



Applications

CRS with inter-image wavelength switching

Live virtual H&E contrast via CRS

Multicolor pump-probe experiments

RAPIDLY TUNABLE DUAL-COLOR ALL-FIBER PICOSECOND LASER

Wavelength conversion in an all-fiber optical parametric oscillator, pumped by a stable fiber laser provides an unmatched combination of tuning speed and tuning range. Our patented tuning mechanism requires no mechanical delay and allows comfortable fiber-delivery of synchronized dual-color pulses. We minimize requirements on maintenance and environmental conditions by all-spliced polarization-maintaining fiber technology.

Highest Available Tuning Speed

- | Tuning speed of 5 ms per arbitrary wavelength step
- | No change of temporal overlap while tuning

Mobile Operation

- | Compact, robust and mobile due to patented fiber technology
- | Optional fiber-outputs for flexible and shielded pulse delivery
- | Proven shock resistant operation up to 25 m/s²

Optimized for CRS

- | Covered wavenumbers: 700 - 3530 cm⁻¹
- | High repetition rate of 40 MHz
- | Matched pump and Stokes pulse duration of 7 ps

Care-free Operation

- | Plug&Play installation
- | Hands-free and maintenance-free operation
- | Air-cooled

Product Specifications

Optical	Output A	Output B
Tuning range	750 - 980 nm	1020 - 1052 nm
Tuning speed	<5 ms	<1 ms
Average power	>150 mW	500 mW
Covered wavenumbers	700 - 3530 cm^{-1}	
Pulse duration	7 ps	
Spectral bandwidth	< 12 cm^{-1}	
Repetition rate	40.5 MHz	
RMS noise	< 1 %	
Polarization	linear, 100:1	

Electrical

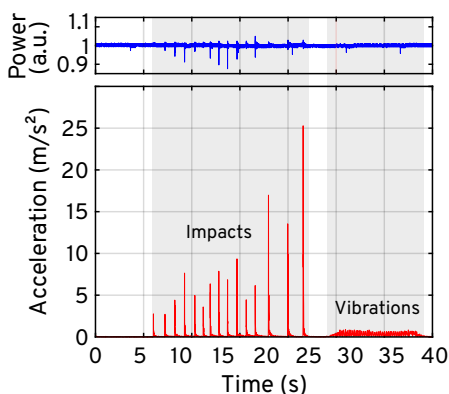
Interfaces	Communication through USB or TCP/IP Trigger in for high speed wavelength tuning Sync. out for external synchronisation
Software interfaces	GUI and custom serial API, e.g., via Python & Matlab

Mechanical

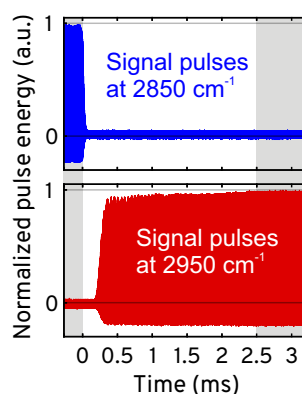
Laser head dimension	35x35x18 cm^3
Laser controller dimension	< 40x30x13 cm^3
Cooling	Air-cooled
Weight	25 kg
Standard umbilical length	2 m

Performance

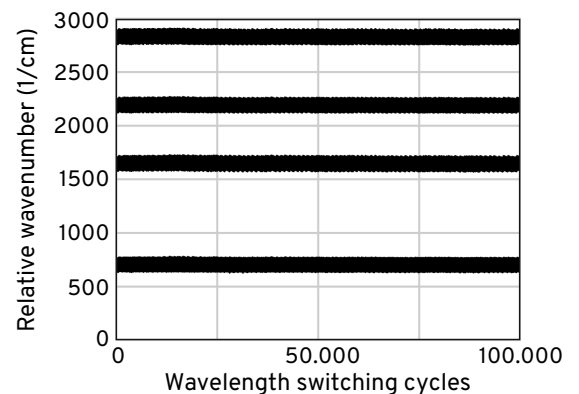
Shock test on laboratory cart



Ultra-fast switching



Reliable switching



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