



DATASHEET

01.01.2019

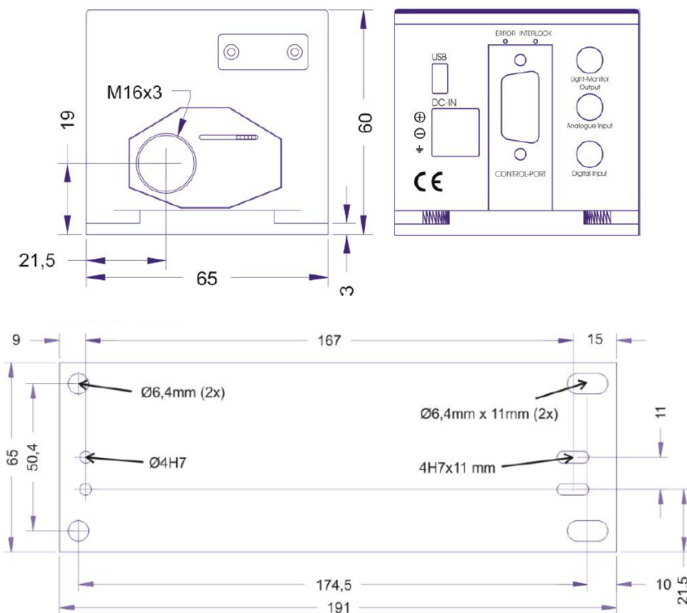
QuixX

Versatile “two-in-one” picosecond-pulsed / CW diode lasers

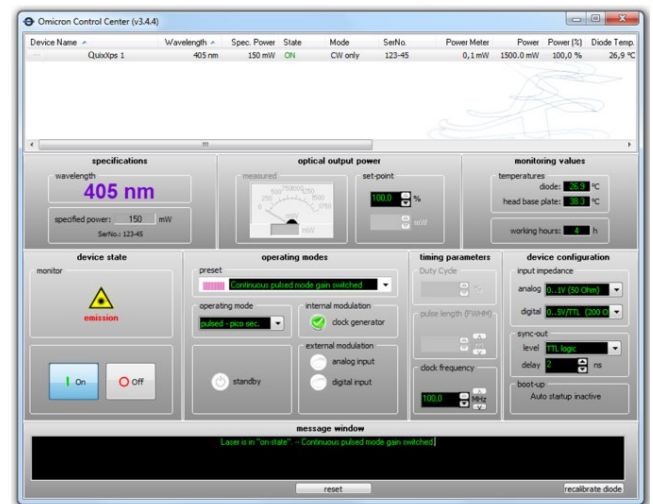


The new laser series QuixX® can be pulsed in the picosecond range, as well as being operated in “continuous wave” (CW) and modulated mode. With completely integrated driver electronics, high precision temperature regulation, internally programmable frequency generator, beam shaping optics with astigmatism correction and a high resolution SYNC delay-generator, the lasers can emit ultrashort pulses down to 50 ps pulses with up to 100MHz repetition rate. Diodes with up to 500 milliwatt CW optical output power and wavelengths between 375 and 2090nm can be used in the QuixX systems. The light output can be either free-space or fibre-coupled. CW operation is possible with up to 200kHz digital full ON/OFF modulation as well as up to 3 MHz analogue intensity modulation. Typical applications are microscopy, TCSPC, spectroscopy, fluorescence analysis and usage as seed or pump laser.

Dimensions:



Control Software:



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

For more online information:



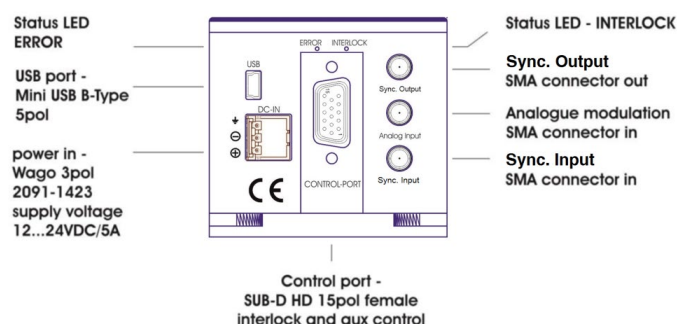
Specifications QuixX Diode Laser Series																																													
QuixX® Series																																													
Wavelengths & Powers (other wavelengths and powers on request) TBD = Values will be available soon!	<table border="1"> <thead> <tr> <th>Modell</th> <th>Wavelength h</th> <th>Pulse width Narrow Pulse Wide Pulse</th> <th>Average power @40MHz Narrow Pulse Wide Pulse</th> </tr> </thead> <tbody> <tr> <td>QuixX® 375-70 PS</td> <td>375nm / 70mW</td> <td><50ps <400ps</td> <td>1.0mW 4.0mW</td> </tr> <tr> <td>QuixX® 405-120 PS</td> <td>405nm / 120mW</td> <td><70ps <500ps</td> <td>1.0mW 3.0mW</td> </tr> <tr> <td>QuixX® 405-300 PS</td> <td>405nm / 300mW</td> <td><90ps <500ps</td> <td>1.2mW 4.0mW</td> </tr> <tr> <td>QuixX® 425-120 PS</td> <td>425nm / 120mW</td> <td><60ps <500ps</td> <td>0.7mW 4.0mW</td> </tr> <tr> <td>QuixX® 445-100 PS</td> <td>445nm / 100mW</td> <td><80ps <500ps</td> <td>0.8mW 4.0mW</td> </tr> <tr> <td>QuixX® 473-100 PS</td> <td>473nm / 100mW</td> <td><90ps <700ps</td> <td>0.75mW 4.0mW</td> </tr> <tr> <td>QuixX® 488-60 PS</td> <td>488nm / 60mW</td> <td><90ps <600ps</td> <td>0.7mW 4.4mW</td> </tr> <tr> <td>QuixX® 488-200 PS</td> <td>488nm / 200mW</td> <td><110ps <550ps</td> <td>1.3mW 4.1mW</td> </tr> <tr> <td>QuixX® 515-80 PS</td> <td>515nm / 80mW</td> <td><110ps <600ps</td> <td>0.6mW 4.0mW</td> </tr> <tr> <td>QuixX® 642-140 PS</td> <td>642nm / 140mW</td> <td><100ps <1000ps</td> <td>2.8mW 10mW</td> </tr> </tbody> </table>	Modell	Wavelength h	Pulse width Narrow Pulse Wide Pulse	Average power @40MHz Narrow Pulse Wide Pulse	QuixX® 375-70 PS	375nm / 70mW	<50ps <400ps	1.0mW 4.0mW	QuixX® 405-120 PS	405nm / 120mW	<70ps <500ps	1.0mW 3.0mW	QuixX® 405-300 PS	405nm / 300mW	<90ps <500ps	1.2mW 4.0mW	QuixX® 425-120 PS	425nm / 120mW	<60ps <500ps	0.7mW 4.0mW	QuixX® 445-100 PS	445nm / 100mW	<80ps <500ps	0.8mW 4.0mW	QuixX® 473-100 PS	473nm / 100mW	<90ps <700ps	0.75mW 4.0mW	QuixX® 488-60 PS	488nm / 60mW	<90ps <600ps	0.7mW 4.4mW	QuixX® 488-200 PS	488nm / 200mW	<110ps <550ps	1.3mW 4.1mW	QuixX® 515-80 PS	515nm / 80mW	<110ps <600ps	0.6mW 4.0mW	QuixX® 642-140 PS	642nm / 140mW	<100ps <1000ps	2.8mW 10mW
	Modell	Wavelength h	Pulse width Narrow Pulse Wide Pulse	Average power @40MHz Narrow Pulse Wide Pulse																																									
	QuixX® 375-70 PS	375nm / 70mW	<50ps <400ps	1.0mW 4.0mW																																									
	QuixX® 405-120 PS	405nm / 120mW	<70ps <500ps	1.0mW 3.0mW																																									
	QuixX® 405-300 PS	405nm / 300mW	<90ps <500ps	1.2mW 4.0mW																																									
	QuixX® 425-120 PS	425nm / 120mW	<60ps <500ps	0.7mW 4.0mW																																									
	QuixX® 445-100 PS	445nm / 100mW	<80ps <500ps	0.8mW 4.0mW																																									
	QuixX® 473-100 PS	473nm / 100mW	<90ps <700ps	0.75mW 4.0mW																																									
	QuixX® 488-60 PS	488nm / 60mW	<90ps <600ps	0.7mW 4.4mW																																									
	QuixX® 488-200 PS	488nm / 200mW	<110ps <550ps	1.3mW 4.1mW																																									
	QuixX® 515-80 PS	515nm / 80mW	<110ps <600ps	0.6mW 4.0mW																																									
	QuixX® 642-140 PS	642nm / 140mW	<100ps <1000ps	2.8mW 10mW																																									
Beam Quality M²	<1.15																																												
Beam ellipticity	<1.1:1 (astigmatism corrected)																																												
Polarisation	>100:1 vertical																																												
Long term power stability	<1% / 8h																																												
RMS Noise 20Hz...10MHz	<0.5% (CW)																																												
10MHz...500MHz	<0.5% (CW)																																												
Operation Modes	CW operation (ACC - Automatic Constant Current) CW operation (APC - Automatic Power Control) Picosecond Pulsed (LP - narrow pulse) Picosecond Pulsed (HP - wide pulse) Picosecond Pulsed (expert mode adj. between LP and HP) Analogue modulation (works for both CW and Picosecond Mode) Digital modulation (CW mode only) SYNC in (works for Picosecond Mode as external SYNC or gating input) Analogue + SYNC in (work for Picosecond Mode)																																												
Analogue modulation	>3MHz																																												
Input signal type	0...5V / 1,2kOhm or 0...1V / 50 Ohm (user selectable via software)																																												
Digital modulation / SYNC input	>1MHz digital modulation (CW) up to 100MHz* for external triggering (SYNC in)																																												
Input signal type	0...5V/TTL (200 Ohm), 0...1V / 50 Ohm, -0.5...+0.5V / 50 Ohm or (NIM)0...-1.6V / 50 Ohm (user selectable via software)																																												
Laser Enable (electronic shutter)	>200kHz (full ON/OFF)																																												
Input signal type	TTL (2kOhm)																																												
Rise- and falltime	Analogue: < 50ns Digital: < 500ns Laser Enable: < 1000ns																																												
Extinction ratio	Analogue: >1000 : 1 Digital: >1000:1 Laser Enable: infinite (full ON/OFF)																																												
Picosecond pulsed repetition rate external SYNC	From Single-Shot up to 100MHz*																																												
Internal programmable frequency generator	0...500kHz in 1Hz steps 500kHz...80MHz in 500kHz steps																																												
Internal programmable SYNC OUT delay generator	0ns ... 28.4ns pulse to sync delay in 10ps steps																																												
Supply voltage	15 ... 24 VDC nominal (14 ... 25VDC max.)																																												
Control interface	RS-232 and USB 2.0																																												
Dimensions laser head	191 x 65 x 60 mm (l x w x h)																																												
Options & Accessories	BRIXX.PSU world wide power supply unit for BrixX and QuixX diode lasers BRIXX.FASYADAP fibre coupling adapter bracket for fibre coupling units various fibre coupling units for single-mode or multi-mode fibres with SMA, FC/PC, FC/APC or FCP8 connector as well as collimated output at various beam diameters fasy.xxxx single-mode fibre coupling efficiency >65% multi-mode fibre coupling efficiency >80% BRIXX.HEATSINK Standard heat sink for BrixX and QuixX diode lasers XX.CDRH remote control box with key switch and emission LED for CDRH compliant operation																																												

Laser Safety classification:

Class 3B 400-700nm



Control Interface



Ordering Code

