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GMP

GENERAL
MICROTECHNOLOGY
& PHOTONICS

SYSTEMS FOR INDUSTRY
RESEARCH
TELECOM & MEDICINE

omicron
LASERAGE

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April 2013

omicron
LASERAGE

Ultra Compact
High Performance Diode Lasers

LUX X+

Digital modulation up to
250 MHz

Analogue modulation
>3 MHz

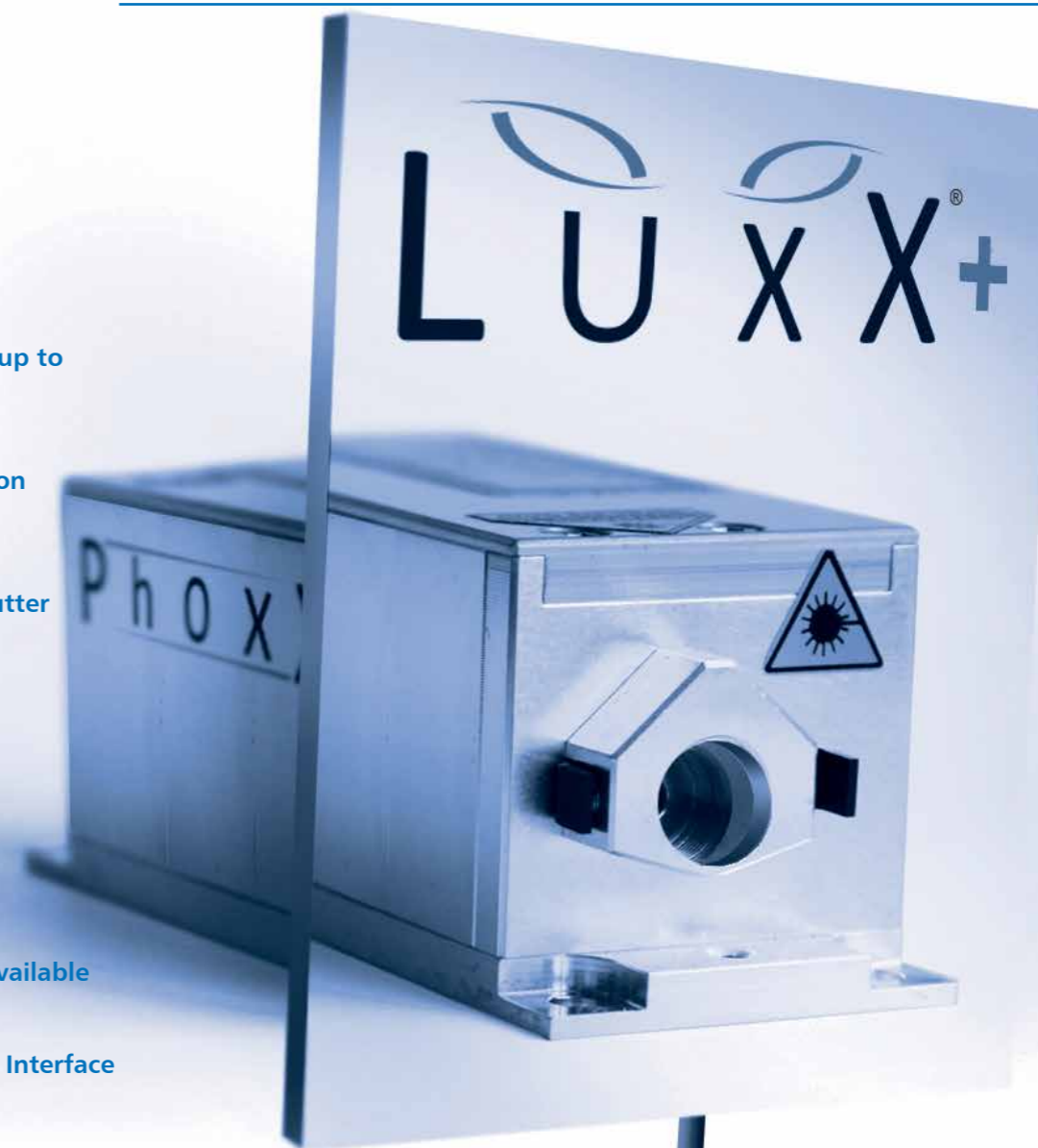
Fast full ON/OFF shutter
function

High stability CW
operation

Ultra compact
one-box-solution

>20 wavelengths available

RS-232 and USB 2.0 Interface



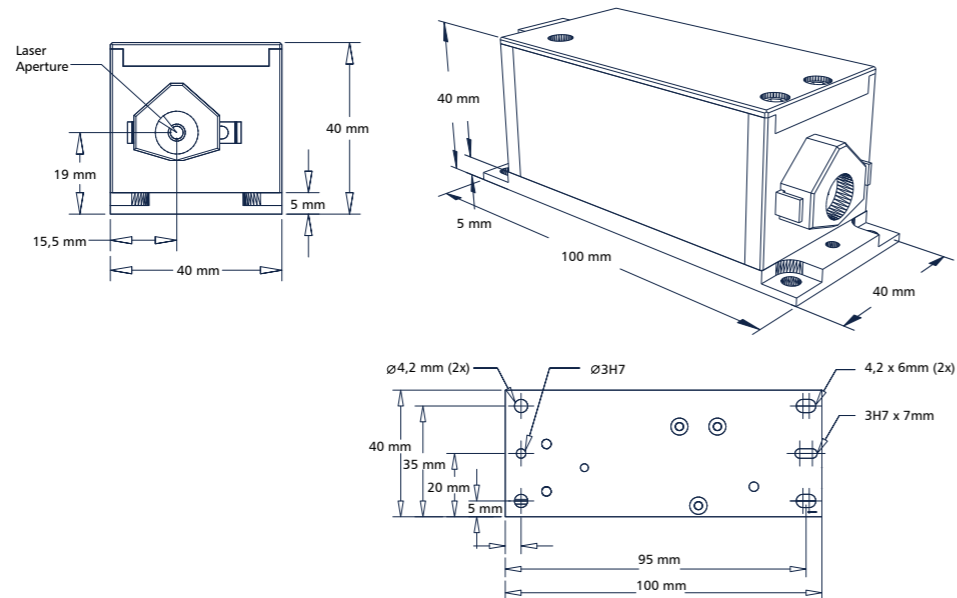
The Omicron LUXX+ Laser Series

The Omicron LuxX[®] + Laser Series offers high-performance at a compact design. A broad variety of wavelengths and single mode emission up to 300mW cover a wide range of applications. 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 applications process.

LUXX+ dimensions

Applications:

- Flow Cytometry
- Microscopy
- Test and Measurement
- Machine Vision
- CTP
- Microlithography
-



LUXX+ Laser Series Specification Table

Model	Model																				
Wavelength (+/- 5nm)	LuxX+ 375 - 20 / 70	LuxX+ 395	LuxX+ 405nm	LuxX+ 415nm	LuxX+ 425nm	LuxX+ 445 - 50 / 100	LuxX+ 457nm	LuxX+ 460	LuxX+ 473 - 20 / 80 / 100	LuxX+ 488 - 20 / 60 / 80 / 100 / 150 / 200	LuxX+ 515 - 25 / 50 / 80	LuxX+ 638 - 40 / 100 / 150	LuxX+ 642	LuxX+ 647	LuxX+ 660	LuxX+ 685	LuxX+ 705	LuxX+ 730	LuxX+ 785	LuxX+ 808	LuxX+ 830
Optical output power	20mW 70mW	120mW	60mW 120mW 300mW	120mW	120mW	50mW 100mW	100mW	100mW	20mW 80mW 100mW	20mW 60mW 80mW 100mW 150mW 200mW	25mW 50mW 80mW	40mW 100mW 150mW	140mW	140mW	130mW	50mW	40mW	40mW	120mW	140mW	140mW
Typical beam diameter (1/e ²)	1.0...1.5mm (1/e ²), (depends on wavelength) - 0.7mm (1/e ²) +/- 0.1mm with option XX.DSO																				
Beam quality M2	< 1.15																				
Beam ellipticity	< 1.1:1																				
Beam pointing stability (µ rad/°C)	< 5																				
Polarisation ratio	> 100:1 vertical																				
Warm up time	< 3 minutes																				
Operation modes																					
Mode 1	CW Operation (APC and ACC)																				
Mode 2	Analogue Modulation																				
Mode 3	Digital Modulation																				
Mode 4	Mixed Analogue & Digital Modulation																				
Digital modulation																					
Modulation bandwidth	> 250MHz																				
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 (1.2k Ohm) (user-configurable)																				
Laser enable input																					
Modulation bandwidth	> 500kHz (complete ON/OFF)																				
Signal type	TTL (2 kOhm)																				
RMS noise characteristics																					
20Hz ... 10MHz	< 0.2%																				
10MHz ... 500MHz	< 0.2%																				
Long-term power stability (8h)	(< 0.5% in CW operation mode)																				
Electrical properties																					
Laser operating voltage	12 VDC +/- 0.50V																				
Computer interface																					
Type	RS-232 and USB2.0																				
Mechanical properties																					
Dimensions laser head	100 x 40 x 40 mm (l x w x h)																				

more information: www.omicron-laser.de