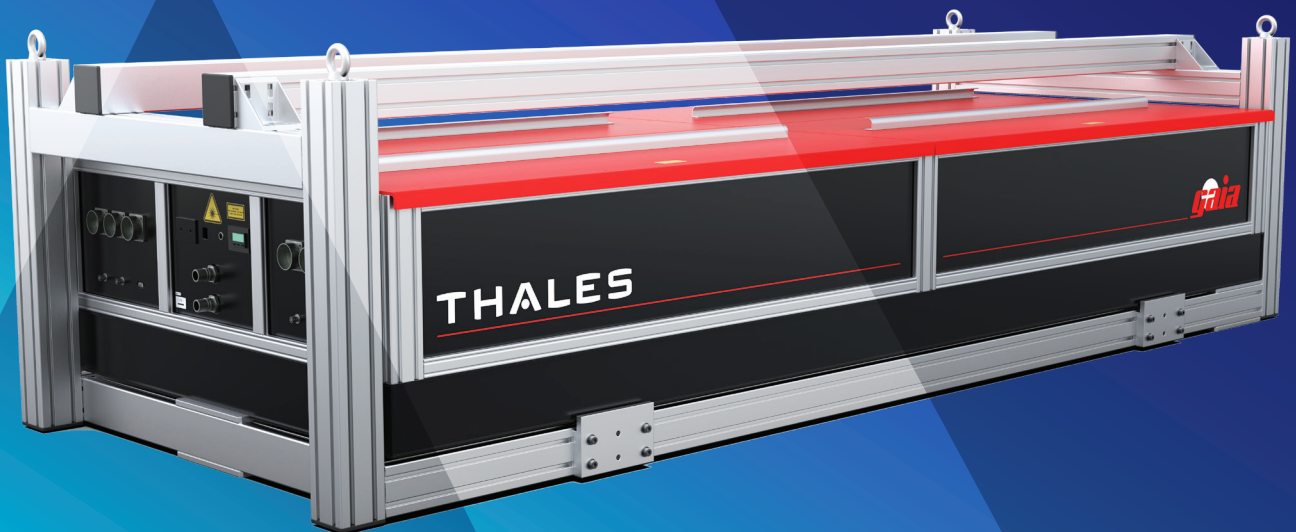


GAIA HP Flashlamp-Pumped Nd:YAG Laser Series

High repetition rate
for Petawatt pumping
Perfect beam quality
and stability
More than 10 years of
proven technology



GAIA HP

Flash Pump Solid State Laser

Applications

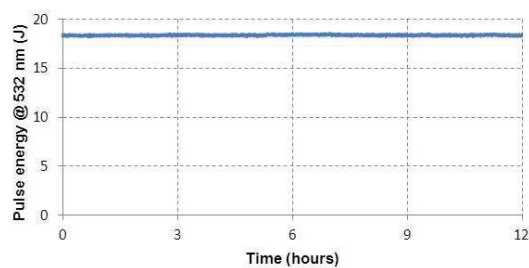
Science:

- Ultrafast TW and PW systems pumping

Industry:

- Laser shock peening
- Silicon annealing
- Large area ablation
- Non destructive testing

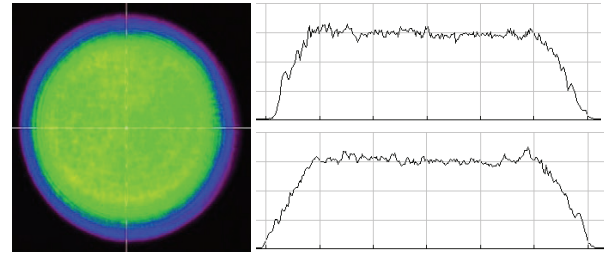
Long Term Stability of GAIA HP High M^2 over 12 Hours



Physical Characteristics (L x W x H)

Power supply	
22.05 x 30.71 x 71.65 in	56 x 78 x 182 cm
Cooling unit	
32.68 x 17.52 x 23.62 in	83 x 44.5 x 60 cm
Laser head	
106.30 x 39.37 x 27.95 in	270 x 100 x 71 cm

Typical GAIA HP beam profile



Features and Benefits

- Largest installed base
- Field proven reliability for more than 10 years
- High beam stability combined with high energy
- Suitable for the most demanding environments
- Cost effective solution

Specifications

Version	GAIA-HP	
Wavelength (nm)	1064	532
Repetition rate (Hz)	1	
Energy per pulse (J)	> 22 or > 2x11	> 16 or > 2x8
Pulse to pulse energy stability (% rms)	1	1.2
Pulse duration FWHM (ns)	10 to 15	
Time jitter (ns)	2 ns peak to peak	
Polarization	50% Vertical 50% Horizontal	Linear
Typical beam diameter (mm)	23	
Divergence (mrad)	< 1 mrad	< 1 mrad
Beam pointing stability (μrad)	±50	
Spatial beam profile (near field)	Top hat	
Power consumption (at 1 Hz) (kW)	7.3	

Utilities and Environment Requirements

Voltage	230 VAC ± 5% Single phase	
Current	1 Hz	5 x 16 A plugs
Frequency	50 – 60 Hz	
Water Flow	> 4 gal/min	> 15 L/min
Static Pressure	43.5 – 72 psi	3 – 5 bars
Temperature	10 – 20°C	

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