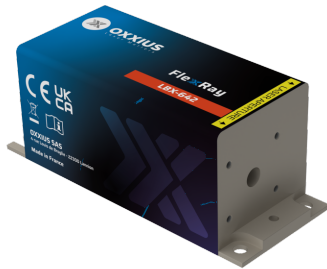


| | |
|--------------------|--|
| Gamme | CW & Modulated Lasers |
| Title | FlexxRay 642 nm |
| Reference | LBX-642 |
| Description | <p>The FlexxRay LBX-642 is a compact 642nm laser source delivering one of the highest power available on the market over a beam of superior quality, and featuring a high-speed 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"> • TEM₀₀ spatial mode • ±0.5% long-term power stability; low optical noise • Modulation up to 150 MHz • Integrated control electronics • 100×40 mm industry-standard footprint <p>Fully compatible with Oxxius MixxWave combiners for single-mode fiber delivery alongside other laser lines.</p> |



Product Variations

| Part Number | Puissance |
|---------------------|-----------|
| LBX-642-140-CSB-PPA | 140mW |

Optical Characteristics

| | |
|----------------------------|--|
| Emission wavelength | 642 nm |
| Tolerance | (-7/+5nm tolerance) |
| Control modes | Automated power control, Automated current control |

| | |
|--|---|
| Optical noise | ≤ 0.2% rms, 10Hz-20MHz bandwidth |
| Spectral linewidth | ≤ 1.2nm |
| Digital modulation function - Rise / fall time | ≤ 2ns |
| Digital modulation function - Bandwidth | ≥ 150MHz |
| Analog modulation function - Rise / fall time | ≤ 150ns |
| Analog modulation function - Bandwidth | ≥ 3MHz |
| Beam diameter, 1/e² level, 50mm from the beam aperture | 1 ±0.2mm |
| Beam divergence, 1/e² level full beam, far field | ≤ 1.3mrad |
| Beam quality factor M² | ≤ 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 |