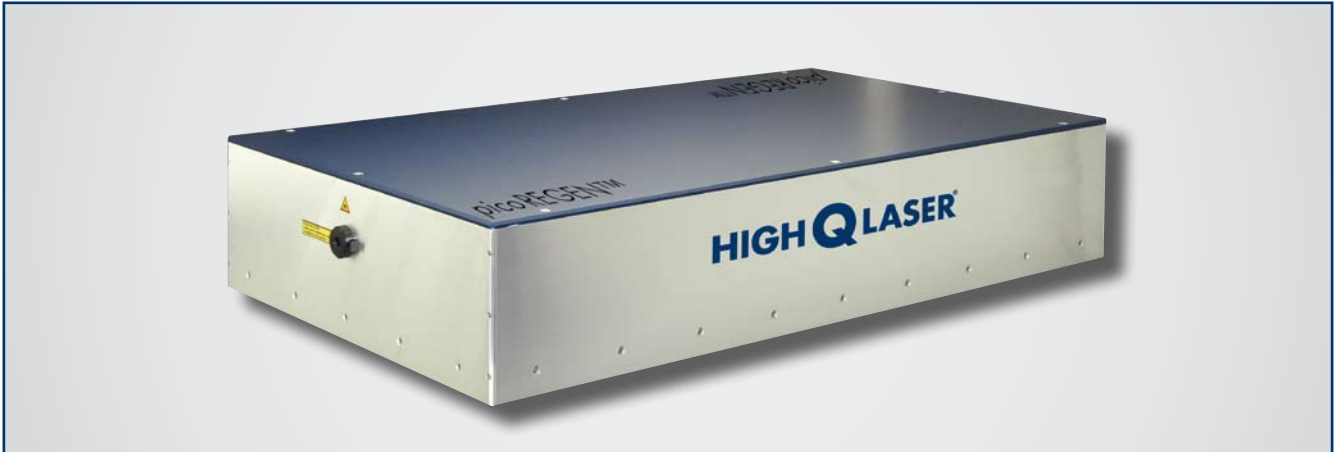


picoREGEN™ Science High-Energy

All-in-one picosecond regenerative amplifier system



picoREGEN™	SC-1053-3000 HE		SC-527-1200 HE SLR	
Wavelength	1053 nm	1064 nm	527 nm	532 nm
Pulse width (FWHM) ¹⁾	8 ps	12 ps	8 ps	12 ps
Average output power	3 W	2 W	1.2 W	0.8 W
Pulse energy, max. ²⁾	3 mJ @ 1 kHz	2 mJ @ 1 kHz	1.2 mJ @ 1 kHz	0.8 mJ @ 1 kHz
Pulse repetition rate ³⁾	single shot -10 kHz (optional to 100 kHz)			
Laser material	Nd:YAG / Nd:YLF			
Power stability, typical	< 1 % RMS (12h)			
Beam quality	TEM ₀₀ ; M ² ≤ 1.5			
Polarization	horizontal / vertical (TBD)			
Power supply	100, 115, 240 VAC, 50/60 Hz, < 500 W			
Laser head size	702 or 902 or 1102 x 502 x 166 mm ³ (l x w x h); beam height 101.6 mm (4"), not including pedestals			
Controller size	600 x 590 x 550 mm ³ (l x h x w), 19" rack			
Chiller	400 x 200 x 557 mm ³ (l x w x h), 115 VAC or 230 VAC, 50/60 Hz, < 2000 W (incl. heater)			
Operation ambient temp.	18 °C to 30 °C			
Optional Post Amplification				
Pulse Energy	up to 200 mJ	up to 1 J	up to 80 mJ	up to 400 mJ
Pulse repetition rate	single pulse to 10 Hz (200 Hz optional)			

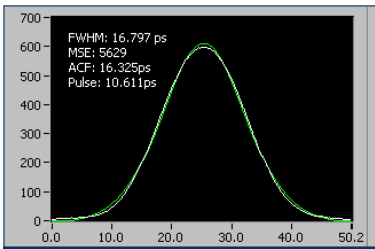
All specifications are typical data and subject to change without notice in order to provide the best product possible.

1) Ask for long pulse versions

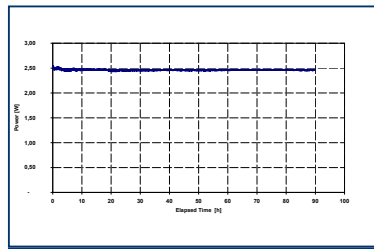
2) Please enquire about higher pulse energy

3) up to 2 MHz on request

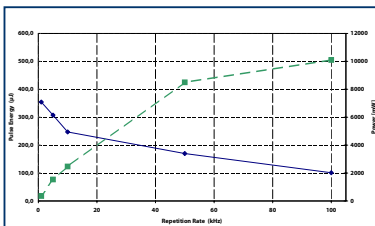
Main Features	Customer Benefits
• Integrated <i>picoTRAIN</i> ™ seed laser	• High temporal and spatial stability
• Passive self-starting modelocking by saturable Bragg reflectors	• USB software remote control (optional via internet)
• User replaceable fiber-coupled diode module (URDM)	• Synchronised IR, Green and UV pulses (optional)
• Modular Pockels cell & Pockels cell driver	• Service friendly compact and modular setup
• FEA optimized industrial mirror mounts	• Multiple beam exits for simultaneous access to all wavelengths (opt.)
• Variable power ratio via motorized attenuator (optional)	• Remote maintenance via internet (optional)



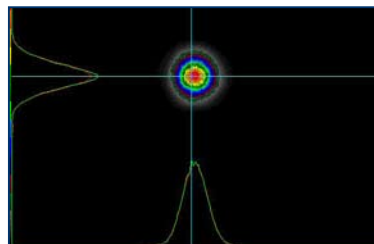
Typical Intensity Autocorrelation
Autocorrelation duration 16.3 ps
Pulse duration 10.6 ps



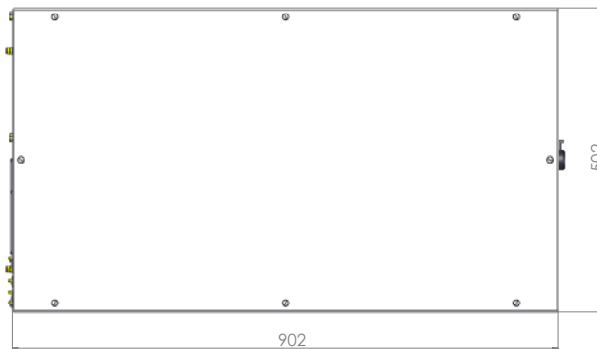
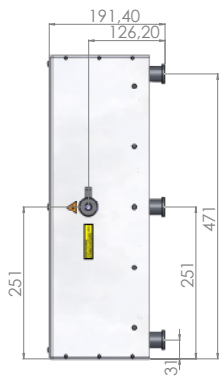
Typical power stability
Measurement duration 89h
Mean 2.46 W, RMS 0.35 %



Typical relation of power and pulse energy versus repetition rate
Pulse energy 354 µJ @ 1 kHz
Power 10 W @ 100 kHz



Typical IR beam profile of *picoREGEN*



Applications

- OPA/OPCPA Pumping
- Satellite Laser Ranging
- High Energy Physics (Photo Cathode Illumination)
- Nonlinear Optics
- Material Processing
- Pulsed Laser Deposition
- Ultrafast Spectroscopy

Please Inquire About

- OPA *picoTUNE*™: Tunable output from 300 nm - 3000 nm
- Frequency conversion (SHG – THG – FHG)
- Long pulse version up to 300 ps
- Application laboratory for Nano Processing
- Synchronisation "SYNC" option
- Pulse picker
- OEM and customized models

