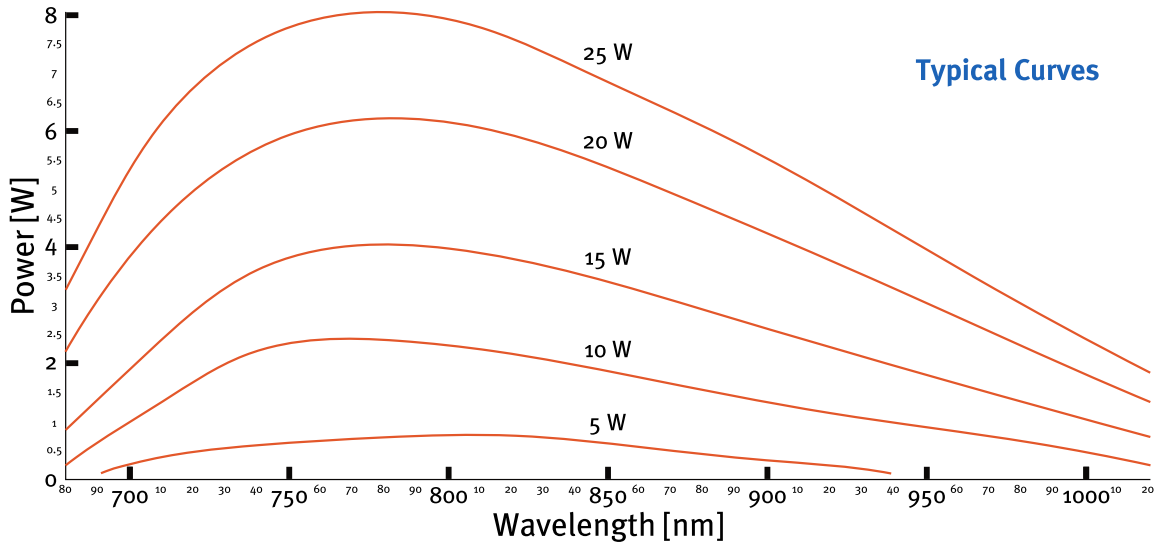
07/2021

Matisse CR

Passively Stabilized Titanium:Sapphire Ring Laser

- Sealed, fully automated design with purge ports for trouble free operation across atmospheric absorptions
- Hands free operation with ELSA (Electronic Laser Self Alignment)
- Wide tuning range (300 nm) with broadband option
- High power output up to 8.4 W
- Compact design with pump laser included: only 720 mm length on laser table
- Intracavity EOM available
- Extended scans over nanometers (requires wavemeter, optional fiber launch integrated in Matisse)
- Long term stable special developed mounts (no tweaking)
- Field serviceable: optics change, maintenance, upgrades
- Special optics for enlarged tuning range (662-1050 nm)
- Extension modules available from 210-4200 nm

Tuning Range



Specified Power	Millennia eV 25W	Millennia eV 20W	Millennia eV 15W	Millennia eV 10W	Millennia eV 5W
Broadband 700-1000 nm [1) 2)]	6.5 W	5.0 W	3.5 W	1.8 W	0.7 W
Three Optic Sets [1) 2)]	7.2 W	5.5 W	3.8 W	2.0 W	0.8 W

General Characteristics

Beam Radius [3)]	0.4-0.5 mm (typical)
Beam Divergence	< 1.2 mrad (half angle)
Linewidth	< 1 MHz rms / 100 msec, < 100 kHz rms / 100 µsec
Amplitude Noise	< 0.1 % rms (above pump noise, added in quadrature)
Scan Range [1)]	> 50 GHz
Beam Polarization	horizontal

Requirements

Pump Laser [4)]	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

1) at approximately 780 nm
2) non-standard tuning ranges upon request
3) at Matisse output port
4) please contact Sirah for compatibility with other pump lasers

sirah.com

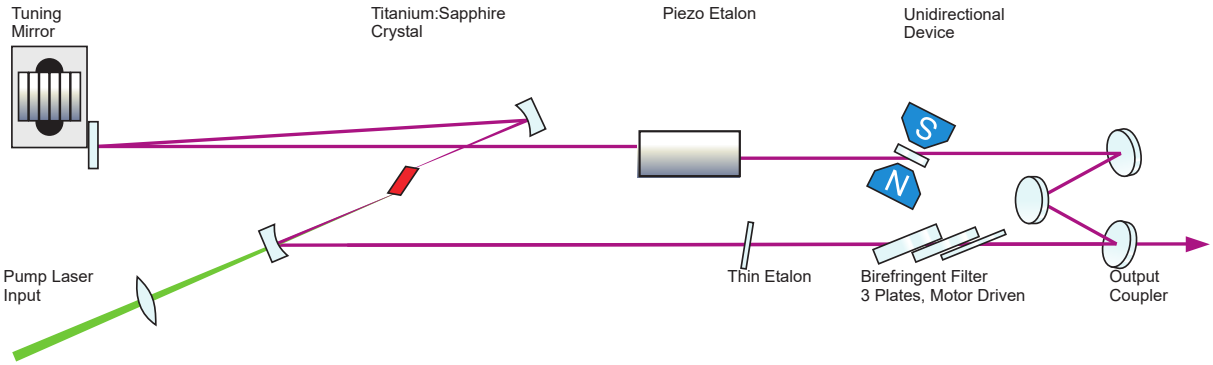
Matisse CR

Matisse CR Setup

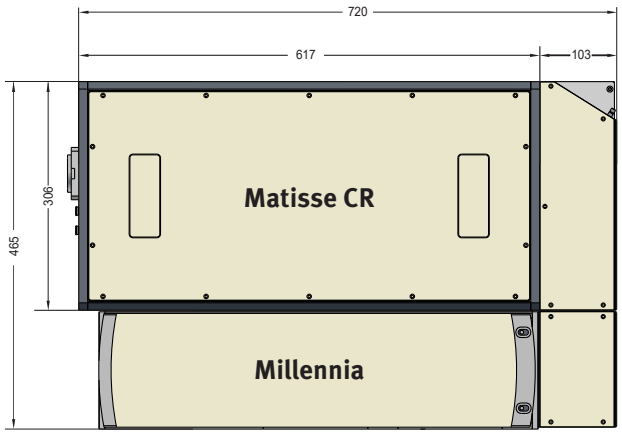
ELSA

Matisse CR

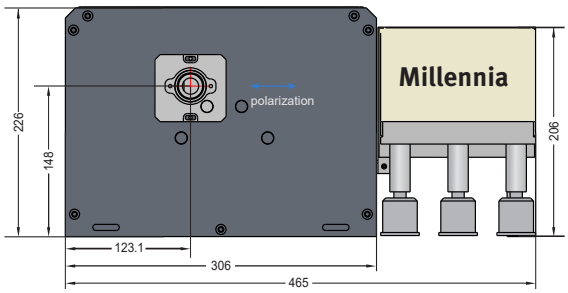
Optical Layout



Dimensions



Matisse CR (Top view)
(with Millennia eV 25W pump laser)



Matisse CR (Side view)

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

Heinrich-Hertz-Straße 11
D-41516 Grevenbroich
Sirah Lasertechnik GmbH

Phone +49 (0)2182 829818-0
Fax +49 (0)2182 829818-40
Web www.sirah.com

Sirah Lasertechnik