

Femtosecond Laser Performance With/Without MIIPS™

Laser tested	Specifications from Company website	FWHM (nm) (When measured)	Pulse duration before MIIPS™ (fs)	Pulse duration after MIIPS™ (fs)	$\tau_{\text{pulse}}/\tau_{\text{TL}}$
Coherent Mira™ seed oscillator	FWHM > 50 nm, <20 fs	57.7	36.1	22.1	1.001
Coherent Micra™ oscillator	FWHM: >100 nm ¹	101	91.1	12.4	1.01
-/- -/- with Silhouette™ Amplitude Shaping	-	147 ³	100	9.9	1.01
Coherent RegA™ 9000 amplifier	FWHM~10nm,<200fs	12.2	670	99.7	1.005
Coherent Legend™ USP amplifier	<35~50 fs ²	29	75	32.5	1.005
Legend™ Elite with Silhouette™ Amplitude Shaping	<35~50 fs ²	52 ³	45	26.3	1.01
Spectra-Physics Spitfire™ amplifier	<35 fs ²	25	71	35.5	1.004
Spectra-Physics Spitfire™ Pro amplifier	<35 fs ²	32	46.3	30.9	1.008
Quantronix Ti-light™ oscillator	FWHM 30~100 nm ¹	48.7	73	20	1.002
Quantronix Odin™ II Multipass amplifier	<30 fs ²	67.9	43.8	21.5	1.002
Quantronix Integra™ C Regen amplifier	<40 fs ²	30.7	114	34.7	1.007
KM Labs Wyvern™ Regen amplifier	FWHM~30 nm,<50fs	27.7	175	39.6	1.001
KM Labs Griffin™ oscillator	FWHM >70 nm,<15fs	45.1 ³	37	11.7	1.009
Clark-MXR CPA™ 1000 amplifier	<150 fs ²	22.7	98.1	45.7	1.004
Nanolayers Venteon™ oscillator ⁴	FWHM~300nm, <8 fs	300 ³	480	4.6	1.006

- 1 Pulse duration not specified
- 2 Bandwidth not specified
- 3 Non-Gaussian shape profile
- 4 With custom designed optics

Disclaimer: The numbers reported were obtained without touching or optimizing any parameter of the indicated laser systems. The laser systems can be manually tweaked to be within 10-30% of TL, however, the point we make here is that MIIPS achieves better than 1% of TL within a couple of minutes without touching the laser. This is performance you can count every day from anyone in your lab. We have found that the chance for a failure of a laser system decreases significantly when no one opens and tweaks the laser system. This web page was last updated on June 25, 2008. Check often for new measurements.

These measurements were made on the different laser systems around the world. If you have some numbers to report, please send us a computer screen printout of your laser system with the final numbers obtained by MIIPS. Once we confirm your results we will post them in this web page.