mode fiber delivery alongside other laser lines.</li> </ul> |



## Product Variations

| Part Number         | Power  |
|---------------------|--------|
| LBX-830-100-CSB-PPA | 100 mW |

## Optical Characteristics

|                                                                          |                                                    |
|--------------------------------------------------------------------------|----------------------------------------------------|
| <b>Emission wavelength</b>                                               | 830 nm                                             |
| <b>Tolerance</b>                                                         | (±10 nm tolerance)                                 |
| <b>Power stability over 8 hours, temperature within ±3°C</b>             | ±1 %                                               |
| <b>Control modes</b>                                                     | Automated power control, Automated current control |
| <b>Optical noise</b>                                                     | ≤0.2 % rms, 10 Hz-20 MHz bandwidth                 |
| <b>Spectral linewidth</b>                                                | ≤1.2 nm                                            |
| <b>Digital modulation function - Rise / fall time</b>                    | ≤5 ns                                              |
| <b>Digital modulation function - Bandwidth</b>                           | 150 MHz                                            |
| <b>Analog modulation function - Rise / fall time</b>                     | ≤200 ns                                            |
| <b>Analog modulation function - Bandwidth</b>                            | ≥2.5. MHz                                          |
| <b>Beam diameter, 1/e<sup>2</sup> level, 50mm from the beam aperture</b> | 0.9 ±0.2 mm                                        |
| <b>Beam divergence, 1/e<sup>2</sup> level full beam, far field</b>       | ≤2.2 mrad                                          |
| <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 ≥17 dB          |

## General Specifications

|                                         |                                                         |
|-----------------------------------------|---------------------------------------------------------|
| <b>Power consumption</b>                | 1 W typ. / 10 W max.                                    |
| <b>Supply voltage</b>                   | 5 V to 12 V                                             |
| <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>                      | 3B                                                      |
| <b>Warranty</b>                         | 24 months or 5000 hours, whichever occurs first         |

# Options

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

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