

PhoxX®



The PhoxX® Series - Compact High Performance Diode Lasers

The PhoxX® diode lasers offer high-performance at a compact design. Especially developed for applications like flow cytometry, DNA screening and confocal microscopy in bioinstrumentation as well as industrial applications like printing / CtP, microlithography, reprographics or machine vision, the PhoxX® lasers integrate all functionalities needed for today's and future machine designs. A broad variety of wavelengths and single-mode emission up to 140mW with high beam quality and fast digital and analog modulation fulfills even highest demands. Easy integration into existing or future designs is assured by versatile input signal types. The USB2.0 and the RS-232 interface allow deep integration of the lasers into the application process.

Key Facts:

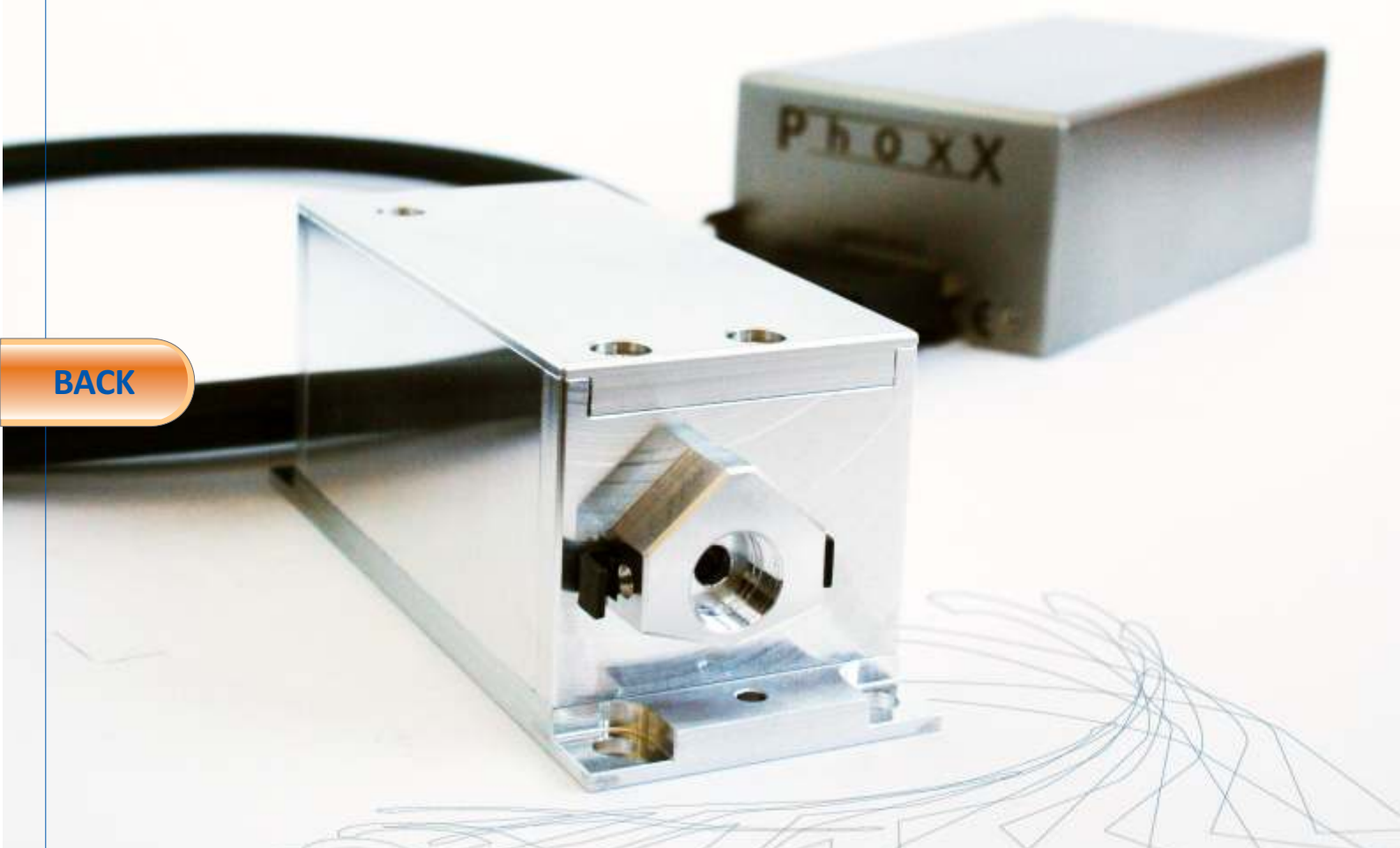
- Small and compact design
- 15 different wavelengths between 375nm and 830nm
- Single-Mode optical output powers up to 140mW
- High-Stability CW operation
- High-Speed digital and/or analogue modulation
- Electronic shutter function (laser inhibit) with > 150kHz full ON/OFF capability
- Flexible, customer configurable input signaling
- AAC - Automatic Aging Compensation
- Industry standard footprint

Wavelength range: 375 - 830nm

Optical output power: up to 140mW

[MORE](#)

The Omicron Phox[®] Laser Series

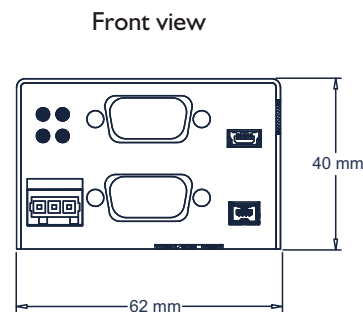
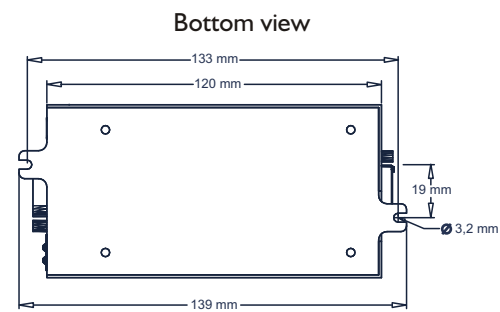


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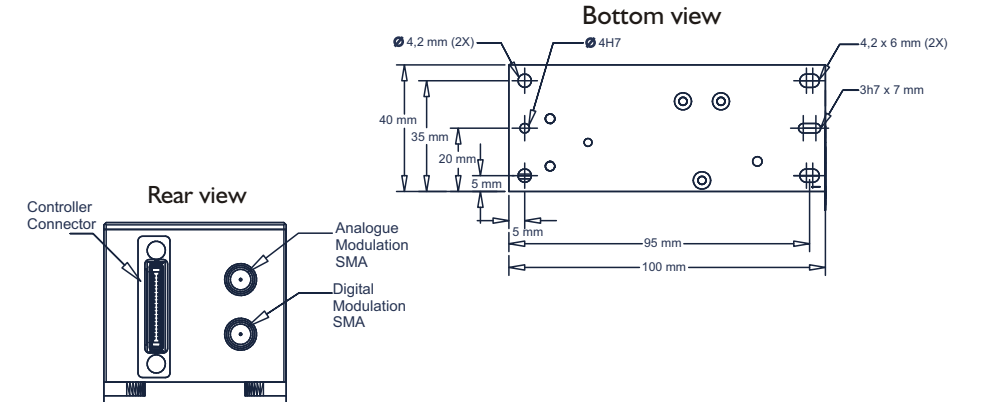
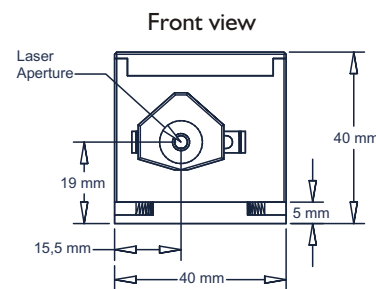
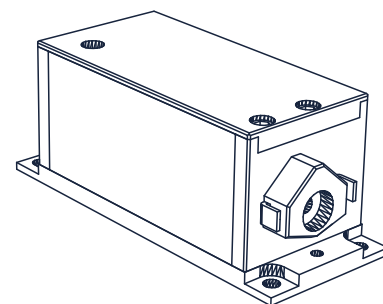
Model	Phox [®] 375	Phox [®] 405-60	Phox [®] 405-120	Phox [®] 445	Phox [®] 473	Phox [®] 488	Phox [®] 638-40	Phox [®] 638-100	Phox [®] 642	Phox [®] 660	Phox [®] 685	Phox [®] 705	Phox [®] 730	Phox [®] 785	Phox [®] 808	Phox [®] 830
Wavelength (+/- 5nm)	375nm	405nm	405nm	445nm	473nm	488nm	638nm	638nm	642nm	660nm	685nm	705nm	730nm	785nm	808nm	830nm
Optical output power	20mW	60mW	120mW	50mW	20mW	20mW	40mW	100mW	140mW	130mW	50mW	40mW	40mW	120mW	140mW	140mW
Typical beam diameter (1/e ²)	1.0 ... 1.5mm (depends on wavelength) - 0.7mm with PHOXX.DSO option															
Beam quality M ²	<1.3															
Beam ellipticity	<1.2:1															
Beam pointing stability (µrad/°C)	<5															
Polarisation ratio	>100:1 vertical															
Warm up time	<3 minutes															
Operation modes																
Mode 1	CW Operation															
Mode 2	Analogue Modulation															
Mode 3	Digital Modulation															
Mode 4	Mixed Analogue & Digital Modulation															
Digital modulation																
Modulation bandwidth	>180MHz															
Signal type	TTL (200 Ohm) / 0...1V (50 Ohm) / LV-PECL / PECL / LVDS (user-configurable)															
Analogue modulation																
Modulation bandwidth	>3MHz															
Signal type	0...1V (50 Ohm) / 0...5V (1.2kOhm) (user-configurable)															
Laser enable input																
Modulation bandwidth	>150kHz (complete ON/OFF)															
Signal type	TTL (2 kOhm)															
RMS noise characteristics																
20Hz ... 10MHz	< 0,2%															
10MHz ... 500MHz	< 0,5%															
Long-term power stability (8h)	< +/- 2%															
Electrical properties																
Laser operating voltage	5.00 VDC +/- 0.50V															
Computer interface																
Type	RS-232 and USB2.0															
Mechanical properties																
Dimensions laser head	100 x 40 x 40mm (l x w x h)															
Dimensions laser controller	120 x 62 x 40mm (l x w x h)															

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Wavelength in nm Power in mW

Phox[®] Controller



Phox[®] Laser head



Note: Laserhead dimensions may vary

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