

One laser solution for all your needs.

SATSUMA

Versatile, full-featured and compact femtosecond laser

The Satsuma family of femtosecond lasers offers versatility in the most compact air-cooled laser platform on the market. Satsuma is a cost-efficient high repetition rate solution providing high energy, up to 175 μJ in the IR with optional green, UV and deep UV outputs.

Versatile and fully-featured, Satsuma femtosecond lasers can be equipped with:

- > FemtoTrig® high precision synchronization to provide high ablation quality and high throughput, in a cost effective and easy to use option
- > Superburst, enabling up to 10x higher energy per impact at constant average power, for faster processing and improved ablation efficiency

The Satsuma product range is globally recognised as the best-seller due to its ease of integration and unsurpassed engraving quality.

Satsuma is part of Amplitude's femtosecond laser range with very short pulsewidths ensuring the lowest HAZ (heat-affected zone) and highest ablation efficiency for industrial applications, and making it the ideal pump source for science.



Applications

Industry:

- > Microelectronics
- > Micromachining
- > Flat Panel Display Repair

Science:

- > Multiphoton Imaging
- > Optogenetics
- > Ultrafast Spectroscopy

Medical:

- > Ophthalmology
- > Medical Device Manufacturing

Key Features

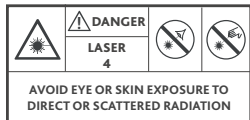
- > Air-cooled up to 20 W
- > FemtoTrig®
- > No burst length limitation
- > Superburst mode
- > Optional green, UV and DUV outputs
- > Industrial design for 24/7 operation

Specifications

	Satsuma	Satsuma HP	Satsuma HP ²
Pulse Width (fs)	< 350		
Repetition Rate	From single shot to 40 MHz		
Max Power (W)	5	10	20
Max Energy (μJ)	10	20	40
Reference Repetition Rate	500 kHz		
Central Wavelength	1030 +/- 5 nm		
M ²	< 1.2		
Beam diameter (mm)	2.3 +/- 0,5 mm	2,7 +/- 0,5 mm	
Astigmatism	< 50 %		
Waist assymetry	< 13 %		
Ellipticity	< 13 %		
Pointing Stab	< 15 μrad / °C		
p to p Stability	< 1,5 % RMS		
Power Stability (8 hrs)	< 1 % RMS		

Options

Short Pulses - up to 20 μJ	< 220 fs		
High Energy option - IR only	up to 60 μJ		
Harmonic Generation	Integrated, Mono-wavelength, up to 4-wavelengths		
	Output wavelength - 515 nm, 343 nm, 257 nm		
Femtotrig® - real pulse on demand	High precision triggering	Jitter 25 ns	
Max Energy with Super Burst Option - IR only	up to 65 to 175 μJ		



CE

Dimensions

Laser Head	52 x 33 x 12 cm
Power Supply	4U 19" rackable

Weight

All Models	23 kg
------------	-------

Cooling

Satsuma, HP, HP ²	Air-cooled***
------------------------------	---------------

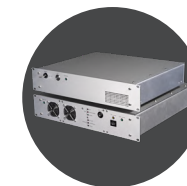
*** Water-cooled version available on request



Mango



Compress



Synclock