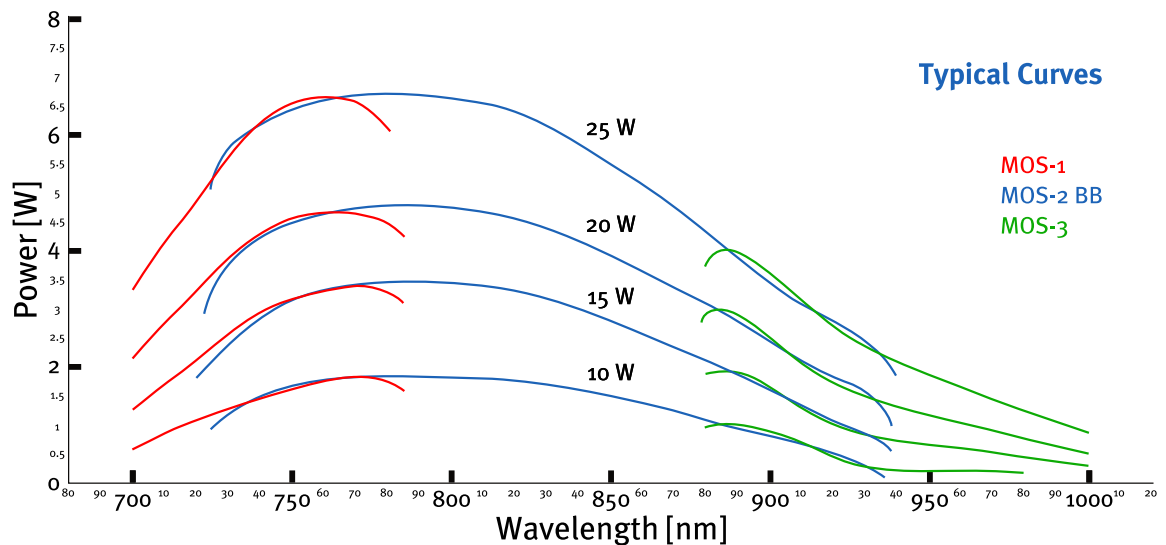


# Matisse 2 TX

## Pound-Drever-Hall Stabilized Titanium:Sapphire Ring Laser with Intracavity Modulator

- Narrow linewidth: Best spectral resolution commercially available
- Hands free operation with ELSA (Electronic Laser Self Alignment)
- Improved Housing: Faster Purge of Laser
- Extended scans over nanometers (requires wave-meter, optional fiber launch integrated in Matisse)
- High power output up to 7.0 W
- Field serviceable: optics change, maintenance, upgrades, conversion to Matisse 2 DX (Dye)
- Extension modules available from 210-4200 nm
- Low Amplitude Noise: Quiet Laser Operation
- Special optics for enlarged tuning range (668-1030 nm)

## Tuning Range



	Millennia eV 25W	Millennia eV 20W	Millennia eV 15W	Millennia eV 10W
Specified Power <sup>1)</sup>	6.2 W	4.7 W	3.3 W	1.7 W
Three Optic Sets <sup>2) 3)</sup>	MOS-1 690-770 nm	MOS-2 BB 730-930 nm	MOS-3 880-1015 nm	

## General Characteristics

Beam Radius <sup>4)</sup>	0.6-0.7 mm (typical)
Beam Divergence	< 1.2 mrad (half angle)
Linewidth <sup>5)</sup>	< 30 kHz rms / 100 msec, < 20 kHz rms / 100 µsec
Amplitude Noise	< 0.1 % rms (above pump noise, added in quadrature)
Scan Range <sup>1)</sup>	> 50 GHz
Beam Polarization	horizontal

## Requirements

Pump Laser <sup>6)</sup>	Millennia Series
Ambient Conditions	constant temperature in the 20-30 °C range, 80% max. rel. humidity, non condensing
Cooling	required for crystal (ca. 30 Watt)
Laboratory	vibrational isolated optical table, dust-free air (flow box)
Computer Control	Windows XP / Vista / 7 / 8 / 10, USB-Port

<sup>1)</sup> at approximately 780 nm

<sup>2)</sup> non-standard tuning ranges upon request

<sup>3)</sup> depending on pump power

<sup>4)</sup> at Matisse output port

<sup>5)</sup> relative to built-in reference cavity

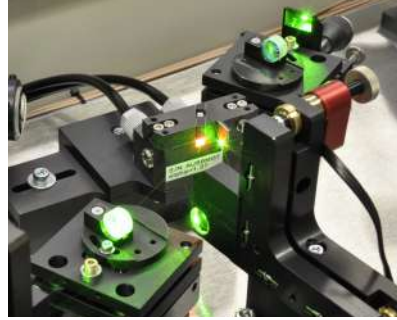
<sup>6)</sup> please contact Sirah for compatibility with other pump lasers

# Matisse 2 TX

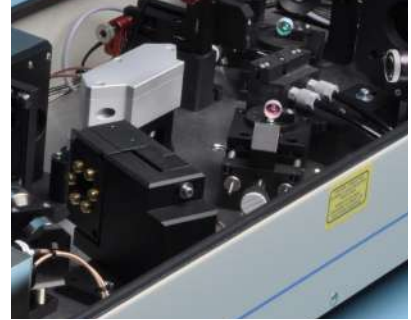
## Matisse 2 TX



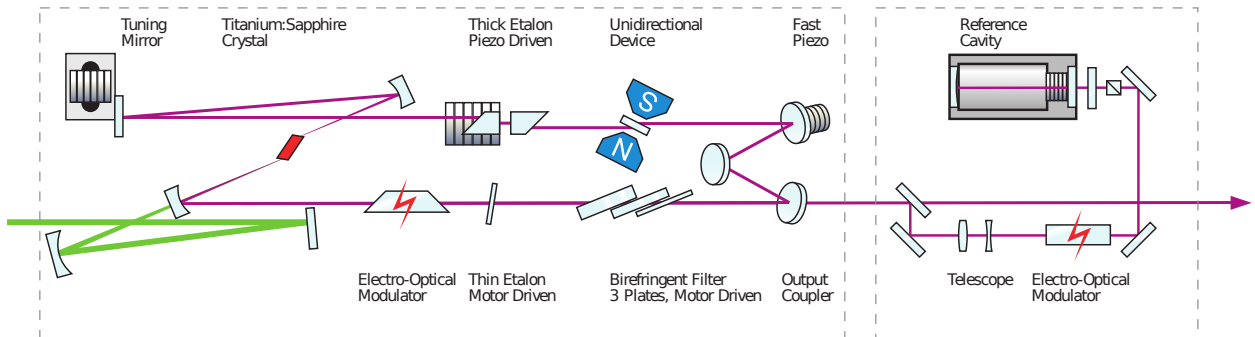
## ELSA



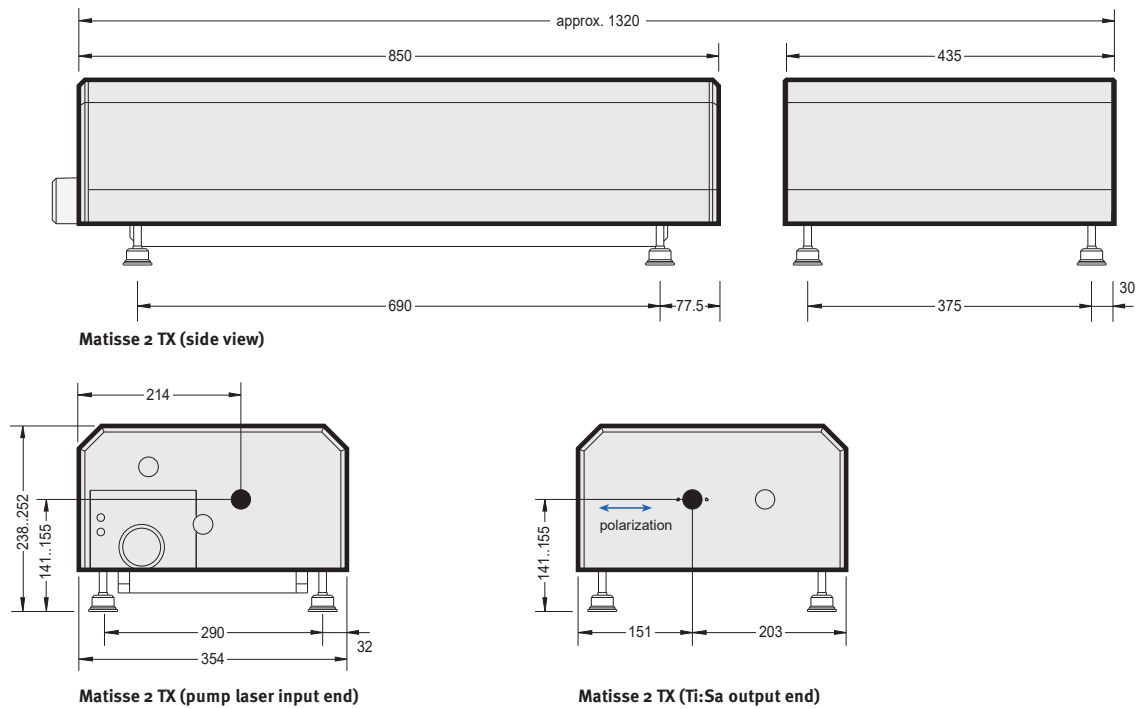
## EOM



## Optical Layout



## Dimensions



All Dimensions in mm  
 Specifications are subject to change without notice  
 U.S. Patent 7,489,715



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