HIGH Q LASER®
Think Ultrafast!™

*femto*REGEN™ UC *INDUSTRIAL*

All-in-one femtosecond regenerative amplifier system

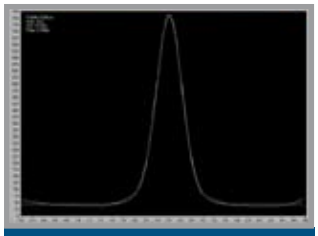
*femto*REGEN™ Ultra Compact *INDUSTRIAL*

	UC-1035-2000	*UC-1040-8000*
Wavelength[2)]	1035 +/- 5 nm	1040 +/- 5 nm
Pulse width (FWHM), typical[3)]	350 fs	350 fs
Average output power	2 W	8 W
Pulse repetition rate[4)]	Single pulse - 200 kHz (TTL-Trigger)	Single pulse - 500 kHz (TTL-Trigger)
Pulse energy[6)]	20 µJ @ 100 kHz	16 µJ @ 500 kHz
Laser material[1)]	Ytterbium	Ytterbium
Power stability, typical	< 1 % RMS (12h)	
Beam quality	TEM_{00}; $M^2 \leq 1.25$	
Polarization	horizontal / vertical (TBD)	
Power supply	90 VAC - 240 VAC, 50/60 Hz, < 500 W	
Laser head size	780 x 340 x 210 mm^3	
Beam height (IC-Laser[5)]**)**	101.6 mm (4"), nominal	
Controller size	600 x 590 x 550 mm^3 (l x w x h), fits in 19" rack	
Chiller	440 x 430 x 180 mm^3 (l x w x h), 115 VAC or 230 VAC 50/60 Hz, < 800 W (incl. heater), 19" rack	
Operation ambient temp.	18 °C to 30 °C	

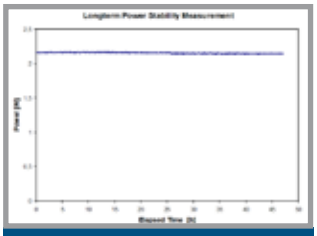
All specifications are typical data and subject to change without notice in order to provide the best product possible.

[1)] different laser materials on request
[2)] other wavelengths on request
[3)] +/- 10%, shorter pulse widths down to 250 fs on request
[4)] pulse repetition rates up to 500 kHz on request
[5)] ask for customized system packaging
[6)] higher pulse energy available

Main Features	*Customer benefits*
• Semiconductor Saturable Absorber Mirror (SESAM) technology	• High temporal and spatial stability
• User Replaceable Diode Module (URDM)	• Service friendly modular setup
• Integrated Ytterbium *femto*Train™ Ultra Compact seed laser	• Hands-free, true turnkey operation
• Shock and vibration tested	• Single phase power supply
• Air-cooled closed-loop chiller (included)	• Passive & self starting modelocking
• All-in-one controller system	• Modules-in-the-box: Sealed-off set-up of seed laser and amplifier
• Diode modules with de-rated pump current (long lifetime)	• Integrated pulse-picker with TTL trigger
• Modular Pockelscell and Pockelscell driver	• USB software remote control, CAN bus
• Intra-Cavity-Chirped-Pulse-Amplification (ICCPA)	• Small footprint

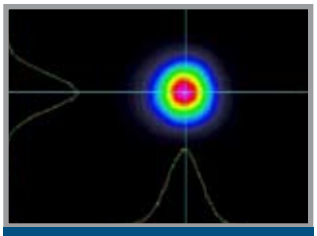


Typical Intensity Autocorrelation
Autocorr. duration 535 fs
Pulse duration 348 fs

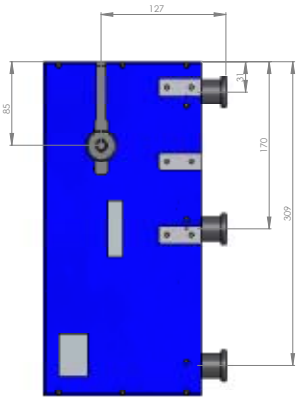


Long Term Power Stability
Measurement duration 50h
Mean 2.15 W | RMS 0.36 %

Typical Beam Quality
M^2 X 1.06, M^2 Y 1.08
Ellipticity 1.02



Typical IR beam profile of
*femto*REGEN Yb



Applications

- Femtosecond Laser Dissection
- Thin Film Ablation
- Pulsed Laser Deposition
- OPA pumping
- Femtosecond Spectroscopy
- Nonlinear Optics
- Nano Processing
- Waveguide Writing
- Biological Tissue Ablation and Machining

Please Inquire About

- OPA: Tunable output from 200 nm - 3000 nm
- Frequency conversion (SHG, THG, FHG, OPA)
- Optical pulse picker
- Picosecond laser systems
- Applications laboratory for sample testing
- OEM and customized versions

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