



DATASHEET

03.2021

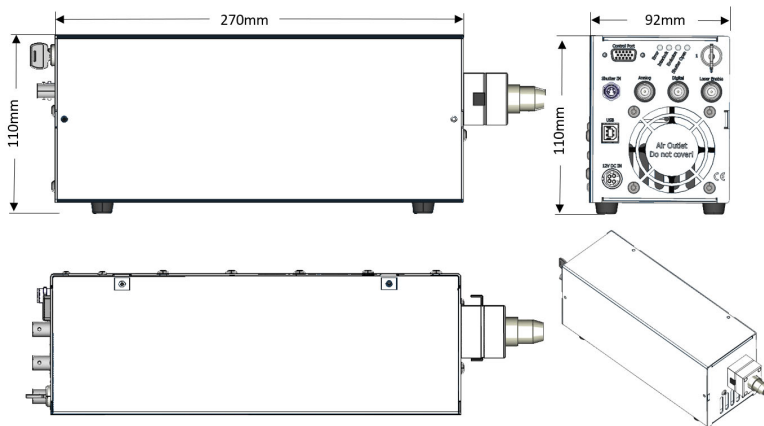
# LaserNest

## LaserNest® High-Performance Desktop Diode Lasers for industrial, scientific and laboratory use

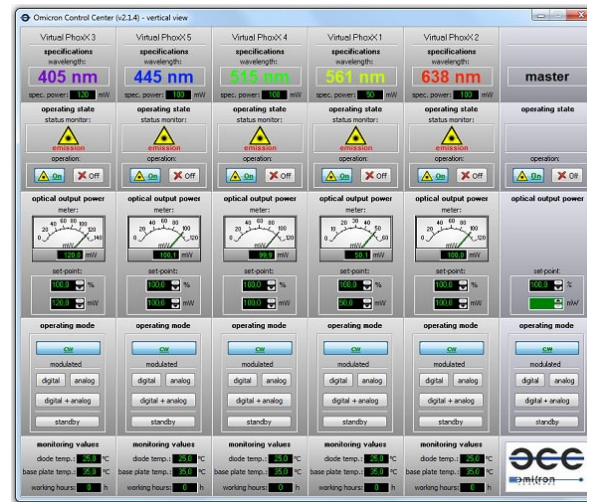


The LaserNest® systems are a combination of the well-established LuxX+ diode lasers and a desktop-style housing. This combination represents an easy to use plug&play laser light source for science, research and industry. The high-performance systems can be equipped with one laser module of wavelengths from UV to the near IR range and offer fast analogue intensity modulation with up to 3MHz and high-speed digital modulation up to 250MHz. The additional electronic shutter function provides full ON/OFF modulation with a switching time of <math><1\mu\text{s}</math> and frequencies up to 500kHz.

### Dimensions:



### Control Software



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For more online information:



Specifications LaserNest Diode Laser Series		
	LaserNest® Series	
<b>Wavelengths &amp; Powers</b> (other wavelengths and powers on request)	LaserNest® 375-20 375nm / 20mW	LaserNest® 515-80 515nm / 80mW
	LaserNest® 375-70 375nm / 70mW	LaserNest® 515-100 515nm / 100mW
	LaserNest® 395 395nm / 120mW	LaserNest® 515-150 515nm / 150mW
	LaserNest® 405-20 405nm / 20mW	LaserNest® 633-100 633nm / 100mW
	LaserNest® 405-60 405nm / 60mW	LaserNest® 638-40 638nm / 40mW
	LaserNest® 405-120 405nm / 120mW	LaserNest® 638-100 638nm / 100mW
	LaserNest® 405-300 405nm / 300mW	LaserNest® 638-150 638nm / 150mW
	LaserNest® 415 415nm / 120mW	LaserNest® 638-200 638nm / 200mW
	LaserNest® 425 425nm / 120mW	LaserNest® 642 642nm / 140mW
	LaserNest® 445-50 445nm / 50mW	LaserNest® 647 647nm / 140mW
	LaserNest® 445-100 445nm / 100mW	LaserNest® 660 660nm / 130mW
	LaserNest® 445-500 445nm / 500mW	LaserNest® 685 685nm / 50mW
	LaserNest® 457-100 457nm / 100mW	LaserNest® 705 705nm / 40mW
	LaserNest® 457-500 457nm / 500mW	LaserNest® 730 730nm / 40mW
	LaserNest® 460-100 460nm / 100mW	LaserNest® 785-120 785nm / 120mW
	LaserNest® 473-20 473nm / 20mW	LaserNest® 785-200 785nm / 200mW
	LaserNest® 473-80 473nm / 80mW	LaserNest® 808 808nm / 140mW
	LaserNest® 473-100 473nm / 100mW	LaserNest® 830 830nm / 140mW
	LaserNest® 488-25 488nm / 25mW	LaserNest® 850 850nm / 100mW
	LaserNest® 488-60 488nm / 60mW	LaserNest® 945 945nm / 200mW
	LaserNest® 488-80 488nm / 80mW	LaserNest® 980 980nm / 100mW
	LaserNest® 488-100 488nm / 100mW	LaserNest® 1030 1030nm / 100mW
	LaserNest® 488-150 488nm / 150mW	LaserNest® 1060 1060nm / 150mW
	LaserNest® 488-200 488nm / 200mW	LaserNest® 1080 1080nm / 80mW
	LaserNest® 505-80 505nm / 80mW	LaserNest® 1310 1310nm / 50mW
	LaserNest® 515-25 515nm / 25mW	LaserNest® 1550 1550nm / 100mW
	LaserNest® 515-50 515nm / 50mW	
	<b>Light output options</b>	Single-Mode fibre: SM/PM fibres with FC/PC, FC/APC, FCP8 or collimated output beam  Multi-Mode fibre: MM fibres with 50...1500µm core diameter and FC/PC or SMA connectors  Liquid Light Guide output: LLG's with 2, 3, 5 or 8mm core diameter
	<b>Long term power stability</b>	<0.5% / 8h (CW)
	<b>RMS Noise 20Hz...20MHz</b>	<0.2% (CW)
	<b>Operation Modes</b> Mode 1 Mode 2 Mode 3 Mode 4 Mode 5	CW operation (ACC - Automatic Constant Current) CW operation (APC - Automatic Power Control) Analogue modulation Digital modulation Analogue + Digital modulation
	<b>Analogue modulation</b>	>3MHz
<b>Input signal type</b>	0...5V (1,2kOhm) or 0...1V (50Ohm) - user configurable	
<b>Digital modulation</b>	>250MHz	
<b>Input signal type</b>	Single-ended input: TTL (200Ohm) or 0...1V (50Ohm) - user configurable Differential-ended input: PECL / LVDS / HSTL etc. - autom. detected	
<b>Laser Enable (electronic shutter)</b>	>500kHz (full ON/OFF)	
<b>Input signal type</b>	TTL (2kOhm)	
<b>Rise- and falltime</b>	Analogue: < 100ns Digital: < 1.5ns Laser Enable: < 100ns	
<b>Extinction ratio</b>	Analogue: > 1000 : 1 Digital: > 250 : 1 Laser Enable: infinite (full ON/OFF)	
<b>Supply voltage</b>	80-240VAC / 50-60Hz	
<b>Control interface</b>	RS-232 and USB 2.0	
<b>Dimensions</b>	270 mm x 92 mm x 110mm (l x w x h) (w/o fibre coupler)	
<b>Options &amp; Accessories</b>	LN.SHUTTER Fail-Safe laser safety shutter XX.Fxxx Clean-Up Filter (xxx = laser wavelength)	

## Laser Safety classification:

**INVISIBLE LASER RADIATION  
AVOID EXPOSURE TO BEAM**

$P_o \leq 500mW$   
 $\lambda = 315 - 400nm$   
Class 3B Laser product  
IEC60825-1:2014

**LASER RADIATION  
AVOID EXPOSURE TO BEAM**

$P_o \leq 500mW$   
 $\lambda = 400 - 700nm$   
Class 3B Laser product  
IEC60825-1:2014

**INVISIBLE LASER RADIATION  
AVOID EXPOSURE TO BEAM**

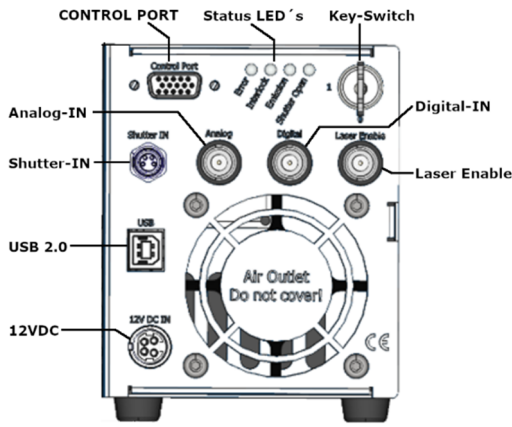
$P_o \leq 500mW$   
 $\lambda = 700 - 1064nm$   
Class 3B Laser product  
IEC60825-1:2014

**INVISIBLE LASER RADIATION  
AVOID EXPOSURE TO BEAM**

$P_o \leq 500mW$   
 $\lambda = 1064 - 1600nm$   
Class 3B Laser product  
IEC60825-1:2014

**LASER RADIATION AVOID EYE OR  
SKIN EXPOSURE TO DIRECT OR  
SCATTERED RADIATION  
CLASS 4 LASER PRODUCT**

$P_o \leq 2W$   
 $\lambda = 400 - 700nm$   
IEC60825-1:2014



Ordering Information:

