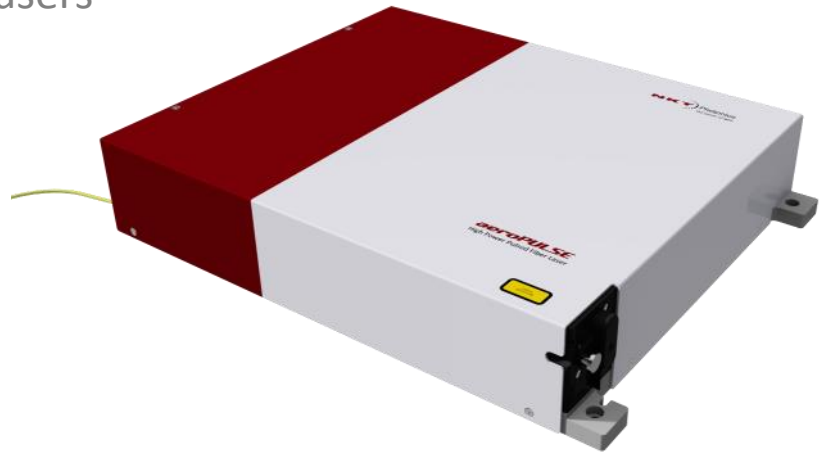


# aeroPULSE

## High power picosecond fiber lasers

- Up to 40W Average Power
- Excellent Beam Pointing Stability
- Narrow Linewidth
- Compact & Rugged OEM Design
- Low Cost of Ownership
- All-Fiber Design, Industrial Reliability
- Maintenance Free 24/7 Operation
- System Monitoring via Remote Diagnostics
- No Warm-Up Time – Instant ON



### Applications

- Laser Direct Imaging
- Material processing
- Semiconductor inspection
- CARS imaging
- Raman (SRS) imaging
- OPO pumping
- Supercontinuum generation
- TCSPC/FLIM/FRET/Single molecule detection

aeroPULSE is a portfolio of industrial-grade mode-locked pulsed fiber lasers based on NKT Photonics world renowned Crystal Fibre platform. These commercial systems are all-fiber, highly integrated, compact form factor and positioned to be a complete self-contained platform. A 24 month warranty is standard and the fully modular optical solution ensures easy turn-key operation, flexibility and up-time.

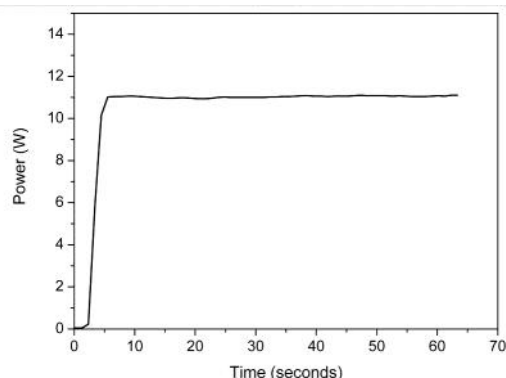
The system configuration consists of a 19" rack-mountable control unit and a very low profile laser head that can be mounted either horizontally or vertically. The complete system can be either air-cooled for low output power performance or water-cooled for high output power performance.

System operation is simple and various functions can be changed on-the-fly without powering down the system in your application. The aeroPULSE series provides high power quasi-CW output, perfect beam quality, exceptional stability and 24/7 maintenance free operation.

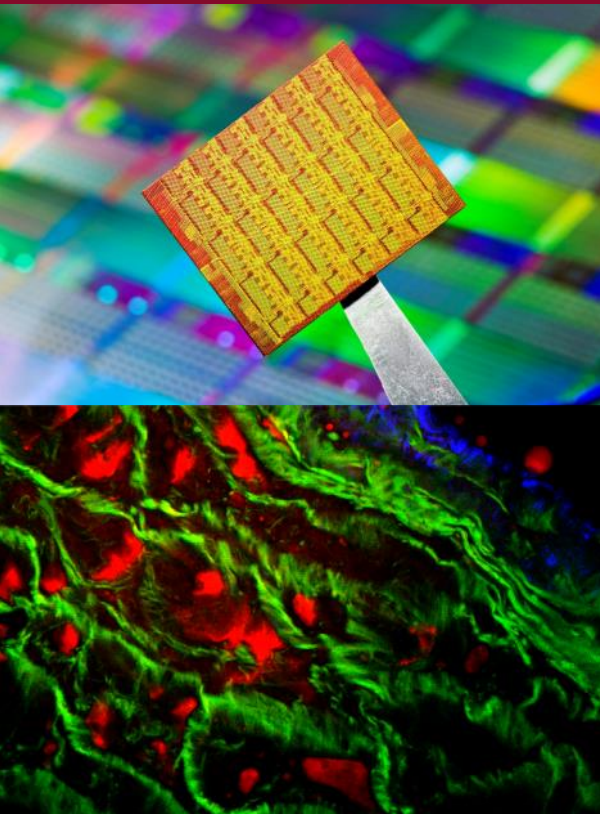
As standard, aeroPULSE is available with either 10 or 40W output power emitting at 1035nm. Other wavelengths, including green, are available upon request.

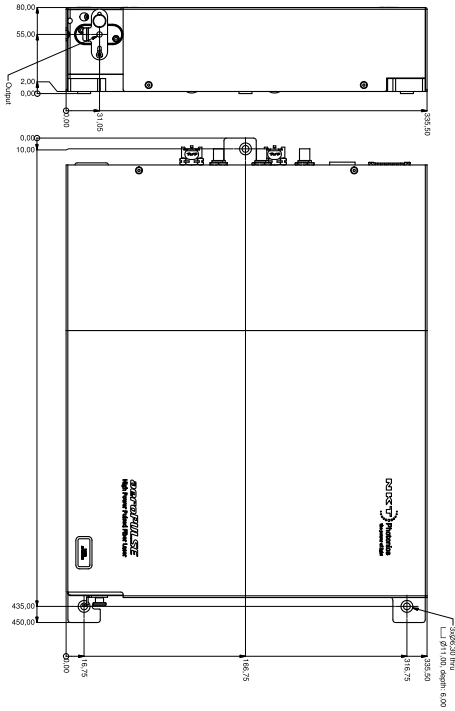
Model	Power	Pulse Length	Rep. Rate
PS10	10 W	5 ps	80 MHz*
PS40	40 W	20 ps	20 MHz*

\*) Other values available on request



aeroPULSE offers high stability after only a few seconds with no warm-up time.





## Specifications

### Optical

Wavelength <sup>1)</sup>	1035 nm
Bandwidth	< 1 nm
Polarization	Linearly polarized, PER > 15 dB
Beam diameter	~1 mm
Beam divergence	1.5 ± 0.2 mrad
Beam Quality <sup>2)</sup> (M <sup>2</sup> )	≤ 1.2
Power fluctuation (50 hours)	< 0.5 %
Warm-up Time	< 1 min

1) Other values available on request  
 2) Diffraction limited

### Mechanical/Electrical

Computer Interface	USB 2.0						
Operation Voltage	100-240 VAC 50/60 Hz						
Power Consumption	<100W (< 800W for the chiller)						
Door Interlock Connector <sup>3)</sup>	2-pin LEMO 0B						
External Bus interface <sup>4)</sup>	15-pin sub-D						
System Cooling	Air or water cooled						
Water cooling connector	Colder PLCD						
Chiller	Included (rack mount or floor stand)						
Operation Temperature	18-30°C						
Storage Temperature	-10°C to +60°C						
Dimensions (WxHXL)	<table border="1"> <tr> <td>Laser head</td> <td>335x80x435mm</td> </tr> <tr> <td>Control box</td> <td>375x177x440mm (4U 19" rack)</td> </tr> <tr> <td>Chiller</td> <td>330x197x279mm (floor stand) 432x177x438mm (rack mount)</td> </tr> </table>	Laser head	335x80x435mm	Control box	375x177x440mm (4U 19" rack)	Chiller	330x197x279mm (floor stand) 432x177x438mm (rack mount)
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Chiller	3 kg						

3) aeroPULSE is a Class 4 laser and is required to be connected to a door interlock/circuit  
 4) External communication and power supply port for accessories

## Support and Warranty

### aeroPULSE support/warranty

All aeroPULSE products comes with industry leading reliability and are backed by our standard 2 year warranty. However, should you need the extra security of an extended warranty and remote diagnostics support this is available in our support and warranty extension package. Please contact your sales representative for more information.

### Lifetime

The aeroPULSE systems are driven by our proven pulsed platform used in the SuperK EXTREME supercontinuum lasers. Consequently, the systems are completely maintenance free and has an expected lifetime of more than 20,000 hours.

**NKT Photonics A/S (Headquarters)**  
 Blokken 84, 3460 Birkerød, Denmark  
 Phone: +45 4348 3900  
 Fax: +45 4348 3901

**NKT Photonics GmbH**  
 Schanzenstrasse 39, Bldg D9-D13  
 51063 Cologne, Germany  
 Phone: +49 221 99511-0  
 Fax: +49 221 99511-650

**NKT Photonics Inc.**  
 1400 Campus Drive West  
 Morganville NJ 07751, USA  
 Phone: +1 732 972 9937  
 Fax: +1 732 414 4094

All NKT Photonics products are produced under our quality management system certified in accordance with the ISO 9001:2008 standard.

