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Single-Mode optical output
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through baseplate

High-Stability CW operation
and high-speed digital and
analogue modulation



The Omicron P h o x X[®] OEM Laser Series

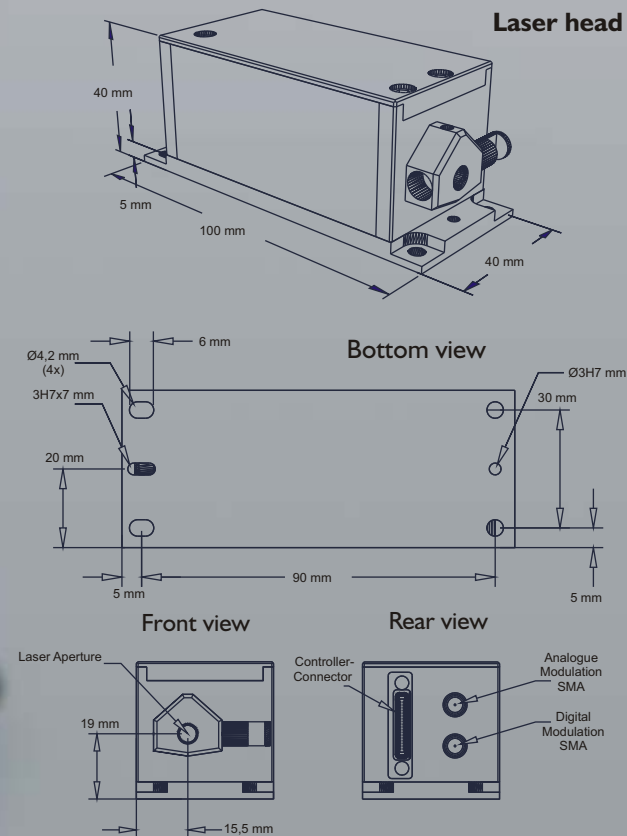
Smaller than you are used to
Stronger than expected !

The Omicron P h o x X[®] OEM Laser Series offers high-performance at a compact design. A broad variety of wavelengths and single-mode emission up to 140mW 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.

Applications:

Flow Cytometry
Confocal Microscopy
Printing / CtP
Microlithography
Reprographics
Test and Measurement
Machine Vision

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P h o x X[®] OEM Laser Series Specification Table

| Model | PhoxX [®] 375 | PhoxX [®] 405-60 | PhoxX [®] 405-60 | PhoxX [®] 445-120 | PhoxX [®] 445 | PhoxX [®] 473 | PhoxX [®] 488 | PhoxX [®] 638-40 | PhoxX [®] 638-40 | PhoxX [®] 642-100 | PhoxX [®] 642 | PhoxX [®] 660 | PhoxX [®] 685 | PhoxX [®] 705 | PhoxX [®] 730 | PhoxX [®] 785 | PhoxX [®] 808 | PhoxX [®] 830 |
|---|---|---------------------------|---------------------------|----------------------------|------------------------|------------------------|------------------------|---------------------------|---------------------------|----------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| Wavelength (+/- 5nm) | 375nm | 405nm | 405nm | 445nm | 473nm | 488nm | 638nm | 638nm | 642nm | 660nm | 685nm | 705nm | 730nm | 785nm | 808nm | 830nm | | |
| Optical output power | 20mW | 60mW | 120mW | 50mW | 20mW | 20mW | 40mW | 100mW | 140mW | 130mW | 50mW | 40mW | 40mW | 120mW | 140mW | 140mW | | |
| Typical beam diameter (1/e ²) | 1.0 ... 1.5mm (depends on wavelength) - 0.7mm with PHOXX.DSO option | | | | | | | | | | | | | | | | | |
| Beam quality M ² | <1.3 | | | | | | | | | | | | | | | | | |
| Beam ellipticity | <1.2:1 | | | | | | | | | | | | | | | | | |
| Beam pointing stability (µrad/°C) | <5 | | | | | | | | | | | | | | | | | |
| Polarisation ratio | >100:1 vertical | | | | | | | | | | | | | | | | | |
| Warm up time | <3 minutes | | | | | | | | | | | | | | | | | |
| Operation modes | | | | | | | | | | | | | | | | | | |
| Mode 1 | CW Operation | | | | | | | | | | | | | | | | | |
| Mode 2 | Analogue Modulation | | | | | | | | | | | | | | | | | |
| Mode 3 | Digital Modulation | | | | | | | | | | | | | | | | | |
| Mode 4 | Mixed Analogue & Digital Modulation | | | | | | | | | | | | | | | | | |
| Digital modulation | | | | | | | | | | | | | | | | | | |
| Modulation bandwidth | >180MHz | | | | | | | | | | | | | | | | | |
| 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 (1.2kOhm) (user-configurable) | | | | | | | | | | | | | | | | | |
| Laser enable input | | | | | | | | | | | | | | | | | | |
| Modulation bandwidth | >150kHz (complete ON/OFF) | | | | | | | | | | | | | | | | | |
| Signal type | TTL (2 kOhm) | | | | | | | | | | | | | | | | | |
| RMS noise characteristics | | | | | | | | | | | | | | | | | | |
| 20Hz ... 10MHz | < 0,2% | | | | | | | | | | | | | | | | | |
| 10MHz ... 500MHz | < 0,5% | | | | | | | | | | | | | | | | | |
| Long-term power stability (8h) | < +/- 2% | | | | | | | | | | | | | | | | | |
| Electrical properties | | | | | | | | | | | | | | | | | | |
| Laser operating voltage | 5.00 VDC +/- 0.50V | | | | | | | | | | | | | | | | | |
| Computer interface | | | | | | | | | | | | | | | | | | |
| Type | RS-232 and USB2.0 | | | | | | | | | | | | | | | | | |
| Mechanical properties | | | | | | | | | | | | | | | | | | |
| Dimensions laser head | 100 x 40 x 40mm (l x w x h) | | | | | | | | | | | | | | | | | |
| Dimensions laser controller | 120 x 62 x 40mm (l x w x h) | | | | | | | | | | | | | | | | | |