PERLA 100

1030 nm THIN-DISK LASER SYSTEM

PERLA 100 is a compact laser system based on a thin-disk regenerative amplifier delivering picosecond pulses at 100 kHz repetition rate with pulse energy of 1 mJ. It incorporates a fiber front-end seeding the amplifier and a versatile control system allowing precise control and monitoring of the laser. Robust design guarantees excellent stability and maintenance free operation. PERLA laser platform design allows flexible modification of output parameters. User customized solutions are available upon request.

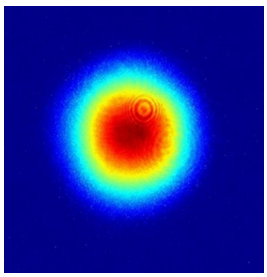

FIG.1 TYPICAL NEAR FIELD BEAM PROFILE AT 1030 NM

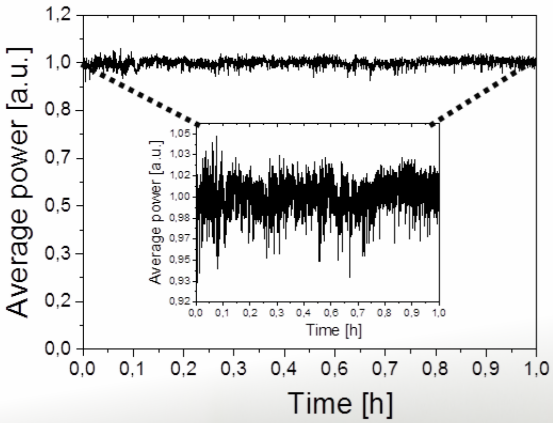

FIG.2 POWER STABILITY (<1% RMS OVER 1 HOUR AT AMBIENT TEMPERATURE OF 23°C)

KEY SPECIFICATIONS

- Wavelength 1030 nm
- Output power 100 W
- Repetition rate 100 kHz
- Pulse duration <2 ps
- Robust design
- Stable and reliable laser source

APPLICATIONS

- Laser source for drilling and cutting of composites, ceramics, plastics, metals, and alloys
- Laser source for surface micro structuring
- Pump source for mid-IR optical parametric amplifiers (OPAs)
- Driving laser for high harmonics generation
- LIDT testing with picosecond pulses

OPTION FEATURES

- Stand-alone regenerative amplifier
- Pulse picker
- Repetition rate 1-200 kHz
- 2nd, 3rd or 4th harmonics stage
- Mid-IR OPA stage

FZU

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Czech Academy of Sciences

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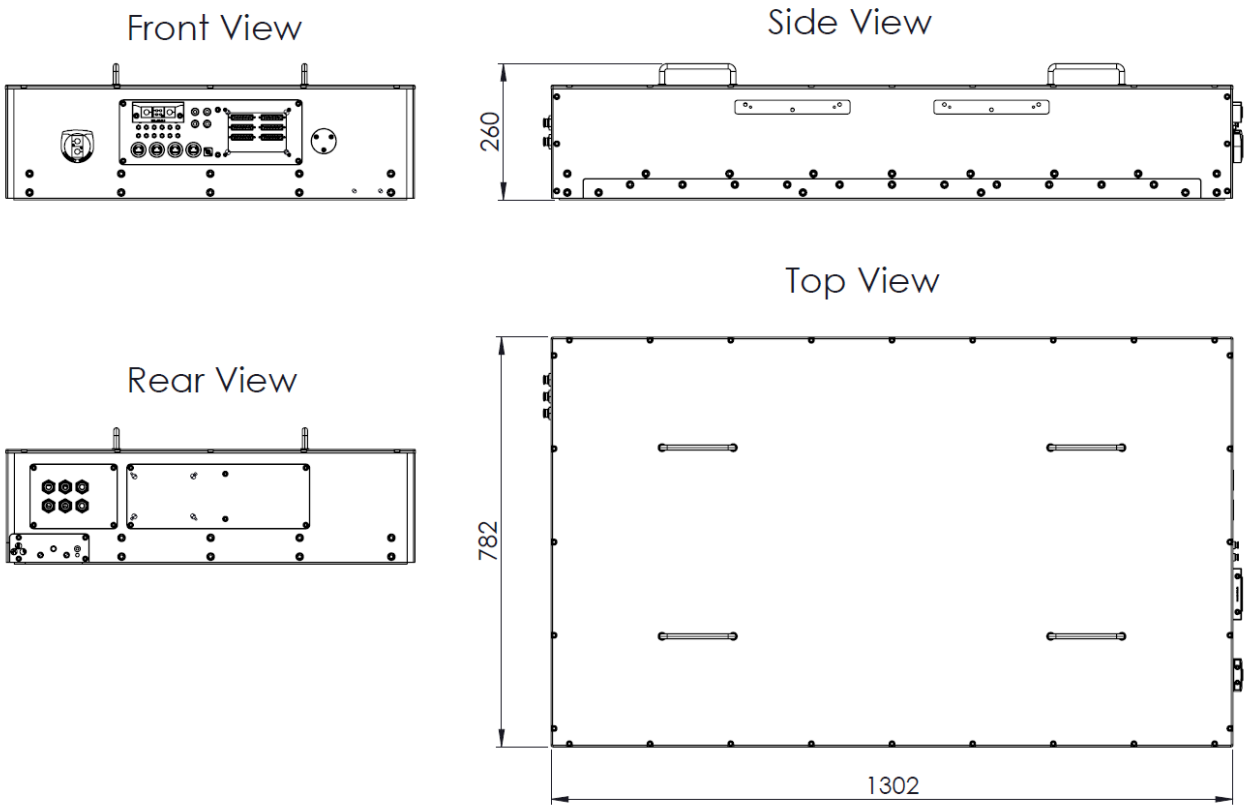

FIG.3 TECHNICAL DRAWING

Specification	PERLA 100
Center wavelength	1030 nm
Average power	100 W
Power stability	<1% RMS
Pulse energy stability	<1.5% RMS
Pulse energy	1 mJ
Pulse length (sech^2)	<2 ps
Repetition rate	100 kHz
Beam quality (M^2)	<1.25
Output polarization	linear, >100:1
Output beam diameter	~3 mm

Operating requirements	
Operating voltage	5P/16A/400V
Operating temperature	23±1°C
Relative humidity	20-50% (non-condensing)
Laser head size	782x1302x260 mm^3

ORDERING INFORMATION

solutions@hilase.cz

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Institute of Physics ASCR, v.v.i.
Za Radnicí 828, 25241 Dolní Břežany, Czech Republic

Please, send email for pricing information.
Specifications are subject to change without notice.
Custom modifications are available upon request.