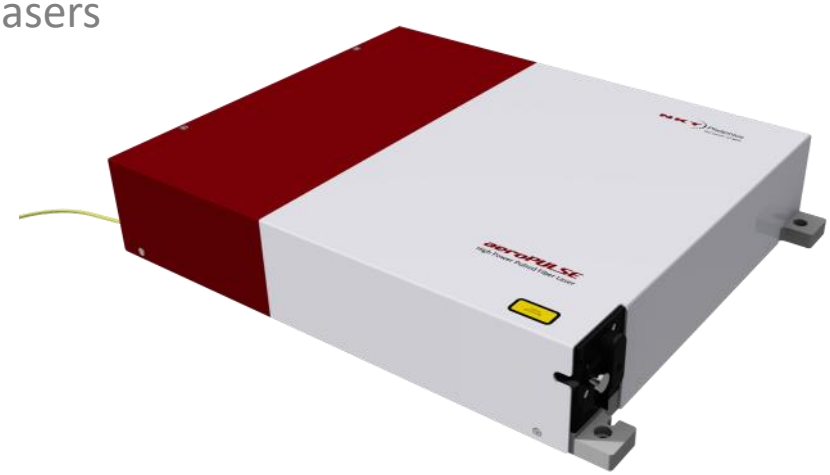
aeroPULSE PS

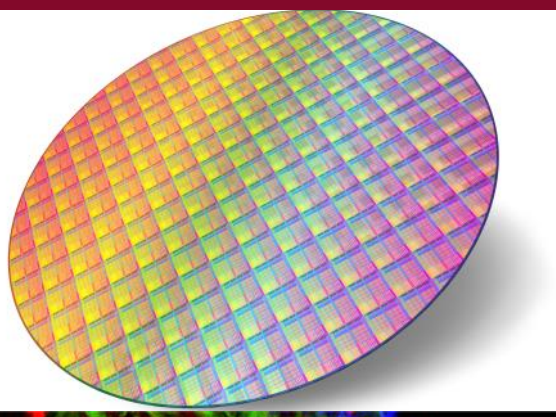
High power picosecond fiber lasers

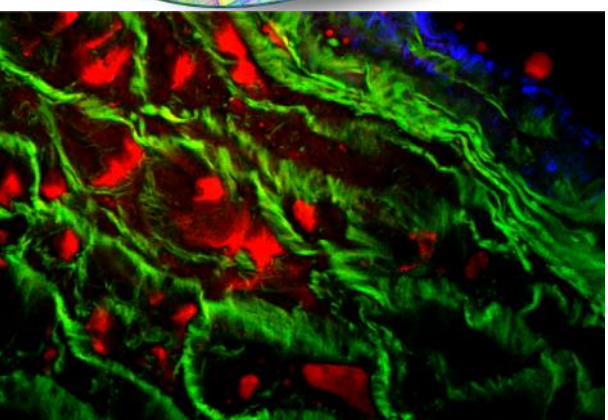
- Up to 40W average power
- Excellent beam pointing stability
- Narrow linewidth
- Compact & rugged OEM design
- Low cost of ownership
- All-fiber design, industrial reliability
- Maintenance free 24/7 operation
- System monitoring via remote diagnostics
- No warm-up time – instant ON



Applications

- Laser Direct Imaging
- Material processing
- Semiconductor inspection
- Harmonic conversion
- Raman (SRS) imaging
- OPO pumping
- Supercontinuum generation
- Flow cytometry



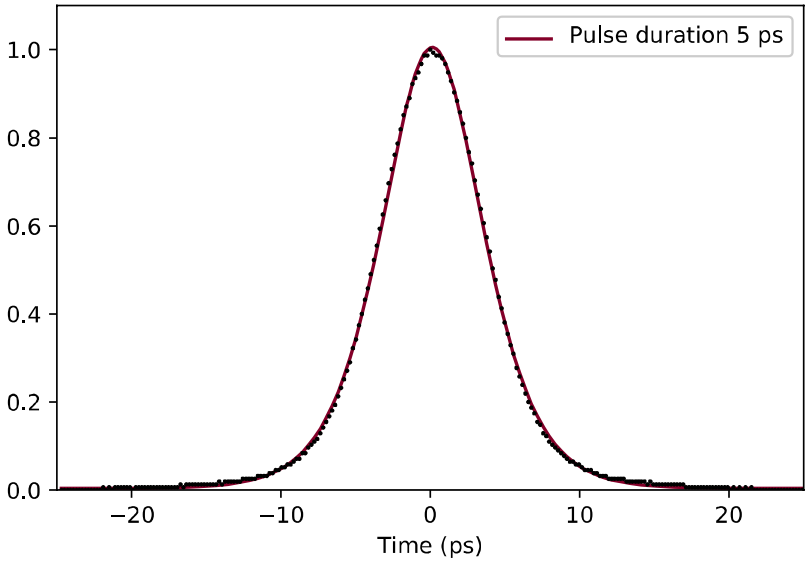


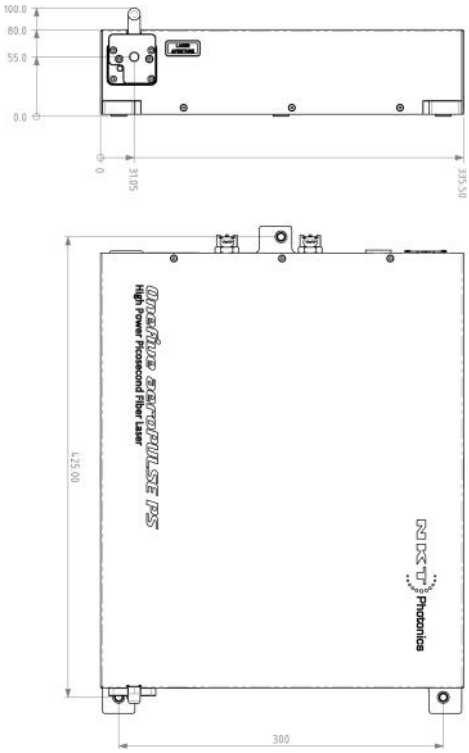
aeroPULSE is a portfolio of industrial-grade pulsed fiber lasers based on NKT Photonics' world renowned Crystal Fiber platform. The rugged and compact OEM lasers use state-of-the-art mode-locking technology to deliver ultra-short picosecond pulses with outstanding long-term stability, very narrow linewidth, low noise, and excellent TEMoo mode quality. As standard, aeroPULSE is available with output powers up to 40W emitting at 1035nm.

The aeroPULSE lasers were developed for demanding 24x7 OEM applications, highlighting unit-to-unit consistency and uptime, low cost of ownership, and ease of integration. Designed for the stringent requirements of semiconductor wafer processing and micromachining applications where superior reliability is a mandatory attribute.

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.

Typical pulse auto-correlation trace





Specifications

Optical

Power[1)]	Up to 40 W
Wavelength[1)]	1030 nm
Pulse duration	5 ps
Repetition rate[1)]	10-400 MHz
Polarization	Linearly polarized, PER > 17 dB
Beam diameter	~1 mm
Beam divergence	1.6 ± 0.2 mrad
Spatial mode	Fundamental, $M^2 \leq 1.2$
Power fluctuation (50 hours)	< 0.5 %
Warm-up Time	< 1 min

1) Other values available on request

Mechanical/Electrical

Computer Interface		USB, RS 232
Operation Voltage		100-240 VAC 50/60 Hz
Power Consumption		<330 W
System Cooling		Air or water cooled
Chiller		Included (rack mount or floor stand)
Operation Temperature		18°C—30°C
Storage Temperature		-10°C—60°C
Dimensions (WxHXL)	Laser head	335.5 x 100 x 450 mm^3
	Control box	375 x 177 x 440 mm^3 (4U 19" rack)
	Chiller	330 x 197 x 279 mm^3 (floor stand) 432 x 177 x 438 mm^3 (rack mount)
Weight	Laser head	10.2 kg
	Control box	Up to 14.7 kg
	Chiller	9 kg

Support and Warranty

aeroPULSE support/warranty

All aeroPULSE products comes with industry leading reliability and are backed by our standard 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.

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See www.nktphotonics.com for global offices and distributors

All NKT Photonics products are produced under our quality management system certified in accordance with the ISO 9001:2015 standard.

VISIBLE AND INVISIBLE LASER RADIATION
AVOID EYE OR SKIN EXPOSURE TO DIRECT OR SCATTERED RADIATION
CLASS 4 LASER PRODUCT