

High Power Laser Diode Modules



LaserBoxx HPE series

UV to IR

Laser Diode Modules

The LaserBoxx HPE series is a high power laser diode module offering excellent performance and reliability in a compact driver integrated laser head. It comes in free space multimode elliptical beam or with removable MM fiber coupling.

Medical
Illumination
High-Throughput inspection
Polymer curing
Laser pumping
Sensor

Laser head with integrated drivers
Elliptical Collimated beam
Multimode fiber coupling option
Analog modulation
USB, RS232 and Analog interfaces
Industry standard compact package

375

405

445

638

785

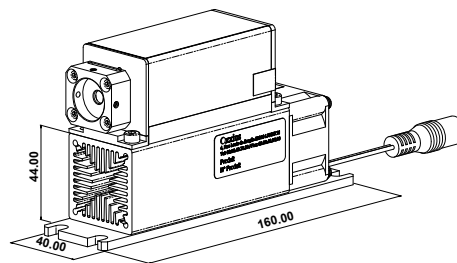
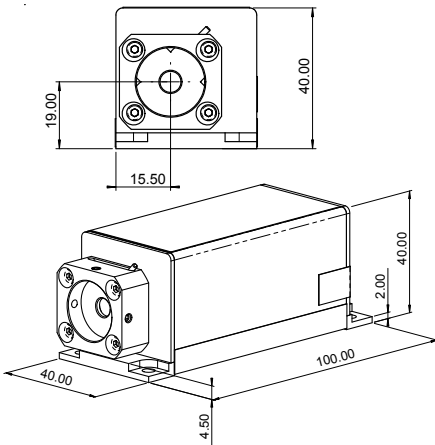
MM Fiber Coupling option

The LBX-FC-MM offers cost effective and compact way to couple LaserBoxx beam into multimode fiber with core diameter $\geq 50 \mu\text{m}$ and $\text{NA} \geq 0.22$. The coupling efficiency is $> 80\%$.



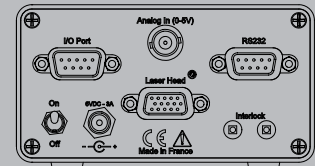
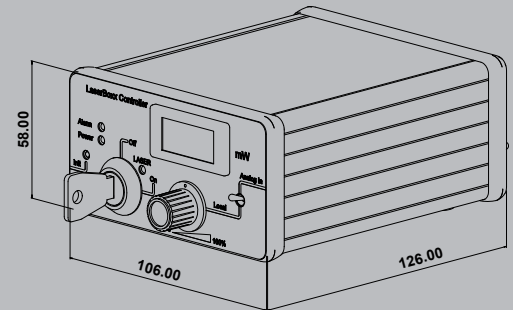
	LBX-375-HPE	LBX-405-HPE	LBX-445-HPE	LBX-638-HPE	LBX-785-HPE	Units
Optical Specifications						
Wavelengths	375	405	445	638	785	nm
Wavelength range						± 5
Spectral width						< 2
Output Power	150	500	650	400	400	mW
Power Stability over 8 hours and $\pm 3^\circ\text{C}$, p-p						$\pm 1\%$
Beam Dimensions (typ.) at 1/e2, at aperture	1.3 x 2.4	1.2 x 2.8	1.2 x 2.8	1.1 x 4.6	1.4 x 4.0	mm
Beam Divergence (typ.) at 1/e2, full angle, in far field	0.7 x 0.9	2.6 x 0.4	2.6 x 0.4	7 x 0.5	7 x 0.5	mrاد
Polarization Ratio Vertical +/- 3 Deg.						Typ. 100:1
MM Fiber Coupling option						
Output Power	120	400	520	320	320	mW
Fiber Core Diameter SMA connectors, 1.5m fiber length	50	50	50	200	200	μm
System Parameters						
Analog Modulation						
Bandwidth 3dB cut off frequency	> 1 (APC)	> 1 (APC) / > 3 (ACC)				MHz
Rise / Fall time 10% - 90%	< 200 (APC)	< 200 (APC) / < 150 (ACC)				ns
Interfacing	RS232, USB, Analog					
General Requirements						
Laser Head						
Operating temperature measured at base, non condensing	10 - 45					$^\circ\text{C}$
Start up time	< 2					min
Heat dissipation	< 15					W
Input Voltage (OEM only)	5					V DC
Input Current (OEM only)	< 3	< 3	< 4		A	
Dimensions (LxWxH)	100 x 40 x 40					mm^3
Plug en Play Version						
Input Voltage	115 / 230					V AC

LaserBoxx Series OEM and P&P Laser head with integrated drivers



Optional heat sin

P&P remote ControlBoxx



Rear view



VISIBLE AND INVISIBLE LASER RADIATION
AVOID EYE OR SKIN EXPOSURE TO DIRECT OR SCATTERED RADIATION
CLASS 4 LASER PRODUCT