

Alpha

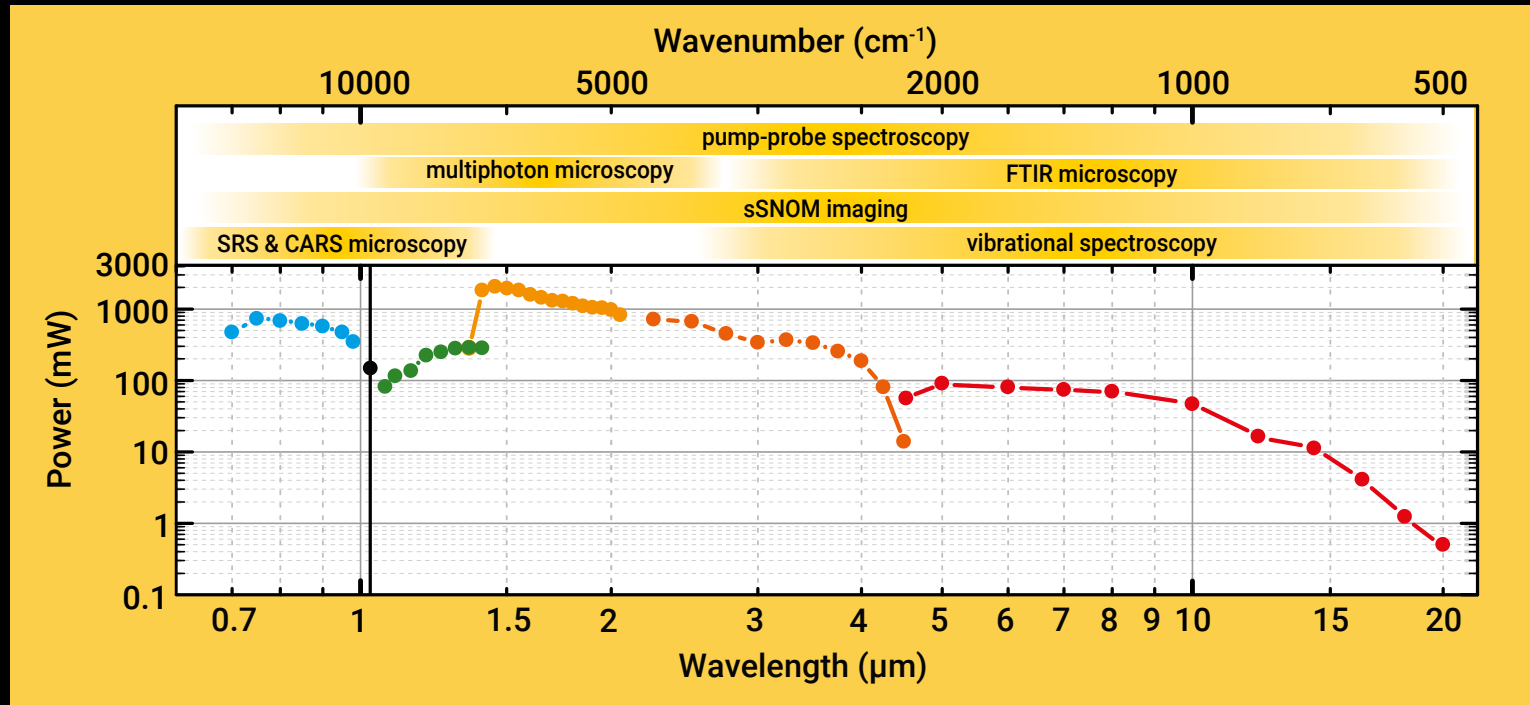
Ultrafast tunable laser system

Fully automated
700 nm - 20 μm

Ultra-short pulsed
100 fs - 5 ps

Unique longterm stability
< 0.1 nm/h / < 0.5 % (RMS)

Shot-noise limited
> 300 kHz



Primus
1.035 μm , > 7 W
40 MHz, < 550 fs

Alpha
1.35 - 4.5 μm
up to 400 mW

HP module
1.35 - 4.5 μm
up to 2 W

MIR module
4.5 - 20 μm
up to 80 mW

NIR module
1.10 - 1.4 μm
up to 300 mW

VIS module
0.72 - 0.98 μm
up to 600 mW

Alpha

Specifications	Primus	Alpha	HP	MIR	NIR	VIS
Tuning range						
Signal	1.03 ± 0.01 μm	1.35 - 2.05 μm	1.35 - 2.05 μm	4.5 - 20 μm	1.10 - 1.40 μm	0.72 - 0.98 μm
Idler		2.15 - 4.50 μm	2.15 - 4.50 μm			
Linewidth (FWHM)	30 - 40 cm ⁻¹			30 - 40 cm ⁻¹		
Average power	> 7 W	400 mW	2000 mW	80 mW	300 mW	600 mW
Repetition rate	40 MHz			10 - 100 MHz		
Pulse width (FWHM)	450 fs (typ.)			150 fs - 5 ps		
Time-bandwidth product	0.34	0.5 (typ.)	0.5 (typ.)	0.4 - 0.6	0.4 - 0.6	0.4 - 0.6
Power stability (RMS)	< 0.3 %	< 0.5 %	< 0.5 %	< 1 %	< 1 %	< 1 %
Spectral stability (RMS)		< 0.02 %	< 0.02 %			
Beam pointing (RMS)		< 10 μrad	< 10 μrad			
Shot-noise limit	> 300 kHz			> 300 kHz		
Ethernet + WIFI		✓	✓	✓	✓	✓
GUI / API		✓	✓	✓	✓	✓

