DATASHEET

01.08.2024

LuxX

LuxX® compact CW laser diode modules for biotech and industrial applications

The LuxX® Diode Laser Series offers high-performance at a compact design. A broad variety of wavelengths and single-mode emission up to 500mW cover a wide range of applications. Easy integration into existing or future designs is assured by its industry standard footprint. The USB2.0 and the RS-232 interface allow deep integration of the lasers into the applications process.

Key Facts:

- Small and compact design
- 36 different wavelengths between 375nm and 1550nm
- Single-Mode optical output powers up to 500mW
- High-Stability CW operation (ACC and APC mode)
- Fast analogue modulation
- Electronic shutter function (laser inhibit) with >150kHz full ON/OFF capability
- Automatic Aging Compensation (AAC) function
- USB2.0 and RS-232 interface
- 0.7mm beam diameter option
- Industry standard footprint
- Drivers for Metamorph, LabVIEW and Micromanager available

Omicron-Laserage Laserprodukte GmbH
Phone: +49 (0) 6106 8224-0
Raiffeisenstraße 5e
63110 Rodgau – Germany
Fax:+49(0)6106 8224-10
www.omicron-laser.de
mail@omicron-laser.de

Specifications – LuxX® Laser Series

	Modell	Wavelength / Power	Modell	Wavelength / Power
Wavelengths & Powers (other wavelengths and powers on request)	LuxX® 375-20	375nm / 20mW	LuxX® 515-80	515nm / 80mW
	LuxX® 375-70	375nm / 70mW	LuxX® 515-100	515nm / 100mW
	LuxX® 395-120	395nm / 120mW	LuxX® 515-150	515nm / 150mW
	LuxX® 405-20	405nm / 20mW	LuxX® 633-100	633nm / 100mW
	LuxX® 405-60	405nm / 60mW	LuxX® 638-40	638nm / 40mW
	LuxX® 405-120	405nm / 120mW	LuxX® 638-100	638nm / 100mW
	LuxX® 405-300	405nm / 300mW	LuxX® 638-150	638nm / 150mW
	LuxX® 415-120	415nm / 120mW	LuxX® 638-200	638nm / 200mW
	LuxX® 425-120	425nm / 120mW	LuxX® 642-140	642nm / 140mW
	LuxX® 445-50	445nm / 50mW	LuxX® 647-140	647nm / 140mW
	LuxX® 445-100	445nm / 100mW	LuxX® 660-130	660nm / 130mW
	LuxX® 445-500	445nm / 500mW	LuxX® 675-200	675nm / 200mW
	LuxX® 457-100	457nm / 100mW	LuxX® 685-50	685nm / 50mW
	LuxX® 457-500	457nm / 500mW	LuxX® 690-200	690nm / 200mW
	LuxX® 460-100	460nm / 100mW	LuxX® 705-40	705nm / 40mW
	LuxX® 473-20	473nm / 20mW	LuxX® 730-40	730nm / 40mW
	LuxX® 473-80	473nm / 80mW	LuxX® 785-120	785nm / 120mW
	LuxX® 473-100	473nm / 100mW	LuxX® 785-200	785nm / 200mW
	LuxX® 473-300	473nm / 300mW	LuxX® 808-140	808nm / 140mW
	LuxX® 488-25	488nm / 25mW	LuxX® 830-140	830nm / 140mW
	LuxX® 488-60	488nm / 60mW	LuxX® 850-100	850nm / 100mW
	LuxX® 488-80	488nm / 80mW	LuxX® 945-200	945nm / 200mW
	LuxX® 488-100	488nm / 100mW	LuxX® 980-200	980nm / 200mW
	LuxX® 488-150	488nm / 150mW	LuxX® 1030-100	1030nm / 100mW
	LuxX® 488-200	488nm / 200mW	LuxX® 1060-150	1060nm / 150mW
	LuxX® 488-300	488nm / 300mW	LuxX® 1080-80	1080nm / 80mW
	LuxX® 505-80	505nm / 80mW	LuxX® 1310-50	1310nm / 50mW
	LuxX® 515-25	515nm / 25mW	LuxX® 1550-100	1550nm / 100mW
	LuxX® 515-50	515nm / 50mW	LuxX® 1310-50	1310nm / 50mW
			LuxX® 1550-100	1550nm / 100mW

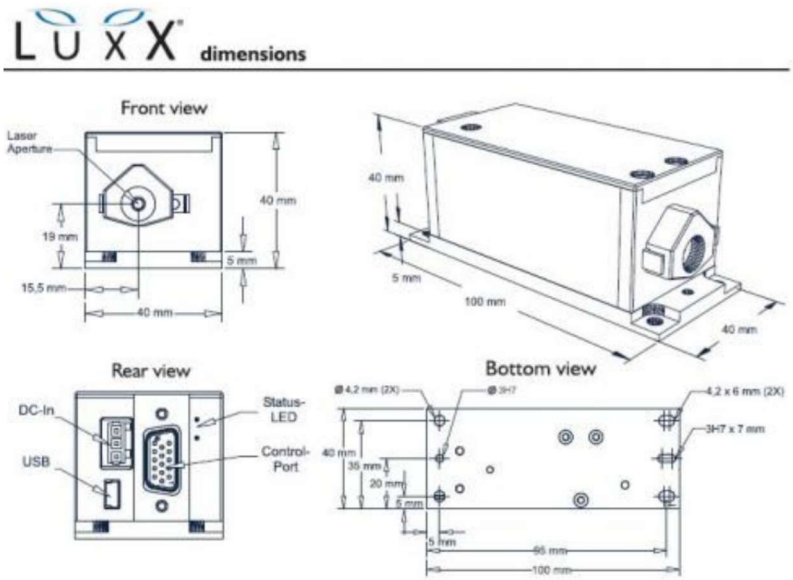
Beam diameter (other diameters on request)	1.0 ... 1.5mm (1/e²), (depends on wavelength) 0.7mm (1/e²) +/- 0.1mm with option XX.DSO
Beam quality M^2	<1.15 (1.05 typical)
Astigmatism (corrected)	<0.2*ZR
Beam ellipticity	<1.15:1
Polarisation	>100:1 vertical
Long term power stability	<0.5% / 8h
RMS Noise 20Hz...10MHz 10MHz...500MHz	<0.2% (CW) <0.2% (CW)
Operation Modes	
Mode 1	CW operation (ACC - Automatic Constant Current)
Mode 2	CW operation (APC - Automatic Power Control)
Mode 3	Analogue modulation
Analogue modulation	>1.5MHz
Input signal type	0...5V (4,7kOhm)
Laser Enable (electronic shutter)	>150kHz (full ON/OFF)
Input signal type	TTL (2kOhm)
Rise- and falltime	Analogue: < 200ns Laser Enable: < 2µs
Extinction ratio	Analogue: >1000 : 1 Laser Enable: infinite (full ON/OFF)
Supply voltage	5.00 VDC +/- 0.50 VDC
Control interface	RS-232 and USB 2.0
Dimensions laser head	100 x 40 x 40mm (l x w x h)

ptions & Accessories

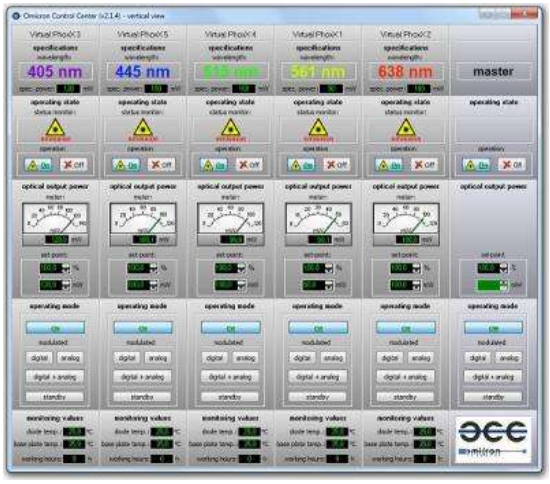
XX.PSU	world wide power supply unit for LuxX / PhoxX series lasers
XX.COL	collimator objective for beam diameters up to 2,5mm (1/e²)
XX.DSO	collimator objective for 0.7mm (1/e²) beam diameter
XX.CDRH	remote control box with key switch and emission LED for CDRH compliant operation
LUXX.HEATSINK	standard heatsink for LuxX series laser heads
XX.FASYADAP	Fibre coupling adapter mount for Omicron fibre coupling units and other fibre coupling systems with 1-inch grid mounting holes

Omicron-Laserage Laserprodukte GmbH
Phone: +49 (0) 6106 8224-0
Raiffeisenstraße 5e
63110 Rodgau – Germany
Fax: +49 (0) 6106 8224-10
www.omicron-laser.de
mail@omicron-laser.de

Dimensions:



Control Software:



Laser Safety classification:

For more online information:

Omicron-Laserage Laserprodukte GmbH
Phone: +49 (0) 6106 8224-0
Raiffeisenstraße 5e
63110 Rodgau – Germany

Fax: +49 (0) 6106 8224-10
www.omicron-laser.de
mail@omicron-laser.de