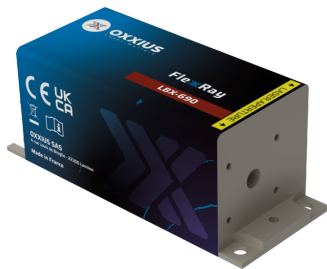


|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Gamme</b>       | CW & Modulated Lasers                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Title</b>       | FlexxRay 690 nm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Reference</b>   | LBX-690                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Description</b> | <p>The FlexxRay LBX-690 is a compact 690nm 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, photoluminescence and illumination.</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         | Puissance |
|---------------------|-----------|
| LBX-690-180-CSB-PPA | 180mW     |

## Optical Characteristics

|                                                                          |                                                    |
|--------------------------------------------------------------------------|----------------------------------------------------|
| <b>Emission wavelength</b>                                               | 690 nm                                             |
| <b>Tolerance</b>                                                         | (±5nm 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>                    | ? 4ns                                              |
| <b>Digital modulation function - Bandwidth</b>                           | ? 150MHz                                           |
| <b>Analog modulation function - Rise / fall time</b>                     | ? 150ns                                            |
| <b>Analog modulation function - Bandwidth</b>                            | ? 2.4MHz                                           |
| <b>Beam diameter, 1/e<sup>2</sup> level, 50mm from the beam aperture</b> | 1 ±0.2mm                                           |

|                                                              |                                           |
|--------------------------------------------------------------|-------------------------------------------|
| Beam divergence, 1/e <sup>2</sup> level full beam, far field | ? 1.4mrad                                 |
| Beam quality factor M <sup>2</sup>                           | ? 1.25                                    |
| Beam circularity, far field                                  | ? 90%                                     |
| Polarization state                                           | Linear, vertical, extinction ratio ? 20dB |

## General Specifications

|                                  |                                                         |
|----------------------------------|---------------------------------------------------------|
| Power consumption                | 2 W typ. / 10 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                     | ?2 minutes                                              |
| Interfaces                       | USB, RS-232, direct modulation inputs                   |
| Dimensions (laser head)          | 100x40x40 mm                                            |
| Weight (laser head)              | ?330 g                                                  |
| Controler dimensions             | 106x126x56 mm                                           |
| Compliance                       | CE (incl. IEC 60825-1) and FDA 21 CFR 1040.10 / 1040.11 |
| Laser class                      | 3B                                                      |
| Warranty                         | 24 months or 5000 hours, whichever occurs first         |

## Options

|          |                            |
|----------|----------------------------|
| Option 1 | Single-mode fiber coupling |
| Option 2 | Multimode fiber coupling   |
| Option 3 | Heat management            |
| Option 4 | Electromechanical shutter  |
| Option 5 | Band-pass filter           |
| Option 6 | OEM version                |