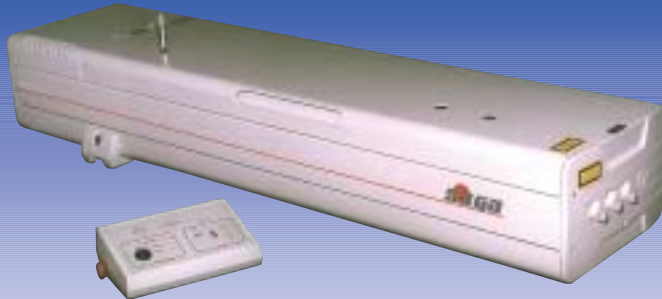


Saga

Flashlamp-Pumped YAG Series



High Energy Solid-State Pulsed Laser

Saga is the most efficient and compact flashlamp-pumped solid-state laser on the market, producing up to 2.3 J per pulse with only two pumping chambers.

Its original optical cavity design based on an unstable resonator and a gaussian end cavity mirror enhances energy extraction. The beam exhibits a super-Gaussian profile in the near field.

Saga operates at 1064, 532, 355 or 266 nm and offers various options to ease day-to-day operations such as :

- Easy optical set up alignment thanks to the diode laser pointing in the direction of the Saga output.
- Thermoregulated structure to offer outstanding beam-pointing stability and cut down harmonic generation warming-up time.

The Saga is the limited footprint solution for matching high energy requirements and for pumping ultrafast TW lasers.

Features

- Up to 2.3 J @ 10 Hz, 1,064 nm
- Up to 1.25 J @ 10 Hz, 532 nm
- Ultrastable energy output
- Passive beam pointing stability control : $< \pm 50 \mu\text{rad}$
- Air and water-cooled operations

Applications

- Material processing
- Instrumentation
- Scientific
- Companion pump laser for ultrafast TW systems

Output Specifications

Model	120/10(A)	120/20	220/10	220/20	230/10
Repetition rate (Hz)	10	20	10	20	10
Energy per pulse (mJ)					
at 1,064 nm	1,200	1,000	1,500	1,200	2,300
at 532 nm	600	500	800	600	1,250
at 355 nm	350	240	420	300	600
at 266 nm	120	70	150	65	170
Shot-to-shot stability (% rms)	1	1	1	1	1
Pulse duration (1) (ns)	4 - 8	4 - 8	4 - 8	4 - 8	4 - 8
Time jitter rms (ns)	0.5	0.5	0.5	0.5	0.5
Typical spectral width (cm ⁻¹)	1	1	1	1	1
Beam diameter (mm)	9.5	9.5	9.5	9.5	13
Divergence (mrad)	0.5	0.5	0.5	0.5	0.5
Beam pointing stability (μrad)	± 50	± 50	± 50	± 50	± 50

Specifications are given at 1,064 nm unless otherwise specified.

Saga series is water-cooled, except air-cooled A models.

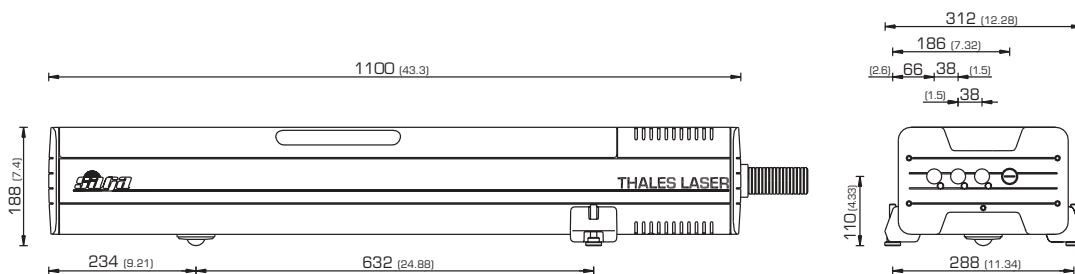
(1) Full Width at Half Maximum.

Utilities

Power requirements	Voltage	208 VAC ± 5 %	230 VAC ± 5 %
	Current	20 A	20 A
	Frequency	60 Hz	50 Hz
Water requirements (except A models)	Flow	1 gal/mn	4 l/mn
	Temperature	50 - 77 °F	10 - 25 °C
	Static pressure	45 - 119 psi	310 - 830 kPa
	Differential pressure	45 psi	310 kPa
	pH	6 - 8	6 - 8
	Particulate size	Ø < 200 μm	Ø < 200 μm

Physical Characteristics

Laser head	Weight	66 lbs	30 kg
	Umbilical length	8 ft	3 m
Remote control LR300	Size (H x W x L)	2.6 x 4.7 x 7.5 in	6.5 x 12 x 19 cm
	Weight	1.8 lbs	0.8 kg
	Cable length	16 ft	6.1 m
Power supply 2 x LS152	Size (H x W x L)	17.6 x 16.9 x 31.1 in	49.5 x 43 x 79 cm
	Weight	209 lbs	95 kg
Water exchanger LC302W	Size (H x W x L)	19.1 x 8.3 x 27.9 in	48.5 x 21 x 71 cm
	Weight	77 lbs	35 kg
	Tank volume	3.6 gal	14 l
Air exchanger LC122A	Size (H x W x L)	19.5 x 8.5 x 28.1 in	49.5 x 21.5 x 71.5 cm
	Weight	77 lbs	35 kg
	Tank volume	1.3 gal	5 l



Dimensions are given in mm (in).

Due to Thales Laser continuous product improvement policy, specifications are subject to change without notice.

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