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## Universal Diode Laser Platform

# BrixX<sup>®</sup>

Multi-Mode optical  
output power up to 2.5 Watt

Single-Mode optical  
output power up to 500mW

Fibre output or free  
space emission

Fast analogue and  
digital modulation

Automatic aging  
compensation

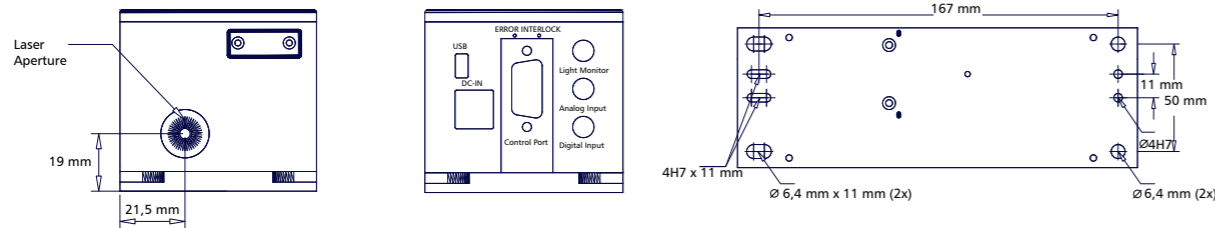
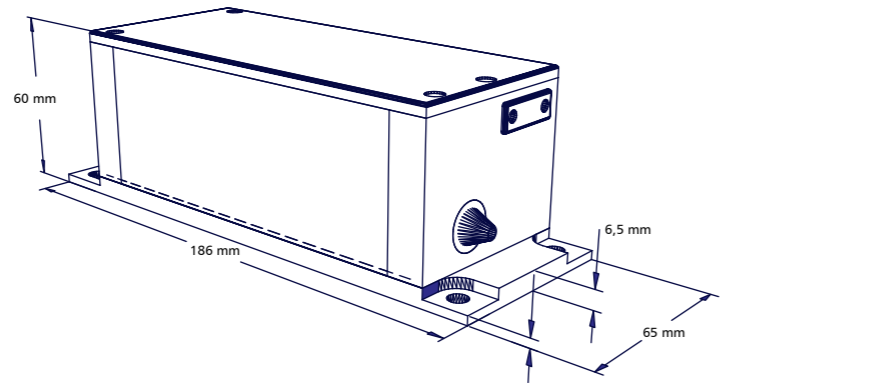
USB2.0 and RS-232 interface



## The Omicron BrixX Laser Series

The BrixX® diode laser series offers the possibility of integration and operation of different industry standard laser diode packages like 5.6mm or 9mm TO-can, C/B-mount and Butterfly and provides free-space or fibre pigtailed light delivery. A broad variety of wavelengths and single-mode or multi-mode output powers up to 2.5 Watt can be integrated into the BrixX® platform. The versatility of the BrixX® covers a wide range of applications like RAMAN spectroscopy, machine vision, metrology and many more. The USB2.0 and the RS-232 interface allow deep integration of the lasers into the application's process.

### BrixX dimensions



Applications:  
Machine Vision  
RAMAN Spectroscopy  
Test and Measurement  
....

## BrixX Laser Series Specification Table

| Model                                    | BrixX® 532-50   | BrixX® 635-100 | BrixX® 760-10 | BrixX® 763-10 | BrixX® 773-20 | BrixX® 780-20 | BrixX® 785-40 | BrixX® 785-40 | BrixX® 795-40 | BrixX® 852-50 | BrixX® 855-50 | BrixX® 975-50 | BrixX® 976-500 | BrixX® 1060-40 | BrixX® 1063-40 | BrixX® 1064-40 | BrixX® 1064-300 | BrixX® 1064-400 | BrixX® 1064-500 | BrixX® 1083-30 |
|--|---|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|----------------|
| Wavelength (+/- 5nm)                     | 532nm   | 635nm          | 760nm         | 763nm         | 773nm         | 780nm         | 785nm         | 785nm         | 795nm         | 852nm         | 855nm         | 975nm         | 976nm          | 1060nm         | 1063nm         | 1064nm         | 1064nm          | 1064nm          | 1064nm          | 1083nm         |
| Optical output power                     | 50mW  | 100mW          | 10mW          | 10mW          | 20mW          | 20mW          | 40mW          | 350mW         | 40mW          | 50mW          | 50mW          | 450mW         | 500mW          | 40mW           | 40mW           | 300mW          | 400mW           | 500mW           | 30mW            |                |
| SM/MM                                    | SM  | MM             | SM PM         | SM PM         | SM PM         | SM PM         | SM PM         | SM            | SM PM         | SM PM         | SM PM         | SM PM         | SM PM          | SM PM          | SM PM          | SM PM          | SM PM           | SM              | SM PM           |                |
| Output                                   | free space  | FC/APC         | FC/APC        | FC/APC        | FC/APC        | FC/APC        | FC/APC        | free space    | FC/APC        | FC/APC        | FC/APC        | FC/APC        | FC/APC         | FC/APC         | FC/APC         | FC/APC         | FC/APC          | free space      | FC/APC          |                |
| Polarisation                             | > 100:1 vertical for single-mode (SM or SM PM) models<br>unpolarised for multi-mode (MM) models   |                |               |               |               |               |               |               |               |               |               |               |                |                |                |                |                 |                 |                 |                |
| Long term power stability                | < 1% / 8h   |                |               |               |               |               |               |               |               |               |               |               |                |                |                |                |                 |                 |                 |                |
| RMS Noise 20Hz...10MHz<br>10MHz...500MHz | < 0.5% (CW)<br>< 0.5% (CW)  |                |               |               |               |               |               |               |               |               |               |               |                |                |                |                |                 |                 |                 |                |
| Operation Modes                          |   |                |               |               |               |               |               |               |               |               |               |               |                |                |                |                |                 |                 |                 |                |
| Mode 1                                   | CW operation (ACC - Automatic Constant Current)   |                |               |               |               |               |               |               |               |               |               |               |                |                |                |                |                 |                 |                 |                |
| Mode 2                                   | CW operation (APC - Automatic Power Control)  |                |               |               |               |               |               |               |               |               |               |               |                |                |                |                |                 |                 |                 |                |
| Mode 3                                   | Analogue modulation   |                |               |               |               |               |               |               |               |               |               |               |                |                |                |                |                 |                 |                 |                |
| Mode 4                                   | Digital modulation  |                |               |               |               |               |               |               |               |               |               |               |                |                |                |                |                 |                 |                 |                |
| Mode 5                                   | Analogue + Digital modulation   |                |               |               |               |               |               |               |               |               |               |               |                |                |                |                |                 |                 |                 |                |
| Analogue modulation                      |   |                |               |               |               |               |               |               |               |               |               |               |                |                |                |                |                 |                 |                 |                |
| Modulation bandwidth                     | > 1.5MHz  |                |               |               |               |               |               |               |               |               |               |               |                |                |                |                |                 |                 |                 |                |
| Input signal type                        | 0...5V / 1,2kOhm or 0...1V / 50 Ohm (user selectable via software)  |                |               |               |               |               |               |               |               |               |               |               |                |                |                |                |                 |                 |                 |                |
| Digital modulation                       |   |                |               |               |               |               |               |               |               |               |               |               |                |                |                |                |                 |                 |                 |                |
| Modulation bandwidth                     | > 1.5MHz  |                |               |               |               |               |               |               |               |               |               |               |                |                |                |                |                 |                 |                 |                |
| Input signal type                        | TTL (2kOhm)   |                |               |               |               |               |               |               |               |               |               |               |                |                |                |                |                 |                 |                 |                |
| Laser enable input (electronic shutter)  |   |                |               |               |               |               |               |               |               |               |               |               |                |                |                |                |                 |                 |                 |                |
| Modulation bandwidth                     | > 500kHz (full ON/OFF)  |                |               |               |               |               |               |               |               |               |               |               |                |                |                |                |                 |                 |                 |                |
| Input signal type                        | TTL (2kOhm)   |                |               |               |               |               |               |               |               |               |               |               |                |                |                |                |                 |                 |                 |                |
| Rise- and falltime                       | Analogue: < 250ns<br>Digital: < 250ns<br>Laser Enable: < 500ns  |                |               |               |               |               |               |               |               |               |               |               |                |                |                |                |                 |                 |                 |                |
| Extinction ratio                         | Analogue: > 1000 :1<br>Digital: > 250 :1<br>Laser Enable: infinite (full ON/OFF)  |                |               |               |               |               |               |               |               |               |               |               |                |                |                |                |                 |                 |                 |                |
| Supply voltage                           | 12 ... 24 VDC nominal (11 ... 25VDC max.)   |                |               |               |               |               |               |               |               |               |               |               |                |                |                |                |                 |                 |                 |                |
| Control interface                        | RS-232 and USB 2.0  |                |               |               |               |               |               |               |               |               |               |               |                |                |                |                |                 |                 |                 |                |
| Dimensions laser head                    | 186 x 65 x 60 mm (l x w x h)  |                |               |               |               |               |               |               |               |               |               |               |                |                |                |                |                 |                 |                 |                |
| Options & Accessories                    | BR1XX.PSU - world wide power supply unit for BrixX® series lasers<br>XX.CDRH - remote control box with key switch and emission LED for CDRH compliant operation |                |               |               |               |               |               |               |               |               |               |               |                |                |                |                |                 |                 |                 |                |

more information: [www.omicron-laser.de](http://www.omicron-laser.de)