



SAGA HP

Flashlamp-pumped Nd:YAG Series

FEATURES

- 1.8 J at 532 nm
- 5 or 10 Hz repetition rate
- Ultrastable energy output
- Excellent beam profile
- Easy maintenance
- Computer control

APPLICATIONS

- Pump laser for ultrafast TW systems
- Material Processing
- Instrumentation
- Ideal pump for OPO and dye lasers



The most efficient Nd:YAG laser at 10Hz

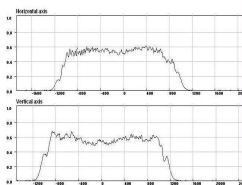
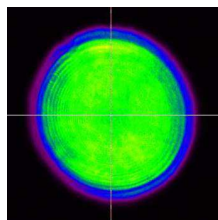
The SAGA HP is the most efficient and compact flashlamp-pumped solid-state laser on the market, producing 1.8 J per pulse at 532 nm at 5Hz or 10Hz.

It features pumping chambers with high efficiency diffusive coupling, that ensures high beam quality and high efficiency.

Its original optical cavity design based on an unstable resonator and a variable reflectivity mirror enhances energy extraction. The beam exhibits a very homogeneous Top Hat profile in the near field.

The use of compact housing structure ensures an excellent short and long term alignment stability.

Different harmonic generators on pre-aligned mounts extend the wavelength range to the second, third and fourth harmonics. They are integrated in a temperature regulated housing for optimum long term performances.



Typical Saga HP beam profile at 532 nm

> SAGA HP

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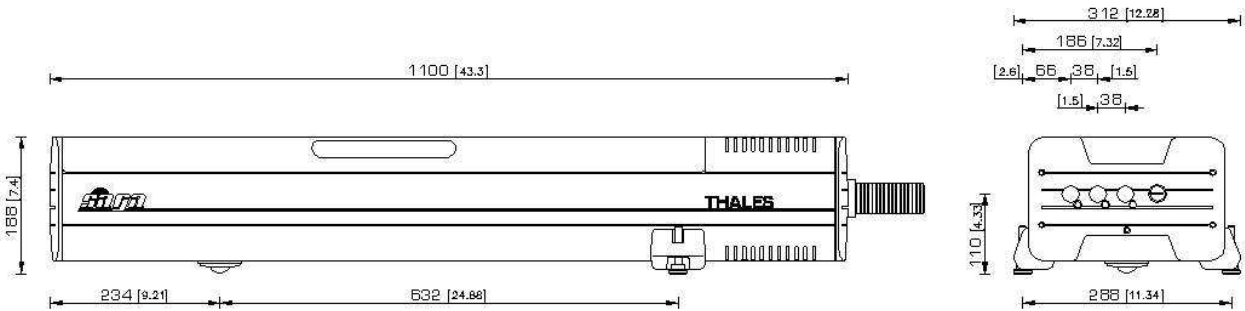
Specifications

Version	HP
Wavelength (nm)	532 ⁽¹⁾
Repetition rate	5 or 10 Hz
Energy per pulse	1.8 J
Pulse to pulse energy stability (% rms)	< 1.2 %
Pulse duration FWHM	4 – 8 ns
Time jitter (ns)	+/-1
Polarization	Vertical
Beam diameter (mm)	~ 15
Divergence (mrad)	0.5
Beam pointing stability (μrad)	+ / - 50
Spatial beam profile (near field)	Top hat
Power consumption (@ 10 Hz)	2.4 kW

⁽¹⁾ IR (1064 nm) and UV (355 or 266 nm) available on request

Physical characteristics (Size*: H x W x L)

Power supply	650 (20.9) x 600 (22) x 830 (31.1)
Cooling unit	485 (19.1) x 210 (8.3) x 770 (30.3)
Laser Head	188 (7.4) x 288 (11.34) x 1100 (43.3)

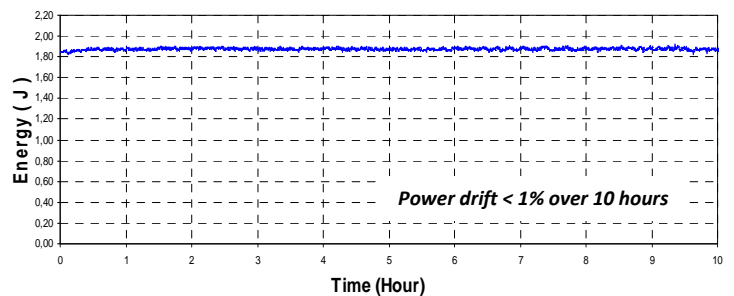


* Dimensions are given in mm (in)

Utilities and environment requirements

Voltage	208 – 230 VAC +/-5% single φ	
Frequency	50 – 60 Hz	
Water Flow	> 10 L/min	> 2.7 gal /min
Static pressure	2-6 bars	30 -90 psi
Temperature	10-25°C	
Operating systems	Windows 98, 2000, NT, XP	

Long term stability of SAGA HP over 10 hours



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