

RayVen-L

2.1 μm ultrafast amplifier system

Dust-tight industrial design



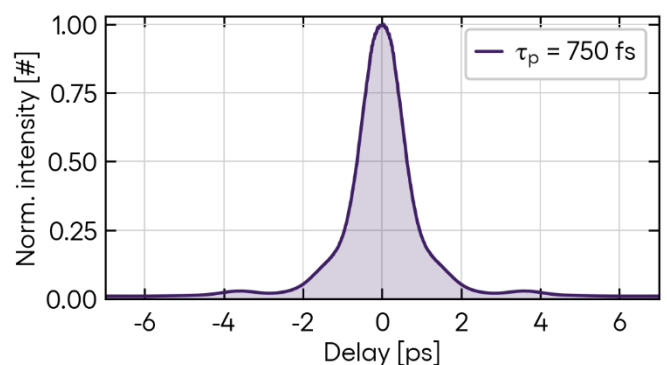
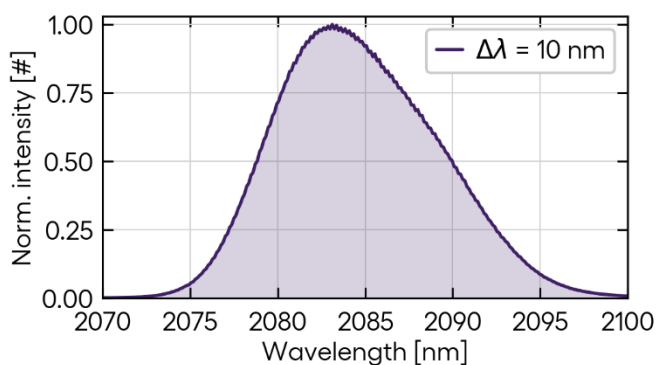
Laser aperture

Interfaces on backside

Specifications

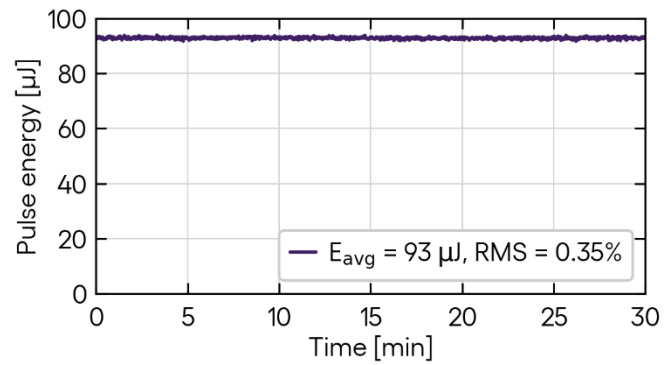
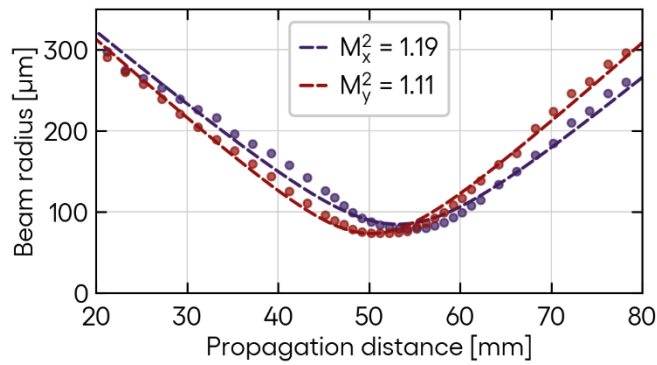
- Pulse energy: 1 mJ – 100 μJ
- Repetition rate: 10 kHz – 100 kHz
- Average power: 10 W
- Pulse duration: 750 fs
- Wavelength: 2085 nm / 10 nm (-3dB)
- Beam quality: TEM_{00} , $M^2 < 1.2$
- Beam height: 80 mm
- Size (laser head): 470 x 322 x 112 mm³
- All water-cooled

Pulse and spectral characterization (100 μJ)



- Emission of a smooth spectrum and a close-to transform-limited pulse duration

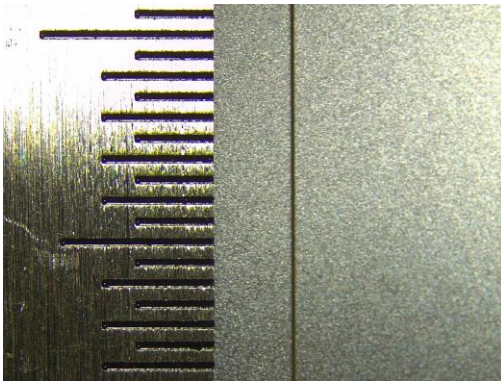
Beam quality and power stability



- Close-to diffraction-limited beam quality and high power stability

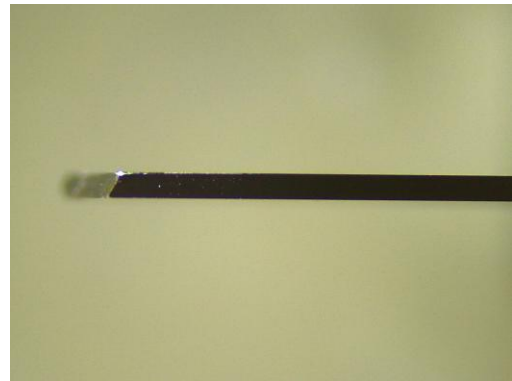
Materials processing

Scribing



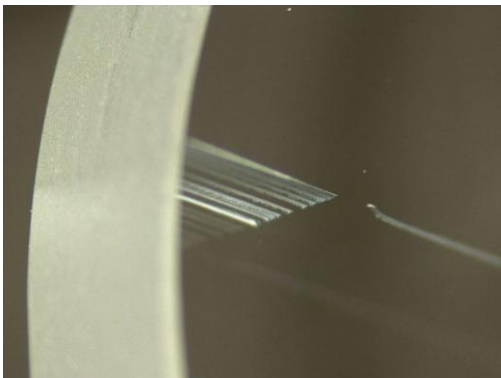
Silicon wafer, 350 μm thick, fine ground

Cleaving



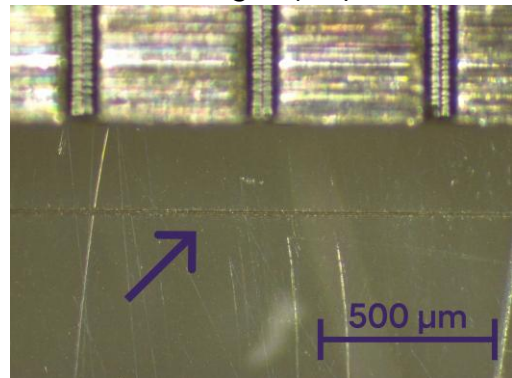
Silicon wafer, 350 μm thick, cleaved edge

In-volume modification



Corning 7979, 6.35 mm thick

Machining of polymers



Line scribe in PMMA (transparent)

Contacts

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