LBX-488

Laser Diode

Optical characteristics *

Emission wavelength	488 nm (±5 nm)	
Linewidth	≤ 2 nm	
Output power	Free space	Fiber coupled
	40 mW	25 mW
	50 mW	35 mW
	60 mW	42 mW
	100 mW	70 mW
	150 mW	105 mW
	200 mW	140 mW
Control mode(s)	Automatic Power Control (APC) Automatic Current Control (ACC)	
Power stability over 8 hours and within ±3k	± 0.5%	
Power adjustment range	0 - 100%	
Optical noise %RMS, 10Hz - 20MHz bandwidth	≤ 0.2%	

▬ Transverse singlemode free-space beam

Beam waist diameter (typ) at 1/e², 50mm from output aperture	0.7 mm
Beam divergence at 1/e², full angle, in far field	≤ 1.2 mrad
Beam quality factor (M²)	≤ 1.25
Beam circularity, in far field	≥ 90%
Polarization extinction ratio (typ)	100:1
Polarization state	linear, vertical at +/-5°

▬ Modulation functions

Digital Modulation

Max modulation frequency	100 MHz
Rise/fall time, 10%-90%	≤ 3.5 ns

Analog Modulation

Bandwidth 3dB cut-off frequency, ACC mode	≥ 3 MHz
Rise/fall time, 10%-90%	≤ 150 ns

Fiber coupling option

	SM and PM Fiber	MM Fiber (50 μm, 0.22 NA)
Coupling Efficiency	≥ 70%	≥ 80%
Polarization Ratio (PMF only)	100 : 1	n/a
Fiber Output Connector	FC-APC FC/PC, FCP8 on demand	FC-APC
Power stability over 8 hours and within ±3k	± 2%	± 2%
Fiber length	2.0 m	2.0 m
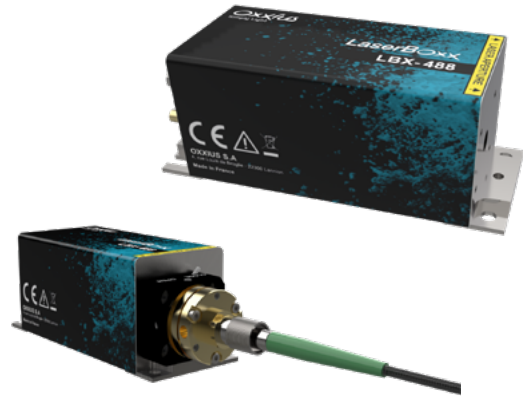
Mechanical drawings
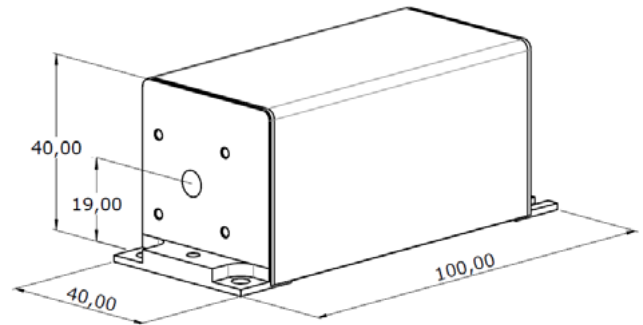
▬ Plug and Play version provided with :

- ControlBoxx
- Power supply

Options

- Electro-mechanical shutter
- Heat sink
- Clean-up filter

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 - 38°C ambiant air with optional heat sink	10 - 50°C baseplate
Power consumption	≤ 25 W	≤ 10 W
Storage temperature	0 to 60°C	
Supply voltage	100 to 240 VAC external power supply	5 to 12 VDC
Warm-up time	≤ 2 minutes	
Interfaces	USB, RS-232, dedicated electronic interface	

Warranty : 12 months from shipment date
*Specifications at nominal power

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