

For every industrial need

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 150 μ J 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
- > FemtoBurst™ to control the micro-pulse number, pattern, inter-pulse delay from 25 to 100 ns

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
- > FemtoBurst™
- > Optional green, UV and DUV outputs
- > Industrial design for 24/7 operation

Specifications

	Satsuma	Satsuma HP	Satsuma HP ²
Average Power	> 5 W	> 10 W	> 20 W
Pulse Energy	> 10 μJ^*	> 20 μJ^*	> 40 μJ^*
Pulse Width	< 350 fs to > 10 ps **		
Repetition Rate	From single shot to 40 MHz		
Central Wavelength	1030 +/- 5 nm		
Beam Quality	$M^2 < 1.2$		
Beam Circularity	> 87 %		
Beam Pointing Stability	< 25 $\mu\text{rad}/^\circ\text{C}$		
Long Term Mean Power Stability	< 1 % rms over 100 hours		
Warm-up Time	< 30 min		

*High Energy Option (up to 150 μJ)

**Short Pulse Option (< 220 fs up to 20 μJ)

OPTIONS

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
Femtoburst™ - arbitrary burst shaping	Defined pattern on request	
Burst Mode - unlimited intra-burst pulses	No length limitation	up to 80 pulses at 500 kHz

Dimensions

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

Weight

All Models	23 kg
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Cooling

Satsuma, HP, HP ²	Air-cooled***
Satsuma HP ³	Water-cooled

***Water-cooled version available on request



Niji



Mango



Compress



Synchrolock

