Mechanical Drawings

LCX series, Plug & Play
DPSS Laser

LBX series, Plug & Play
Laser Diode

LCX series, OEM
DPSS Laser

Optional heatsink
for LCX series & LBX series

LBX series, OEM
Laser Diode

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

LaserBoxx
One platform for all colors

Low Noise CW Monolithic DPSS benefits
- Up to 500 mW
- Low profile laser head (32 mm)
- Lowest power consumption
  - ≤ 12 W for LCX-532, any wavelength, less than 200 mW
  - ≤ 15 W for LCX-532 & LCX-639, 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
- TEM_{00} Beam
- Beam pointing ≤ 5 µm/°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
- Industry standard footprint (100x40 mm²)

Super Resolution Imaging
Confocal Microscopy
Flow Cytometry
DNA Sequencing
Optogenetics
Fluorescence Excitation
Wavelength Combiner
Polymer Curing
Material Analysis
Laser Marking
### Polarization extinction ratio (typ.)

<table>
<thead>
<tr>
<th>Type</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polarization extinction ratio</td>
<td>100:1</td>
</tr>
<tr>
<td></td>
<td>1000:1</td>
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<tr>
<td></td>
<td>100:1</td>
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<tr>
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<td>100:1**</td>
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</tbody>
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### Benefits of the AMR Technology

- Monolithic Resonator (AMR): The elements of the resonator are assembled into a single ultra-low-loss optical subsystem, using a proprietary crystal bonding technique.

#### Transverse singlemode free-space beam

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beam diameter</td>
<td>±3 mm</td>
</tr>
<tr>
<td>Beam divergence</td>
<td>±1.2 mrad</td>
</tr>
</tbody>
</table>

#### Optical characteristics

- Wavelength range: 375 nm to 785 nm
- Emission wavelength (typ.): 375 nm, 405 nm, 445 nm, 450 nm, 473 nm, 488 nm, 515 nm, 520 nm, 532.3 nm, 553.0 nm, 561.4 nm, 639.0 nm, 633 nm, 638 nm, 642 nm, 647 nm, 660 nm, 730 nm, 785 nm

### Specifications

- **LaserBoxx DPSS**
  - Technology: Laser diode
  - Output power: 300 mW, 100 mW, 70 mW, 100, 150, 240 mW
  - Wavelength: 375 nm, 405 nm, 445 nm, 450 nm, 473 nm, 488 nm, 515 nm, 520 nm, 532.3 nm, 553.0 nm, 561.4 nm, 639.0 nm, 633 nm, 638 nm, 642 nm, 647 nm, 660 nm, 730 nm, 785 nm
  - Rise / fall time: ≤ 2 ns
  - Power adjustment range: 0% - 100%
  - Frequency (kHz): 30 - 10 MHz
  - Temperature: 10 - 38 °C

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  - Technology: Laser diode
  - Output power: 300 mW, 100 mW, 70 mW, 100, 150, 240 mW
  - Wavelength: 375 nm, 405 nm, 445 nm, 450 nm, 473 nm, 488 nm, 515 nm, 520 nm, 532.3 nm, 553.0 nm, 561.4 nm, 639.0 nm, 633 nm, 638 nm, 642 nm, 647 nm, 660 nm, 730 nm, 785 nm
  - Rise / fall time: ≤ 20 ms
  - Power adjustment range: 0% - 100%
  - Frequency (kHz): 30 - 10 MHz
  - Temperature: 10 - 38 °C

### Electro-Mechanical shutter option

The ACX-SHTE is a compact and affordable electro-mechanical shutter. It is mounted directly on the laser head in place of the standard manual shutter. The fiber coupling and other options are fully compatible with the electro-mechanical shutter.

### Fiber coupling options

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