



# PRODUCT CARD

NEAR INFRARED

## SOLSTIS



### ULTRA NARROW LINEWIDTH, CW TI:SAPPHIRE

Tuning range	670 - 1050 nm
Amplitude noise	<0.075% RMS
Narrow linewidth	<50 kHz
Average power	Up to 10 W

*Atomic, molecular and optical physics (AMO)  
High-resolution spectroscopy  
Advanced metrology and characterisation*

## SPRITE XT

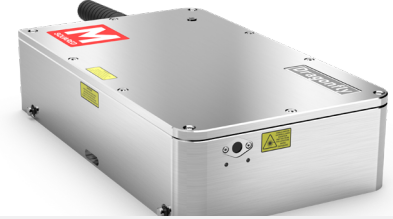


### TUNABLE, ULTRAFAST TI:SAPPHIRE

Tuning range	720 - 980 nm
Pulse duration	<150 fs
Average power	>1.5 W
Repetition rate	80 MHz

*Multi-photon excitation (MPE) and FLIM  
Quantum optics  
Time resolved spectroscopy*

## DRAGONFLY



### MODE-LOCKED, SEMICONDUCTOR LASER

Wavelength range	910 - 1050 nm
Pulse duration	<200 fs up to 40 ps
Average power	Up to 1 W
Pulse repetition rate	200 MHz

*Multi-photon excitation (MPE)  
FLIM and CARS microscopy  
Materials processing*

VISIBLE & UV

## SOLSTIS EXTENSIONS

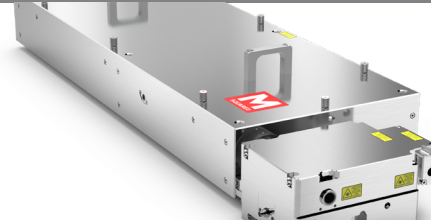
### ECD-X



#### VISIBLE SHG CAVITY

Tuning range	340 - 525 nm
Amplitude noise	<0.15% RMS
Linewidth	<100 kHz
Power	Up to 4 W

### EMM



#### VISIBLE & UV FREQUENCY MIXING MODULE

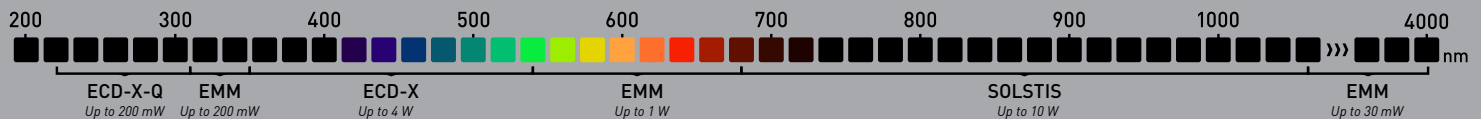
Tuning range	300 - 350 nm, 500 - 680 nm, 1.1 - 4 $\mu$ m
Amplitude noise	<0.5% RMS
Linewidth	<0.5 MHz
Power	Up to 1 W

### ECD-X-Q



#### UV SHG CAVITY

Tuning range	210 - 300 nm
Amplitude noise	<0.5% RMS
Linewidth	<0.5 MHz
Power	Up to 200 mW



## COMPACT, 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.



MID INFRARED & THz

### FIREFLY-IR



#### TUNABLE, PULSED MID-IR OPO

Tuning range	1.5 - 1.8 $\mu\text{m}$ , 2.5 - 4.5 $\mu\text{m}$
Power	Up to 250 mW
Pulse duration	<10 ns
Pulse repetition rate	130 - 300 kHz

*Molecular spectroscopy and chemical sensing  
Spectroscopy and microscopy of nanomaterials  
Remote detection (threat agents and hydrocarbons)*

### FIREFLY-IR (LW)

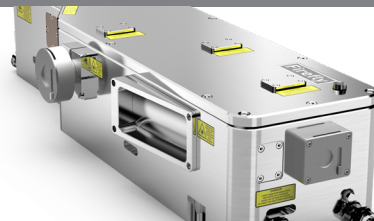


#### TUNABLE, PULSED LW IR OPO

Tuning range	5.6 - 8.5 $\mu\text{m}$
Average Power	~30 mW
Pulse duration	<50 ns
Pulse repetition rate	20 kHz

*Molecular spectroscopy and chemical sensing  
Spectroscopy and microscopy of nanomaterials  
Remote detection (threat agents and hydrocarbons)*

### FIREFLY THz



#### TUNABLE, PULSED THz OPO

Tuning range	2.5 - 0.8 THz
Average Power	~450 nW
Pulse duration	<30 ns
Pulse repetition rate	50 Hz

*THz spectroscopy and imaging  
Non destructive testing (NDT)  
Biomedical diagnostics*



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. Through our dedicated Innovation Group we also partner with research institutions to develop novel light-based applications that have the potential to tackle global problems in areas such as quantum technology, biophotonics and chemical sensing.

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