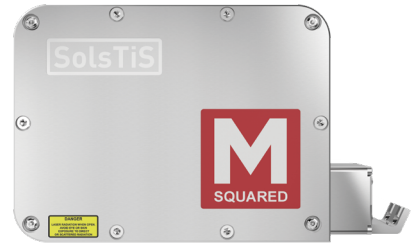


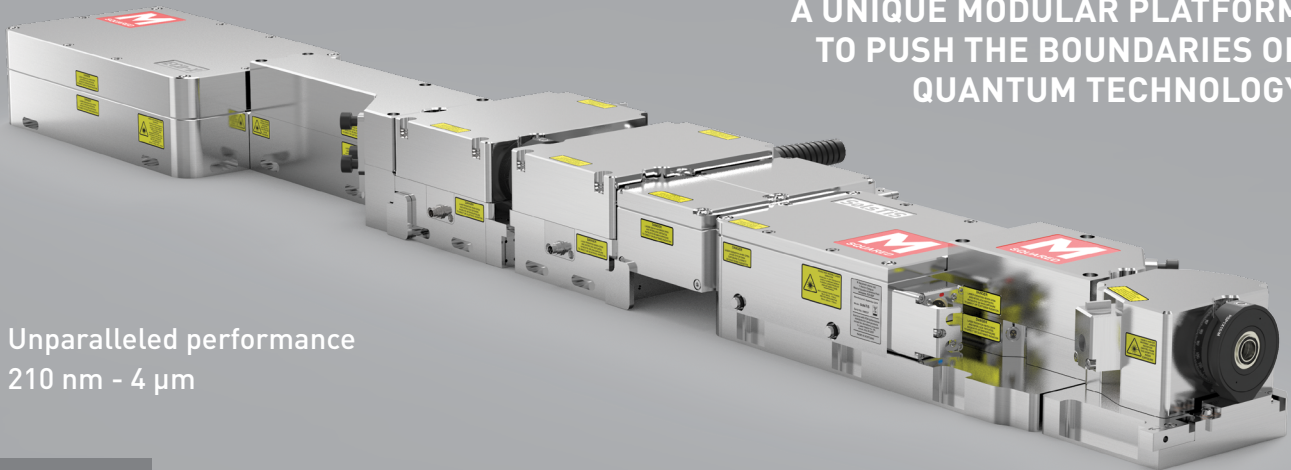
SOLSTIS PLATFORM

ADVANCING QUANTUM TECHNOLOGY

The award-winning SolsTiS represents a step-change in continuous-wave Ti:Sapphire laser technology. SolsTiS delivers low noise, unrivalled power, ultra narrow linewidths and unprecedented tuning. SolsTiS is a super-compact system with a completely sealed, alignment-free cavity and hands-free operation.



A UNIQUE MODULAR PLATFORM TO PUSH THE BOUNDARIES OF QUANTUM TECHNOLOGY



Unparalleled performance
210 nm - 4 μm

FEATURES

BROAD TUNING RANGE Hands-free operation from 670 -1050 nm with >300 nm of continuous tuning with a single optics set.

ULTRA NARROW LINEWIDTHS Exceptional passive stability enables <50 kHz absolute linewidth. Using active feedback, <10 Hz has been achieved.

HIGH POWER SolsTiS is the most efficient Ti:S laser in the world. Output power levels >10 W in the fundamental and >4 W in SHG.

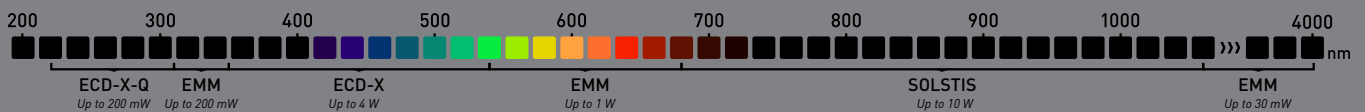
WAVELENGTH EXTENSIONS Extend SolsTiS to provide gapless coverage from 210 nm - 4 μm with SolsTiS-ECD-X SHG cavity, SolsTiS ECD-X-Q FHG cavity and SolsTiS-EMM mixing module.

WIDE CONTINUOUS SCANS Continuous high resolution scans over >25 GHz. Unique functionality enables mode hop free scans over >100 nm.

FULLY AUTOMATED Wavelength tuning and locking via a web browser allows remote control and simple integration into experiments.

SUPERB COMPACT DESIGN Exceptionally compact (smaller than an iPad) with a completely sealed resonator.

ULTRA LOW NOISE: Typical RIN <0.075% with 0.075% RMS power stability over 24 hours.



THE SOLSTIS PLATFORM IS FULLY AUTOMATED AND EASY TO CONTROL

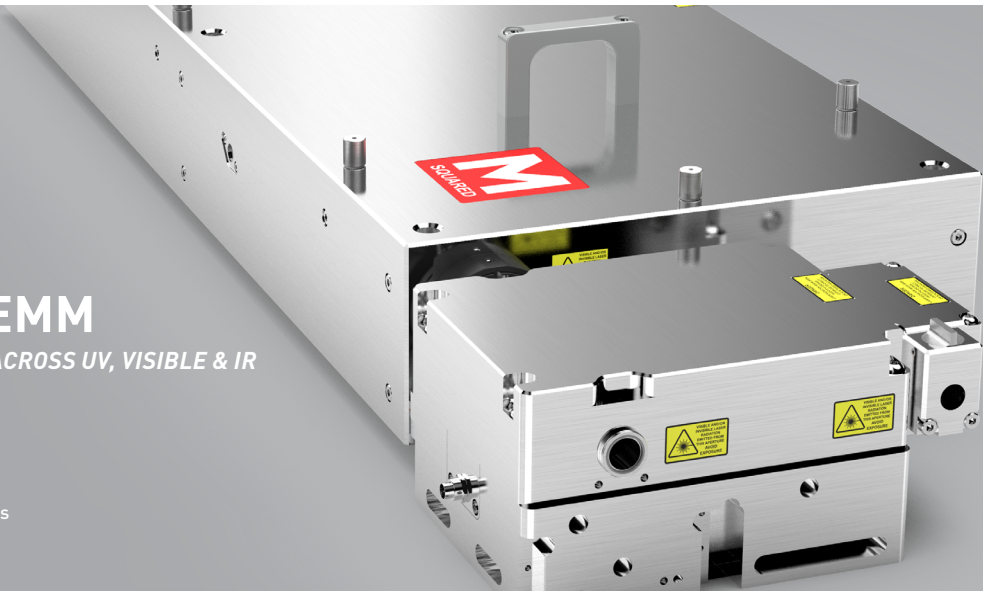
Laser operations are fully automated via a unique web interface allowing systems to be controlled, updated and maintained from anywhere in the world. Easily integrated with lab tools and experiments via TCP/IP command sets. Diode drivers, quantum cascade laser diode drivers and temperature controllers also available.



SOLSTIS-EMM

AUTOMATED TUNING ACROSS UV, VISIBLE & IR

- 300-350 nm
- 500-680 nm
- 1.1-4 μm
- <500 kHz linewidth
- Continuous or stepped scans



Solstis External Mixing Module (Solstis-EMM)

A new extension exclusively designed to complement the award-winning Solstis, CW narrow linewidth Ti:Sapphire laser. It's not only a major breakthrough in laser technology, enabling access to hard-to-reach wavelengths in the UV, visible and IR regions, it also features the narrow linewidth, ease of use and ultra stable output for which Solstis is well-known.

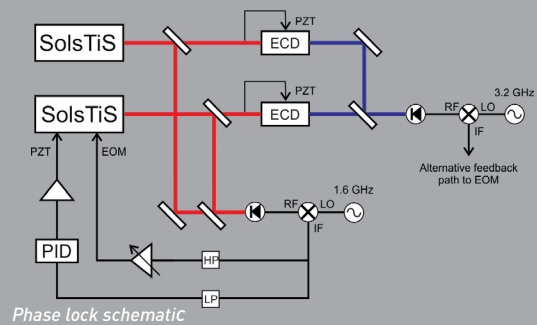
CUSTOM SOLUTIONS

M Squared has a highly collaborative approach with customers to provide additional system functionality, novel modules and advanced control systems. Example projects:

PHASE LOCK BETWEEN TWO SOLSTIS SYSTEMS

Achieved RMS phase error <0.01 rad from 10 kHz and 10 MHz with phase noise down to <-120 dB/Hz at 100 kHz; offset by up to 6.4 GHz

Application: Coherent excitation in Raman transitions towards high fidelity quantum operations.

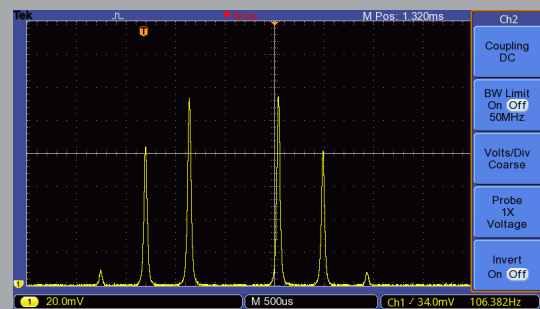


Phase lock schematic

RESONANT MODULATION MODULE

Generation of frequency sidebands at 369 nm, with simultaneous resonant doubling of carrier + sidebands; with rapid extinction of carrier to <99%.

Application: State preparation and shelving in quantum information processing.



2.1 GHz UV sidebands



M Squared designs and manufactures advanced laser platforms. Our high performance systems, such as the award-winning Solstis platform, are critical enablers in fundamental physics research.



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