

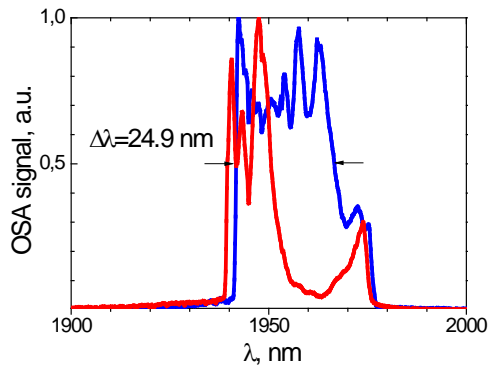
Brevity2.0: 2 μm fiber femtosecond laser

Brevity2.0 is a 2 μm (Infra-Red) fiber femtosecond laser source under final steps of development by NOVAE. Expected applications include organic polymer micromachining and processing, spectroscopy and non-linear frequency conversion. This laser source will exist in three power versions: Standard, Medium Power and a High Power.

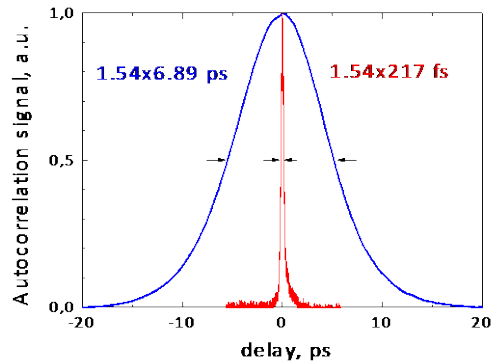
Brevity 2.0	Standard	Medium Power	High Power
Operating wavelength	1.9 – 2.1 μm	1.9 – 2.1 μm	1.9 – 2.1 μm
Pulse duration	300 fs typical (150 fs – 100 ps optional)	800 fs typical (up to 100 ps optional)	800 fs typical (up to 100 ps optional)
Repetition rate	10 MHz typical (5 – 40 MHz optional)	1 MHz typical (200 kHz – 10 MHz optional)	1 MHz typical (200 kHz – 10 MHz optional)
Output power	100 mW	1 W	10 W
Spatial beam quality	LP ₀₁	LP ₀₁	LP ₀₁
Power stability	<2%	<2%	<2%

Pulse duration and repetition rate specifications could be customized according to applications requirements. Brevity 2.0 laser architecture includes an original high power oscillator (> 100 mW) developed by NOVAE in 2013.

Currently typical spectrum and temporal shape generated by Brevity2.0 oscillators show output centered at 1950 nm with optimal autocorrelation trace (compressed signal in red and non-compressed signal in blue for both charts).



Emission Spectrum



Autocorrelation Trace

About Novae :

Novae is a spin-off from Universities and Laboratories of Limoges and Rouen ([XLIM Research Institute](#)). Novae develops and commercialises high energy and/or high power fiber femtosecond lasers emitting at 1μm and 2μm for scientific, industrial and medical applications. Patented Novae's technology is based on an innovative doped-optical-fibre integrated in mode-locked cavities. Main benefits of this architecture are: More power and energy compared to traditional soliton based lasers; new wavelength such as 2μm; and long term stability based on less free space optics.

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