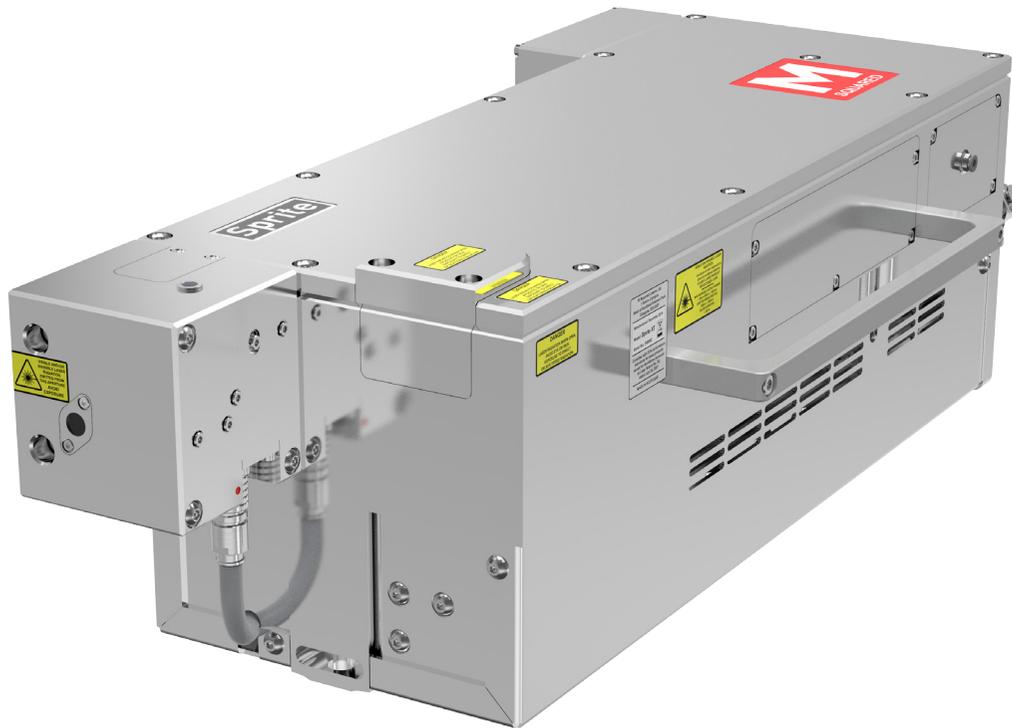


# Sprite-XT

Widely Tunable, Automated Ultrafast  
Ti:Sapphire Laser



The Sprite-XT is for biologists and life scientists who need a low noise, low-cost, tunable Ultrafast Ti:Sapphire laser for multi-photon microscopy. It provides high power where you need for multi-photon excitation (MPE), fluorescent proteins and un-caging applications.

Sprite-XT covers all your daily imaging needs without the complexity, large size and expense of typical laser systems.

## Features

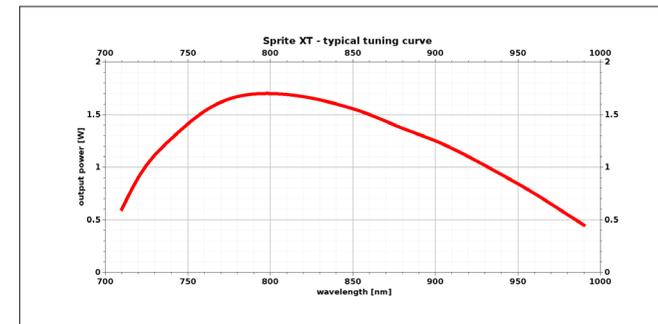
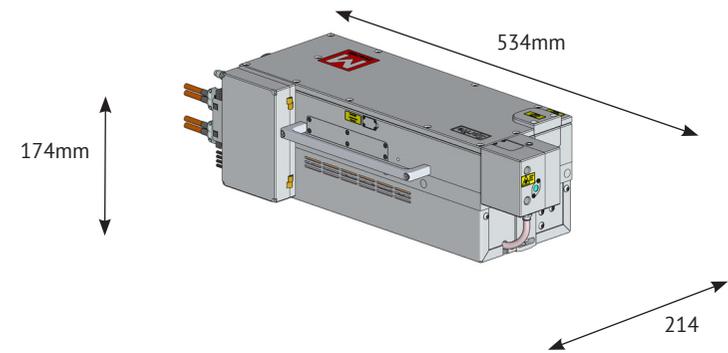
- Hands free operation
- Ultra compact footprint
- High stability and beam quality with exceptionally low noise
- Sealed, alignment & maintenance-free laser head
- Integrated pump with PowerMax™ active pump beam alignment for superb power stability
- Invariant™ alignment-free mounts
- Onboard spectrometer
- Compact, sealed laser head for easy purging when operating near atmospheric absorption lines
- Unique Instrument Control by Ethernet, with included netbook, software interface & laser controller (not shown)

**Specifications <sup>[1]</sup>**
**Sprite-XT Widely Tunable Oscillator**

Tuning Range	720-980 nm
Output Power (Modelocked)	> 0.7 W at ~725 nm > 1.5 W at ~800 nm > 0.7 W at ~935 nm
Pulse Width	< 150 fs <sup>[2]</sup>
Amplitude Noise <sup>[3]</sup>	< 0.1%
Output Power Stability <sup>[4]</sup>	< ± 0.25%
Pulse Repetition Rate	80 MHz
Polarisation	< 500:1
Spatial Mode	TEM <sub>00</sub> (M <sup>2</sup> < 1.1)
Beam Diameter	1.2mm +/- 0.1mm
Beam Ellipticity <sup>[5]</sup>	< 1.1
Astigmatism	< 10 %
Beam Pointing	< 0.4 µrad/nm
Dimensions	534 x 214 x 174mm (L x W x H)
Operating Voltage	90-264 Vac, 47-63 Hz
Maximum Operating Current	< 3 A at 100 Vac < 1.5 A at 230 Vac (laser head + integrated pump + controller + PC) < 6 A at 100 Vac  (closed-loop chiller. Upper limit, actual value depends on laboratory conditions)
Operating Temperature Range	20 to 35 °C (68 to 95 °F)

**Notes:**

- Unless stated otherwise, all specifications apply to: the peak of tuning curve; ambient temperature change of < ±2°C; after 60-minute warm-up; provided the pump laser is operated at its nominal rated output power with recommended pump source; & provided Sprite is not operated on or near strong atmosphere absorption lines without purge.
- Assumes sech<sup>2</sup>(t) deconvolution of 0.65x autocorrelation width. Specified at peak of timing range.
- Measured RMS in a 10 Hz to 20 MHz bandwidth.
- Output power change measured in any two-hour period after one-hour warm-up with less than +/- 1°C ambient temperature change.
- Ratio of major to minor 1/e<sup>2</sup> intensity beam diameter at output port.


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M Squared Laser's laser products are certified to comply with the Federal Regulations (21 CFR Subchapter J) as administered by the Centre of Devices and Radiological Health on all systems ordered for shipment after October 1st, 2003.

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11.15/Sprite-XT V8

