

- 80 MHz (70-110 MHz options)
- Pulse duration and power options
- Stable, long term mode-lock
- Integrated PZT for active repetition rate stabilisation



## Overview

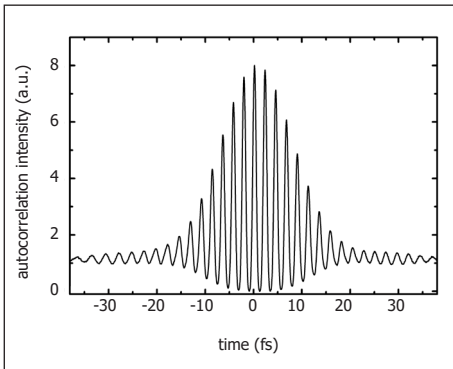
The **gecco** is a fully equipped, compact femtosecond laser in a sealed enclosure, offering an average power of  $>1\text{ W}$  and with a choice of  $<15\text{ fs}$  or  $<20\text{ fs}$  pulse durations. The **gecco** is offered with repetition rates of 70-110 MHz, with optional repetition rate locking to an external source.

Designed for simple installation and system integration, the **gecco** oscillator features a highly compact, vibration resistant laser head with an **opus 532** or **finesse pure** as the integrated pump source (model dependent), and a separate, fully featured control unit.

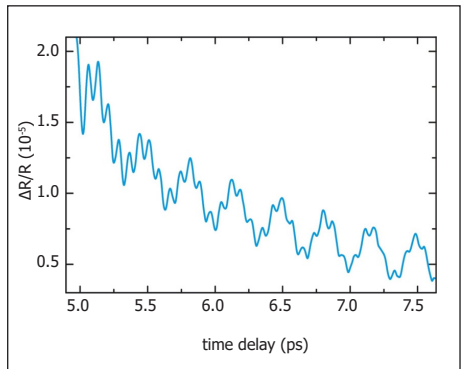
This highly stable laser boasts an industry leading lifetime, very low cost of ownership and comes with 2 year/unlimited hours warranty covering all operating specifications.

## Optional repetition rate and active feedback

If required, active repetition rate control can be implemented for locking to an external signal source. Coarse repetition rate control is enabled by motorised mirror movement, whereas high-speed and large-amplitude feedback is realised using 2 piezomechanic transducers. Regulation through the **TL-1000** repetition rate stabilisation unit achieves a timing jitter  $<100\text{ fs}$  (0.1 Hz to 100 kHz). Alternatively, the 2 piezos can be driven by customer supplied electronics.



Autocorrelation trace of **gecco** indicating emission of pulses with 15 fs duration.



Application example: Pump-probe signature of coherent optical phonons in ZnO measured with the **gecco**.



The **gecco** can be used with the RemoteApp™ software that allows the pump laser to be controlled over the internet and connected to the Laser Quantum support team for monitoring laser performance, diagnosing opportunities for and carrying out laser optimisation.

