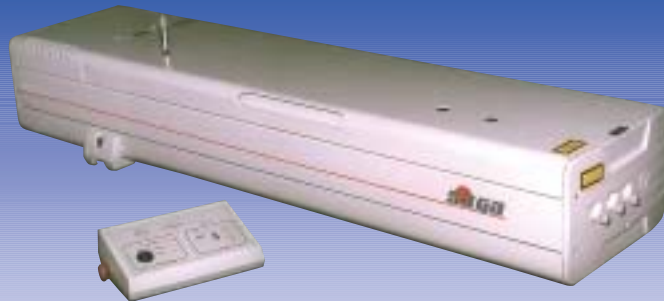


# Saga S

## Flashlamp-Pumped YAG Series



### High Energy Solid-State Seeded Pulsed Laser

Saga S is the most efficient flashlamp-pumped solid-state laser on the market, providing single longitudinal mode emission thanks to a built-in CW seeder.

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

Saga S operates at 1064, 532, 355 or 266 nm and offers various options to ease day-to-day operations such as a harmless diode-laser pointing to safely align the subsequent optical set up and such as a complete thermoregulated structure to guarantee an outstanding stability and cut down harmonic generation warming-up time.

Saga S produces up to 1.9 J per pulse with two laser heads only. The optical cavity length is self-regulated on a shot-to-shot basis to reach unmatched coherence and stability.

The Saga S is the compact seeded solution that matches high energy requirements.

### Features

- Up to 1.9 J @ 10 Hz, 1,064 nm
- Up to 900 mJ @ 10 Hz, 532 nm
- Ultrastable energy output
- Passive beam pointing stability control :  $< \pm 50 \mu\text{rad}$
- Water-cooled operations

### Applications

- Material processing
- Instrumentation
- Scientific

## Output Specifications

Model	120/10	120/20	220/10	220/20	230/10
Repetition rate (Hz)	10	20	10	20	10
Energy per pulse (mJ)					
at 1,064 nm	1,100	900	1,200	1,000	1,900
at 532 nm	520	420	580	480	900
at 355 nm	380	260	450	320	520
at 266 nm	110	65	135	60	150
Shot-to-shot stability (% rms)	1	1	1	1	1
Pulse duration (1) (ns)	6 - 10	6 - 10	6 - 10	6 - 10	6 - 10
Time jitter rms (ns)	0.5	0.5	0.5	0.5	0.5
Typical spectral width (cm <sup>-1</sup> )	0.004	0.004	0.004	0.004	0.004
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 S series is water-cooled.

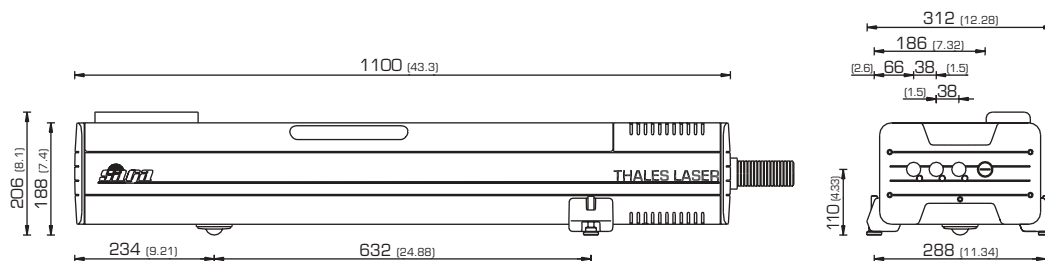
(1) Full Width at Half Maximum.

## 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.S	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 LC182WS	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	1.1 gal	4.4 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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