

## **PERLA®** series – Ultra-short pulse lasers with high average power.

**PERLA**<sup>®</sup> series lasers are compact laser systems based on a thin-disk regenerative amplifier delivering picosecond pulses with pulse energy up to 20 mJ\*. The product portfolio covers repetitions from 1 to 200 kHz. It incorporates a fibre front-end seeding the amplifier and a versatile control system allowing precise control and monitoring of the laser. The robust design guarantees excellent stability and maintenance free operation.

## Strengths

- · Unique combination of energy per pulse and beam quality
- · Suitable for multi-beam micromachining and surface structuring
- Extra fast process speed and high efficiency using 1000s of beams at once
- High harmonics available (SHG, THG, FHG)
- Optical parametric amplifier available
- · Laser source can be modified to fit your application

## **Technical Specifications**

Specification	PERLA <sup>®</sup> 100	PERLA500**
Centre wavelength	1030 nm	1030 nm
Average power	Max 100 W	Max 500 W
Power stability	< 0.5 % RMS	< 0.5 % RMS
Pulse energy	max. 20 mJ*	max. 10 mJ*
Pulse energy stability	< 1 % RMS	< 1 % RMS
Pulse length	1 ps	< 2 ps
Repetition rate	1 -200 kHz	50-200 kHz
Beam quality (M2)	< 1.15	< 1.4
Output polarisation	Linear, > 100:1	Linear, > 100:1
Output beam diameter	~ 3 mm	~ 3 mm
Dimensions	1,3 m x 0,8 m x 0, 3 m	1,3 m x 0,8 m x 0, 3 m

Operating requirements	
Operating voltage	5P/32A/400V
Operating temperature	23 ± 1 °C
Relative humidity	20 - 50 % (non-condensing)

\* Higher values can be reached by customised products. \*\*Custom-built system: specific technical parameters are individually agreed with a customer.

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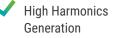
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Stable and reliable laser source

## Areas of Application



Optical Parametric Generation

Laser Induced Damage Threshold

Efficient Micromachining