**Low Noise CW Monolithic DPSS benefits**
- Up to 500 mW
- Low profile laser head (32 mm)
- Lowest power consumption
  - ≤ 12 W for LCX’s, any wavelength, less than 200 mW
  - ≤ 15 W for LCX-532 & LPX-640, 500 mW
  - ≤ 15 W for LCX-561, 300 mW
- Tailored beam diameter capability (0.6 up to 1.4 mm)

**Laser Diode modules benefits**
- Fast TTL and analog modulation
- Optional clean up filter

**Common key features**
- Ultra Low Noise ≤ 0.2% rms
- TEM₀₀ Beam
- Beam pointing ≤ 5 μrad/°C
- SM/PM/MM fiber coupling options
- USB and RS232 computer interfaces
- Graphic User Interface with remote diagnostics
- Remote ControlBoxx with power display (Plug&Play versions - CDRH)
- Controllers integrated into laser head
- LBX and LCX - Industry standard footprint (100x40 mm²)

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**Super Resolution Imaging**
**Confocal Microscopy**
**Flow Cytometry**
**DNA Sequencing**
**Optogenetics**
**Fluorescence Excitation**
**Wavelength Combiner**
**Polymer Curing**
**Material Analysis**
**Laser Marking**

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**Optical characteristics**

<table>
<thead>
<tr>
<th>Technology</th>
<th>Laser diode</th>
<th>DPSS</th>
<th>Laser diode</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beam quality</td>
<td>Transverse singlemode</td>
<td>Transverse singlemode free-space beam</td>
<td>Transverse singlemode</td>
</tr>
<tr>
<td>Beam ellipticity</td>
<td>≤ 1.0</td>
<td>≤ 1.0</td>
<td>≤ 1.0</td>
</tr>
<tr>
<td>Beam divergence</td>
<td>≤ 10 mrad</td>
<td>≤ 10 mrad</td>
<td>≤ 10 mrad</td>
</tr>
<tr>
<td>Beam pointing stability</td>
<td>≤ 5 µrad/°K</td>
<td>≤ 5 µrad/°K</td>
<td>≤ 5 µrad/°K</td>
</tr>
<tr>
<td>Rise / fall time, 10%-90%</td>
<td>≤ 2 ns</td>
<td>≤ 20 ns</td>
<td>≤ 2 ns</td>
</tr>
<tr>
<td>Power adjustment range</td>
<td>0 - 100%</td>
<td>0 - 100%</td>
<td>0 - 100%</td>
</tr>
<tr>
<td>Other available wavelengths</td>
<td>395 nm, 415 nm, 705 nm, 808 nm, 830 nm, 980 nm, 1064 nm</td>
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</tr>
</tbody>
</table>

**Performance**

- **Polarization extinction ratio (typ.):**
  - 100:1
  - 1000:1
  - 100:1
  - 100:1
  - 50:1
  - 100:1
- **The LBX lasers provide superior beam quality, excellent stability and fast modulation capabilities.**

**Benefits**

- **Modulation functions**:
  - Digital modulation
  - Analog modulation
  - Rise / fall times ≤ 2 ns
  - Power adjustment range
  - Other available wavelengths

**Optical beam quality factor (M²):**

- ≤ 1.3
- ≤ 1.25
- ≤ 1.40
- ≤ 1.25
- ≤ 1.40
- ≤ 1.25
- ≤ 1.1
- ≤ 1.25

**Beam circularity, in far field:**

- ≥ 90 %
- ≥ 90 %

**Beam divergence:**

- ≤ 10 mrad
- ≤ 10 mrad
- ≤ 10 mrad

**Beam pointing stability:**

- ≤ 5 µrad/°K
- ≤ 5 µrad/°K
- ≤ 5 µrad/°K

**Beam ellipticity:**

- ≤ 1.0
- ≤ 1.0
- ≤ 1.0

**Beam divergence:**

- ≤ 10 mrad
- ≤ 10 mrad
- ≤ 10 mrad

**Beam pointing stability:**

- ≤ 5 µrad/°K
- ≤ 5 µrad/°K
- ≤ 5 µrad/°K

**Temperature variations and mechanical vibrations. High stability and reliability.**

**Monolithic Resonator (AMR).**

- The elements of resonator are assembled into a single ultra-low-loss optical subsystem, using a proprietary crystal bonding technique.

- A highly transparent compound, deposited on chemically activated end-faces of two crystals, creates a bond that is extremely robust over time, temperature variations, and insensitive to mechanical vibrations. Dielectric mirrors coated at the end-faces of the crystals complete the monolithic assembly with no moving parts.

**Applications**

- **The OXXIUS AMR technology offers the highest spectral quality of the market.**

**System Specifications**

- **Version:**
  - LCC, LPX, LBX
  - LCC & LPX
  - LBCS

- **Output power:**
  - 20 W
  - 50 W
  - 10 W

- **Storage temperature:**
  - 0 - 60 °C

- **Power consumption:**
  - ≤ 25 W
  - ≤ 20 W
  - ≤ 10 W

- **Electro-Mechanical shutter option**:
  - The ACX-SHTE is a compact and affordable electro-mechanical shutter. It is mounted directly on the LCC or LPX in place of the standard manual shutter.

**Fiber coupling options**:

- SM, PM & MM Fiber coupling

**Electro-Mechanical shutter option**:

- **The ACX-SHTE is a compact and affordable electro-mechanical shutter.**

**Fiber coupling options offer rugged and compact solutions to couple LaserBoxx into polarization maintaining fiber, standard single mode fiber or multimode fiber.**

- **The ACX-SHTE is actuated via the LOCC/LPX embedded software or via a standard TTL signal.**
Mechanical Drawings

LCX series, Plug & Play
DPSS Laser

Top view

FT Dissipateur FF LMX32 P&P 070113

Dowel Hole

5.00

Top view

For power adjustable versions

F-22300 Lannion, France
4 rue Louis de Broglie
Oxxius S.A.
Contact us:
DPSS Laser
LCX series, OEM
DPSS Laser

LBX series, Plug & Play
Laser diode

All-In-One laser head with built-in controllers. Input voltage range: 5-12 V DC

Contact us:
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F-22300 Lannion, France
Phone: +33 296 48 70 28
Fax: +33 296 48 21 90
sales@oxxius.com
www.oxxius.com

All dimensions in mm

Avoid exposure to beam class 3B laser product
Power up to 500 mW

Visible and invisible laser radiation
Avoid eye or skin exposure to direct or scattered radiation class 4 laser product

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