

# Matisse TX-light

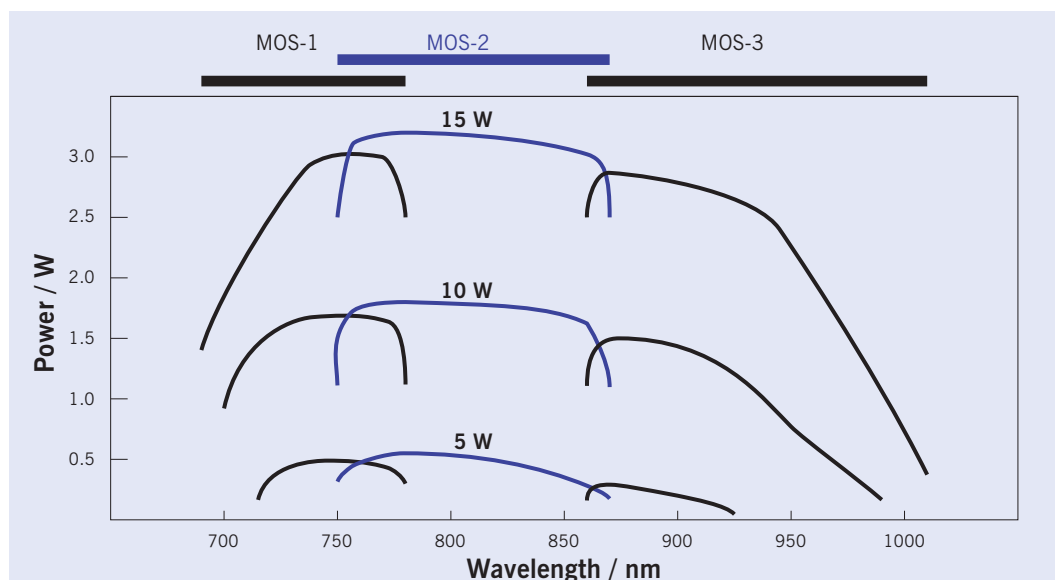
## Pound-Drever-Hall Stabilized Titanium:Sapphire Ring Laser

The Matisse TX-light is a narrow linewidth model of the Matisse laser series. Based on the Matisse TS, further linewidth narrowing down to 60 kHz is

achieved by using the Pound-Drever-Hall locking technique. The unique long travel piezo mechanics allows single frequency scanning over 50 GHz without

mode hopping. The Matisse TX-light can be converted into the Matisse DX-light cw ring dye laser.

## Tuning Range



Optics Set	Millennia Pro 15s	Millennia Pro 10s	Millennia Pro 5s
MOS-1	690 .. 780 nm	700 .. 780 nm	715 .. 780 nm
MOS-2	750 .. 870 nm	750 .. 870 nm	750 .. 870 nm
MOS-3	860 .. 1015 nm	860 .. 990 nm	860 .. 925 nm

Maximum Power	3200 mW	1800 mW	800 mW
	at approximately 780 nm		

## General Characteristics

Spatial Mode	TEM <sub>00</sub>
Beam Diameter <sup>1)</sup>	1.2 .. 1.4 mm (typical)
Beam Divergence	< 2 mrad
Linewidth <sup>2)</sup>	< 60 kHz rms / 100 msec
Amplitude Noise	< 1.5% rms
Beam Polarization	horizontal

<sup>1)</sup> at Matisse output port

<sup>2)</sup> relative to built in reference cavity

## Requirements

Pump Laser <sup>3)</sup>	Millennia Pro Series
Ambient Conditions	constant temperature in the 20 .. 25°C range,
Cooling	required for crystal (<20 Watt)
Laboratory	vibrational isolated optical table, dust-free air (flow box)

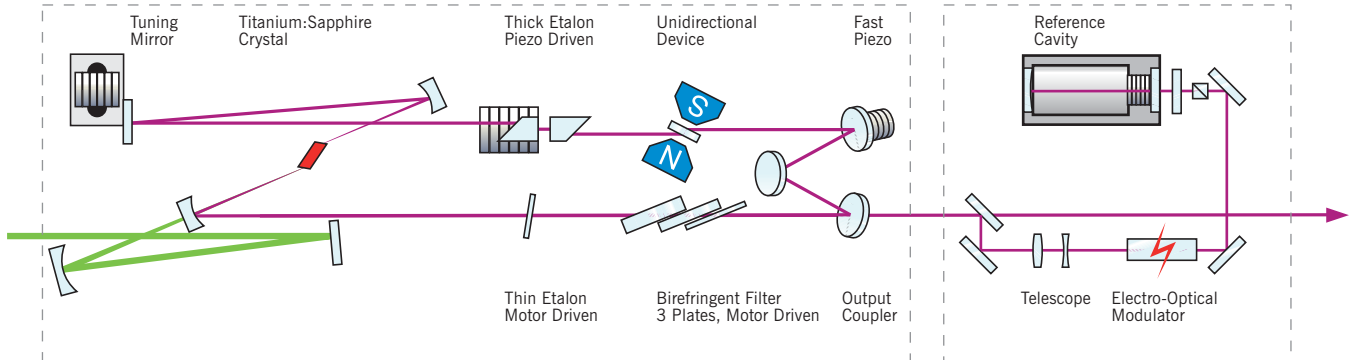
Computer Control Windows 2000 / XP system, USB port

<sup>3)</sup> please contact Sirah for compatibility with other pump lasers

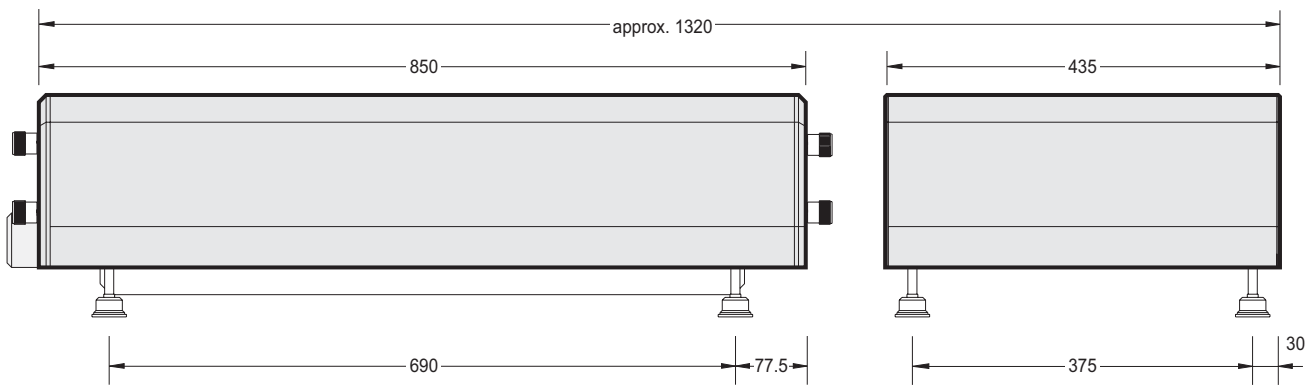
**Sirah**

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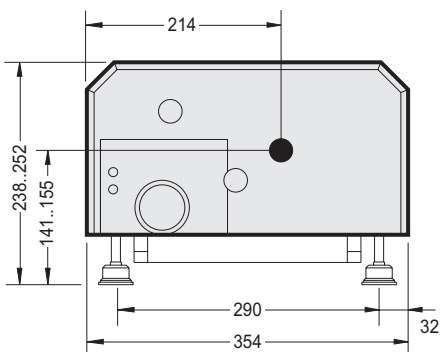
## Optical Layout



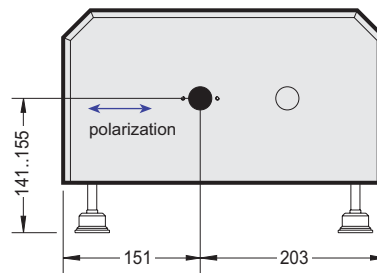
## Laser Head Dimensions



Matisse TX-light (side view)



Matisse TX-light (pump laser input end)



Matisse TX-light (Ti:Sa output end)

All Dimensions in mm  
Specifications are subject to change without notice



## Sirah

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