

PhoxX



LuxX

The PhoxX® Series and the LuxX® Series - Compact High Performance Diode Lasers

The PhoxX® and the LuxX® 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 two laserseries 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
- 18 different wavelengths between 375nm and 830nm
- Single-mode optical output powers up to 140mW
- High stability CW operation with ultra low noise - Corrected astigmatism for perfect focusability and high fiber coupling efficiency
- Fast analogue and/or digital modulation
- Fast electronic shutter function (laser enable) with full ON/OFF extinction ratio
- Flexible, customer configurable input signaling
- AAC - Automatic Aging Compensation function
- Industry standard footprint

Wavelength range: 375 - 830nm

Optical output power: up to 140mW

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The Omicron PhoxX[®] Laser Series

PhoxX[®]

High-Performance Diode Lasers with fast modulation



The Omicron LuxX[®] Laser Series

LUXX[®]

Compact CW Diode Lasers



Model	PhoxX [®] 375	PhoxX [®] 395	PhoxX [®] 405	PhoxX [®] 415	PhoxX [®] 425	PhoxX [®] 445	PhoxX [®] 457	PhoxX [®] 460	PhoxX [®] 473	PhoxX [®] 488	PhoxX [®] 515	PhoxX [®] 638	PhoxX [®] 642	PhoxX [®] 660	PhoxX [®] 685	PhoxX [®] 705	PhoxX [®] 730	PhoxX [®] 785	PhoxX [®] 808	PhoxX [®] 830
Wavelength (+/- 5nm)	375nm	395nm	405nm	415nm	425nm	445nm	457nm	460nm	473nm	488nm	515nm	638nm	642nm	660nm	685nm	705nm	730nm	785nm	808nm	830nm
Optical output power	20mW	120mW	60mW 120mW	120mW	120mW	50mW 100mW	100mW	100mW	20mW 80mW	20mW 50mW 80mW	25mW	40mW 100mW	40mW	30mW	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	<1.2																			
Beam ellipticity	<1.2:1																			
Beam pointing stability (μrad/°C)	<5																			
Polarisation ratio	>100:1 vertical																			
Warm up time	<3 minutes																			
Operation modes	Mixed Analogue & Digital Modulation																			
Mode 1	CW Operation																			
Mode 2	Analogue Modulation																			
Mode 3	Digital Modulation																			
Mode 4	Mixed Analogue & Digital Modulation																			
Digital modulation	>180MHz																			
Modulation bandwidth	TTL (200 Ohm) / 0...1V (50 Ohm) / LV-PECL / PECL / LVDS (user-configurable)																			
Signal type	TTL (200 Ohm) / 0...1V (50 Ohm) / LV-PECL / PECL / LVDS (user-configurable)																			
Analogue modulation	>3MHz																			
Modulation bandwidth	0...1V (50 Ohm) / 0...5V (1.2kOhm) (user-configurable)																			
Signal type	0...1V (50 Ohm) / 0...5V (1.2kOhm) (user-configurable)																			
Laser enable input	>250kHz (complete ON/OFF)																			
Modulation bandwidth	TTL (2 kOhm)																			
Signal type	TTL (2 kOhm)																			
RMS noise characteristics	20Hz ... 10MHz < 0.2%																			
20Hz ... 10MHz	< 0.2%																			
10MHz ... 500MHz	< 0.2%																			
Long-term power stability (8h)	< 0.5% in CW operation mode																			
Electrical properties	Laser operating voltage 5.00 VDC +/- 0.50V																			
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Computer interface	Type RS-232 and USB2.0																			
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Mechanical properties	Dimensions laser head 100 x 40 x 40mm (l x w x h)																			
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Dimensions laser controller	120 x 62 x 40mm (l x w x h)																			

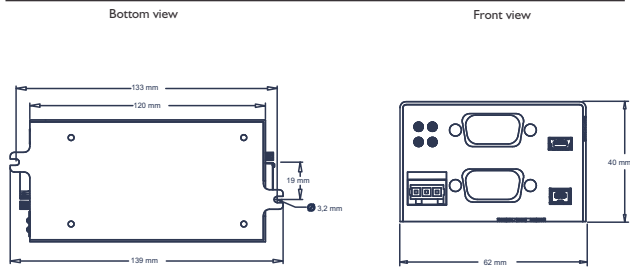
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Beam ellipticity	<1.2:1																			
Beam pointing stability (μrad/°C)	<5																			
Polarisation ratio	>100:1 vertical																			
Warm up time	<3 minutes																			
Operation modes	CW Operation - constant current (ACC)																			
Mode 1	CW Operation - constant current (ACC)																			
Mode 2	CW Operation - constant power (APC)																			
Mode 3	Analogue Modulation																			
Analogue modulation	>1.5MHz																			
Modulation bandwidth	0...5V (1.2kOhm)																			
Signal type	0...5V (1.2kOhm)																			
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PhoxX□□□-□□□
Wavelength in nm Power in mW

LuxX□□□-□□□
Wavelength in nm Power in mW

PhoxX[®] controller



Laser head

