FREGAT. Cr:Forsterite Femtosecond Amplifiers

- Operating wavelength 1240 nm (Cr:F)
- Up to 100 mJ systems (TW level)
- 10/100/1000 Hz models
- Pulse duration <120 fs
- DPSS or flash-lamp pump laser options

Cr:Forsterite regenerative amplifier FREGAT-200

Product overview

The FREGAT family of Cr:Forsterite femtosecond amplifiers are based on unique active medium and radiate fs pulses around 1230-1240 nm. The system includes pulse stretcher, regenerative amplifier, synchronization and delay generator, pulse compressor, seed oscillator with fiber pump laser and amplifier pump laser.

FREGAT-TW system offers TW-level of peak power at this unique wavelength.

FREGAT technical specifications

	FREGAT-200	FREGAT-600	FREGAT-1000
Pulse duration (FWHM)	<120 fs		
Wavelength (fixed)	1240±10 nm		
Output pulse energy*	>0.2 mJ	>0.6 mJ	>1 mJ
Required pump pulse energy (1064 nm, <200 ns)	10 mJ	35 mJ	50 mJ
Pulse repetition rate**	1 kHz	10 / 50 / 100 Hz	10 / 50 Hz
Spatial mode	TEM00		
Output polarization	linear, horizontal		
Utility specs	100-240 V, 50 Hz		

** - up to 30 mJ upon request; also see the FREGAT-TW system (110 mJ);*
*** - depends on the amplifier pump laser; an additional pulse slicer may be added to the unit. This improves the contrast ratio and allows the repetition rate to be adjusted from single-shot to the maximum repetition rate of the amplifier.*

	FREGAT-TW Cr:F
Wavelength	1240 nm
Pulse duration (FWHM)	<110* fs
Pulse energy	>110 mJ
Pulse peak power	1 TW
Output stability	<2% rms
Repetition rate	10 Hz
Beam divergence	<2 mrad
Spatial mode	TEMoo
Polarization, linear	horizontal

** - down to 85 fs upon special request.*

FREGAT-TW

AVESTA
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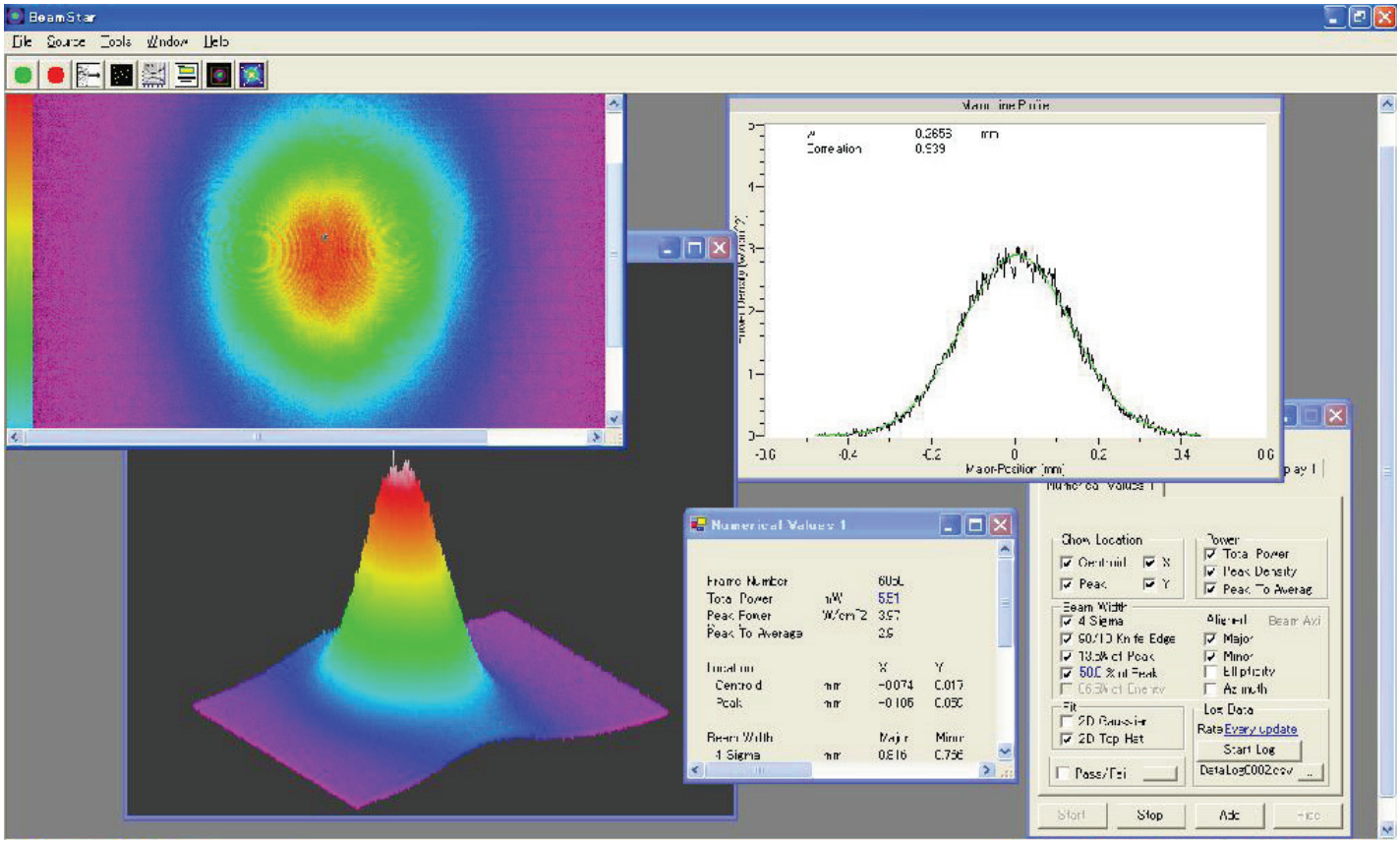
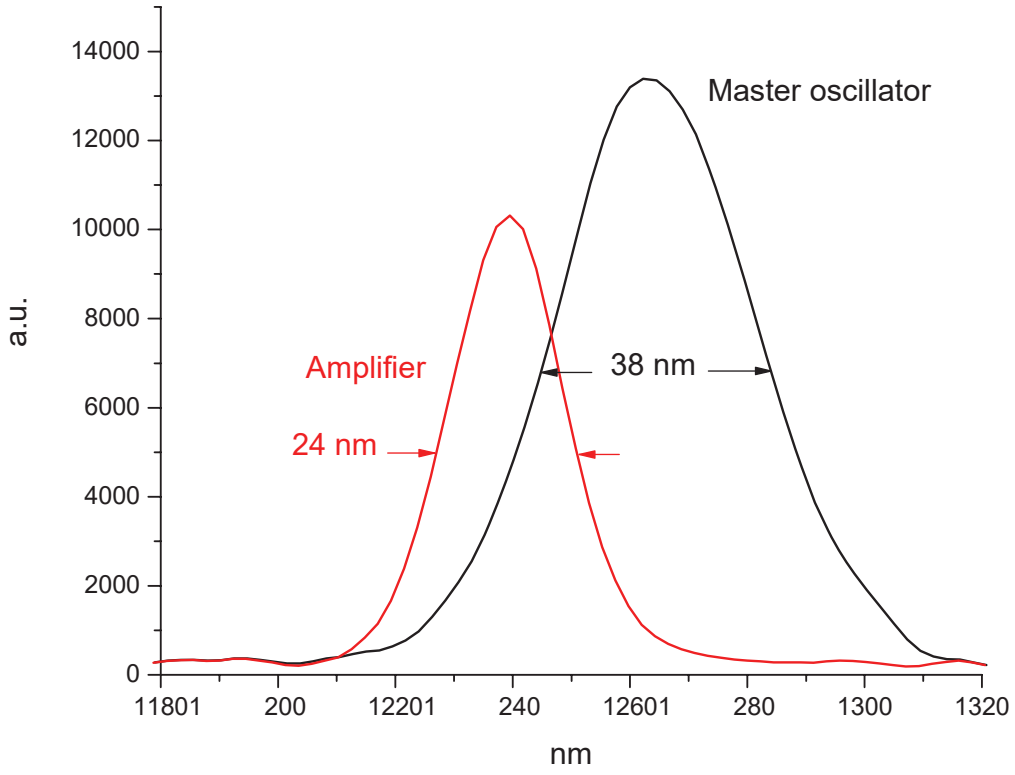


Output beam profile. CCD camera 640x480



Spectra of FREGAT-200 system

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