

# LBX-405

Diode based laser source

## Optical characteristics \*

Emission wavelength 4055 nm ( $\pm 5$  nm tolerance)  
Linewidth, FWHM  $\leq 1.5$  nm

Part number	Free space output	Fiber-coupled output	
		Single mode	Multi mode fiber
LBX-405-50-CSB-(OE/PPA)	50 mW	35 mW	40 mW
LBX-405-100-CSB-(OE/PPA)	100 mW	70 mW	80 mW
LBX-405-180-CSB-(OE/PPA)	180 mW	126 mW	144 mW
LBX-405-300-CSB-(OE/PPA)	300 mW	210 mW	240 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 0.7 mm

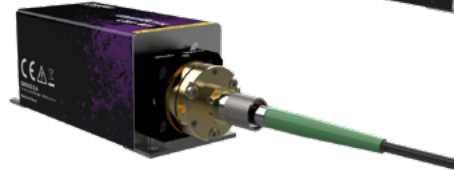
Beam divergence at  $1/e^2$   
full beam, in far field 1.3 mrad

Beam quality factor  $M^2 \leq 1.25$

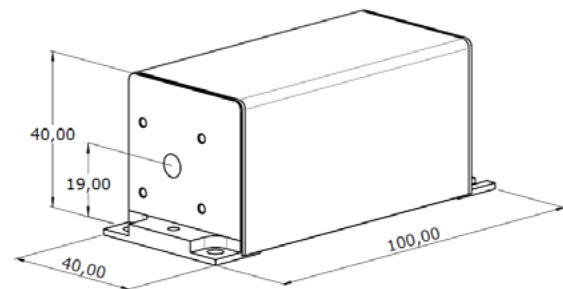
Beam circularity, in far field  $\geq 90\%$

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-405 Clean-up filter

## Fiber coupling options \*\*

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

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 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 optional heat sink	10 to $50^{\circ}\text{C}$ baseplate
Power consumption	2 W typ. / 10 w max.	
Storage temperature Humidity	0 to $60^{\circ}\text{C}$ Up to 90%RH, non-condensing	
Supply voltage	100 to 240 VAC external power supply	5 to 12 VDC
Warm-up time	$\leq 2$ minutes	
Interfaces	USB, RS-232, dedicated electronic interface	



## CONTACT US

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