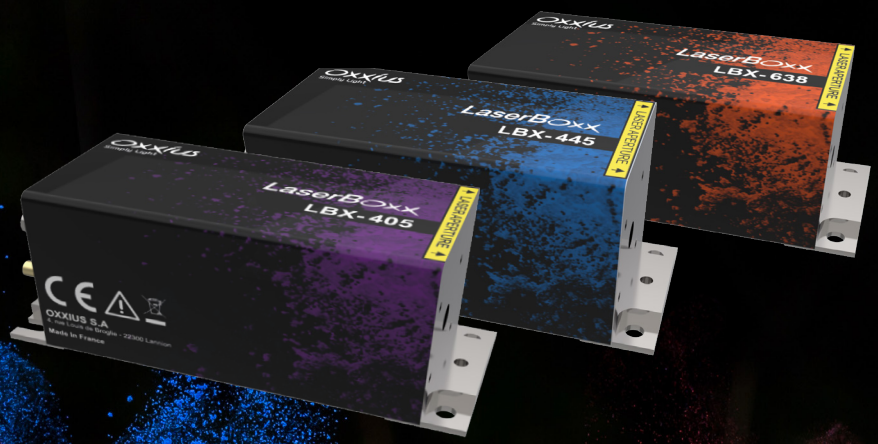
Oxxius
Simply Light

LaserBoxx HPE series

High Power Lasers



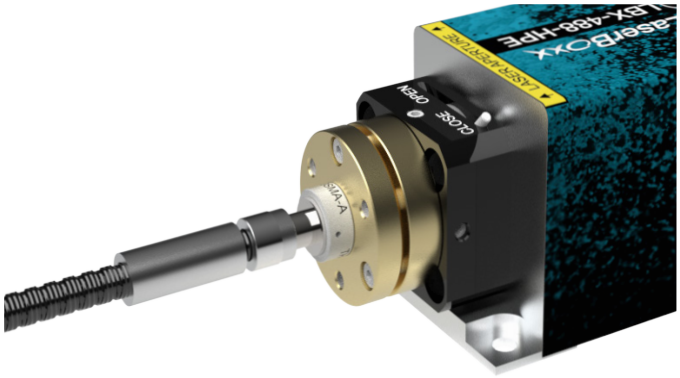
Fluorescence Microscopy
Optogenetics
Illumination
High-throughput inspection
Polymer curing
Laser pumping
Lithography
Additive manufacturing

The *LaserBoxx* HPE series are high power laser sources offering excellent performance and reliability in a compact laser head with integrated electronics.

The optical output is a multimode elliptical beam, either propagating in free space or injected into an optical fiber.

Key features

- Laser head with integrated driver
- Elliptical collimated beam
- Multimode fiber coupling option
- Analog modulation function
- USB, RS232 and analog interfaces
- Industry standard footprint



LBX-488-1000-HPE coupled into a multimode fiber

Fiber coupling

This option offers a cost-effective and compact way to couple the ***LaserBoxx*** beam into a multimode fiber.

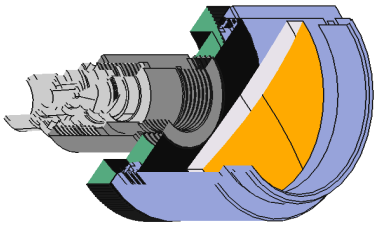
The standard models feature:
- coupling efficiency exceeding 80 %
- round or square core 50 to 200 µm size
- FC / APC delivery connector
- 0.22 numerical aperture
- 2-meter fiber length

Other configurations are available on request.

Custom capabilities

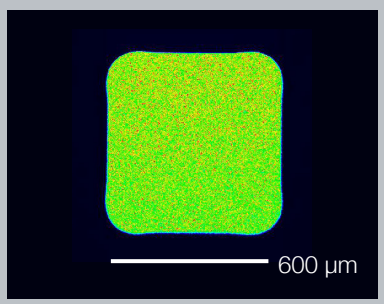
- ***LaserBoxx*** HPE sources combined into a ***L4Cc*** or ***L6Cc*** wavelength combiner
- Speckle reducer option
- Square or hexagonal-shaped fibers, liquid light guide
- Beam-shaping optics

L6Cc-HPE combiner with fiber delivery

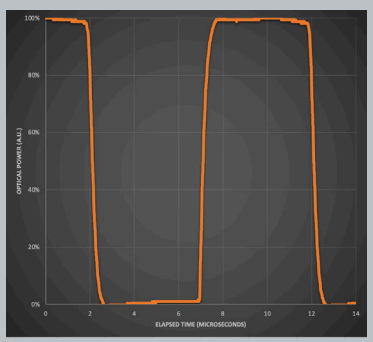


Customized collimator (option)

Performances



Power distribution out of a square-core fiber (LBX-488-1000-HPE)



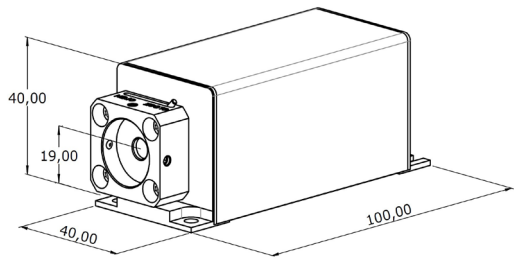
Modulated output; 5 µs pulses at 100 kHz repetition rate (LBX-405-1200-HPE)

Specifications

	Emission wavelength (Tolerance)	Linewidth (-3dB)	Power stability over 8h and ±3 K	Output power (Continous wave)	Beam dimensions (typ.)	Analog modulation function 0-5V input voltage		Multimode fiber coupling option		Supply voltage
						Bandwidth -3 dB cut-off frequency, ACC	Rise / Fall time (10-90%, ACC)	Delivered power	Fiber core diameter	
LBX-375	375 nm (±5 nm)	≤ 5 nm 2 nm typical	± 1%	200, 400 mW	3.0 x 1.4 mm	0 Hz - 1 MHz	≤ 300 ns	160, 320 mW	50 µm or larger	5 - 12 VDC
LBX-395	395 nm (-10/+5 nm)			270 mW	2.5 x 0.8 mm		≤ 200 ns	215 mW		9 - 12 VDC
LBX-405	405 nm (±5 nm)			900, 1200 mW	2.6 x 1.2 mm			720, 960 mW		
LBX-450	450 nm (±10 nm)			650, 1200 mW	2.6 x 0.7 mm			500, 950 mW		
LBX-473	473 nm (±5 nm)			1000 mW	2.6 x 1.2 mm			800 mW		
LBX-488	488 nm (±5 nm)			1000 mW	2.2 x 1.2 mm			800 mW		
LBX-520	520 nm (±10 nm)			800 mW	2.7 x 0.8 mm		≤ 500 ns	600 mW		
LBX-638	638 nm (±10 nm)			1100 mW	4.5 x 4.5 mm		≤ 200 ns	750 mW		5 - 12 VDC
LBX-750	750 nm (±5 nm)			1200 mW	1.9 x 3.8 mm			950 mW		
LBX-785	785 nm (±5 nm)			800 mW	3.8 x 1.9 mm			640 mW	200 µm or larger	
LBX-830	830 nm (±5 nm)			1200 mW	5.2 x 2.6 mm			960 mW		
LBX-940	940 nm (±10 nm)			600 mW	1.9 x 3.8 mm			450 mW	105 µm or larger	
LBX-980	980 nm (±10 nm)			1000 mW	3.5 x 1.5 mm			800 mW		

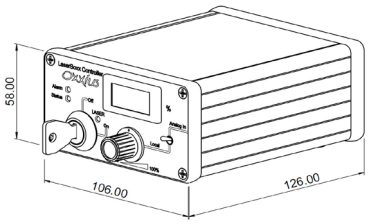
Plug and Play, CDRH-compliant version

Laser head with manual shutter



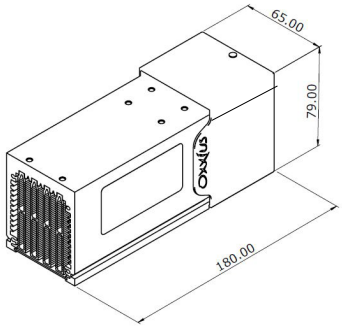
Dimensions in mm

ControlBoxx controller



Heatsink (option)

For improved stability and heat management



	Plug and Play version	OEM version
Compliance	CE, including EN 60825-1:2014 FDA 21 CFR 1040.10/1040.11	FDA 21 CFR 1040.10 / 1040.11
Operating temperature	10 - 38°C ambient air with optional heat sink	10 - 50°C baseplate
Power consumption	10W typ. / 25W max.	
Storage temperature	0 to 60°C	
Supply voltage	100 to 240 VAC external power supply included	see «Specifications» above
Warm-up time	≤ 2 minutes	
Interfaces	USB, RS-232, dedicated electronic interface	

Our sales network

Our distributors are present all over the world, making our products easily accessible wherever you are.
To find the full list of our partners and their locations, visit our website: www.oxxius.com/contact-us.

About Oxxius

Founded in 2002, Oxxius develops, manufactures and sells advanced DPSS and laser diode modules across the ultraviolet, visible, and near-infrared spectra.
Our solutions deliver exceptional optical performance in an ultra-compact design, making them easy to integrate into instruments for life science, metrology, and manufacturing applications.
Oxxius also offers compact and versatile mutlicolor laser sources wavelength combiners, with up to 7 laser lines.

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