

# LBX-522

Diode based laser source

## Optical characteristics \*

**Emission wavelength** 522 nm ( $\pm 2$  nm tolerance)  
**Linewidth, FWHM**  $\leq 2$  nm

| Part number             | Free space output | Fiber-coupled output |                  |
|-------------------------|-------------------|----------------------|------------------|
|                         |                   | Single mode          | Multi mode fiber |
| LBX-522-70-CSB-(OE/PPA) | 70 mW             | 49 mW                | 56 mW            |
| LBX-522-70-CSB-(OE/PPA) | 100 mW            | 70 mW                | 80 mW            |

**Power stability**  $\pm 0.5\%$   
over 8 hour, temperature within  $\pm 3^\circ\text{C}$   
**Power adjustment range** 0 to 100%  
**Control modes** Automatic Power Control (APC)  
Automatic Current Control (ACC)  
**Optical noise**  $\leq 0.2\%$  rms  
10 Hz-20 MHz bandwidth

## External modulations

### Analog Modulation

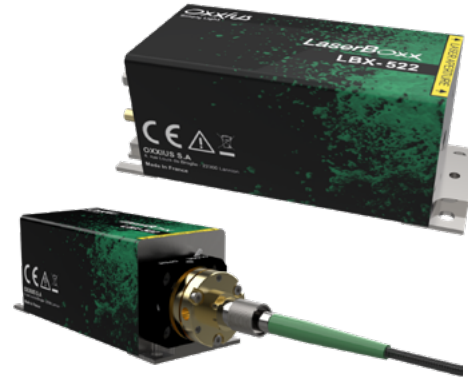
**Rise / fall time**  $\leq 150$  ns  
**-3dB modulation bandwidth**  $\geq 3$  MHz

### Digital Modulation

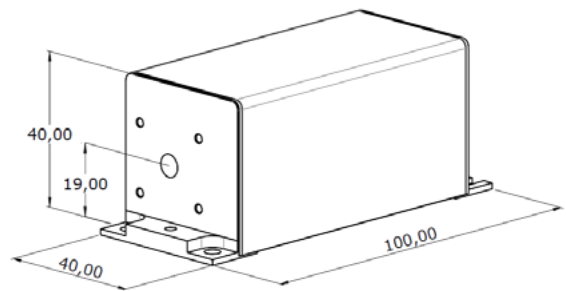
**Rise / fall time**  $\leq 2$  ns  
**-3dB modulation bandwidth**  $\geq 150$  MHz

## Transverse singlemode free-space beam

**Beam diameter (typ)** at  $1/e^2$ ,  
5 cm from the beam aperture 0.8 mm  
**Beam divergence** at  $1/e^2$   
full beam, in far field 1.4 mrad  
**Beam quality factor**  $M^2 \leq 1.25$   
**Beam circularity**, in far field  $\geq 90\%$   
**Polarization state** Linear, vertical at  $\pm 5^\circ$   
**Polarization**  $\geq 100:1$



## Mechanical drawings



## Plug and Play version provide with:

- ControlBoxx controller
- Manual shutter
- DC power supply

## Available options

- OPT-SHTE-LCX Electro-mechanical shutter
- ACX-HTSK-1 Heat sink for operation in ambient air up to  $38^\circ\text{C}$
- ACX-EXK Flange for improved stability
- OPT-CLUP-522 Clean-up filter

## Fiber coupling options \*\*

|  | ACX-FCSMUV<br>or ACX-FCPMUV                 | ACX-FCMM-R50                               |
|--|---|--|
| Power stability<br>over 8 hours and within $\pm 3\text{k}$ | $\pm 2.0\%$                                 | $\pm 2.0\%$                                |
| Fiber optical characteristics                              | 3.5 $\mu\text{m}$ core diameter<br>0.11 N.A | 50 $\mu\text{m}$ core diameter<br>0.22 N.A |
| Polarization extinction ratio<br>(ACX-FCPM only)           | $\geq 100:1$                                | n/a  |
| Fiber output connector                                     | FC/APC                                      | FC/APC                                     |
| Fiber length   | 2 m   | 2 m  |

Warranty : 12 months from shipment date

\*Specifications at nominal power

\*\* Variant are available on demand

## General specifications

|                       | Plug and Play version   | OEM version                          |
|-----------------------|---|--------------------------------------|
| Compliance            | CE<br>FDA 21 CFR 1040.10/1040.1                                 | FDA 21 CFR 1040.10 / 1040.11         |
| Operating temperature | 10 to $38^\circ\text{C}$ ambient air with<br>optional heat sink | 10 to $50^\circ\text{C}$ baseplate   |
| Power consumption     | 10 W max.   |                                      |
| Storage temperature   | 0 to $60^\circ\text{C}$   |                                      |
| Humidity              | Up to 90%RH, non-condensing                                     |                                      |
| Supply voltage        | 100 to 240 VAC<br>external power supply                         | 5 to 12 VDC                          |
| Warm-up time          | $\leq 2$ minutes  |                                      |
| Interfaces            | USB<br>ControlBoxx controller                                   | USB, RS-232,<br>electronic interface |



## CONTACT US

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