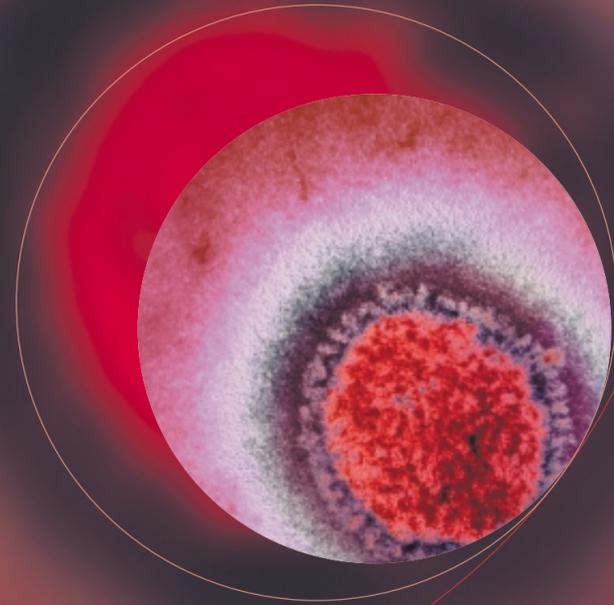


You work in one of the most exciting fields of ultrafast research. An area of exploration that is made practical only by the wide tuning range of two-box ultrafast systems. Or, by the unmatched simplicity of single-box lasers. Or now, for the first time, by both.

Introducing Chameleon.

The industry's first single-box, widely tunable ultrafast laser.

Because when it comes to scientific applications, the more colorful, the better.



Coherent as your partner.

To compete and succeed in today's fast-paced research and manufacturing environments, you need a laser partner who understands your needs. A partner who can provide a wide range of technology solutions, and the support that goes with them.

Since 1966, Coherent has been helping customers by providing laser-based solutions for a wide range of commercial and scientific applications.

With a heritage of innovation and an uncompromising position on quality, Coherent is the most forward-thinking and diversified manufacturer of solid-state, gas, and semiconductor lasers in the industry.

For more information, visit us on the Web at www.CoherentInc.com or call 800-527-3786.



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Coherent's scientific and industrial lasers are certified to comply with the Federal Regulations (21 CFR Subchapter J) as administered by the Center for Devices and Radiological Health on all systems ordered for shipment after August 2, 1976.



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Coherent Solid-State Ultrafast



CHAMELEON

Compact Ultrafast Ti:Sapphire Laser

One laser. Many wavelengths.



COHERENT.



CHAMELEON:

Widely tunable, hands-free, single-box ultrafast laser

Increasingly these days, the nature of scientific research demands tools that are simple to use, yet flexible enough to allow you to explore wherever your research may take you. And whether you explore time-resolved photoluminescence, non-linear spectroscopy, or multi-photon excitation microscopy, this means highly reliable ultrafast lasers that require little or no user intervention. Not to mention a very broad tuning range.

Welcome to Chameleon™, from Coherent.

Chameleon is a compact, single-box, ultrafast laser oscillator designed for completely hands-off operation. With automated tuning, Chameleon delivers sub-200 fs optical pulses covering a wavelength range well in excess of 210 nm, with enough average power to meet all of your application needs. In the field of multi-photon excitation (MPE) microscopy, for example, this broad wavelength coverage allows for the excitation of a much wider range of fluorophores than previously possible with one source.

Not only that, but by incorporating our proprietary Power Pulse™ system, Chameleon can change color quickly while optimizing output power and pulse width automatically. And with its patent-pending MRU air recirculator, Chameleon tunes effortlessly through atmospheric water vapor absorption lines, without the need for an external purge. Dependable as well as agile, Chameleon incorporates our patented, field-proven Kerr-lens mode-locking technique, which is the most straightforward, reliable method for producing ultrafast pulses. Chameleon requires only single-phase AC power, no external cooling water, and has a simple menu-driven operator interface. The result is a truly hands-off, virtually maintenance-free laser system, which allows you to put your focus exactly where it belongs.

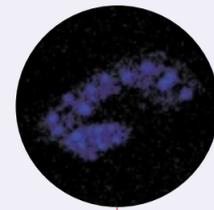
On your work.

Taking a good look at MPE.

When Chameleon's intense beam is tightly focused onto biological specimens stained by fluorescent compounds, MPE is produced. Since the focal volume over which there is sufficient intensity to produce an MPE signal is very small, this results in an extremely well-defined region of excitation. This enables optical sectioning with high spatial resolution.

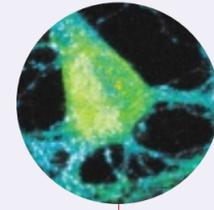
Unlike UV lasers used for conventional single-photon microscopy, Chameleon uses near-infrared wavelengths (and therefore lower photon energy), which reduces photo-induced

damage in MPE samples. What's more, the laser's longer wavelengths enable imaging deeper into the sample, by virtue of less scattering of the illuminating light. Able to tune above 920 nm, Chameleon is also especially suitable for imaging using naturally occurring green and yellow fluorescent proteins (GFP and YFP), which are revolutionizing molecular cell biology. With Chameleon's broad tuning range, for the first time, at the touch of a button, you will be able to explore fluorophores from DAPI to YFP, and everything in between.



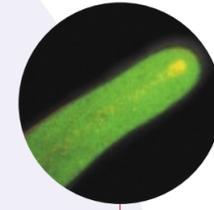
Ultrafast

Two-photon image of the nucleus of a pituitary GHFT-5 cell expressing blue fluorescent protein, fused to the transcription factor CCAAT/Enhancer binding protein alpha (BFP-C/EBPΔ244), excited at 730 nm.
Courtesy of R.N. Day and A. Periasamy, University of Virginia, Charlottesville.



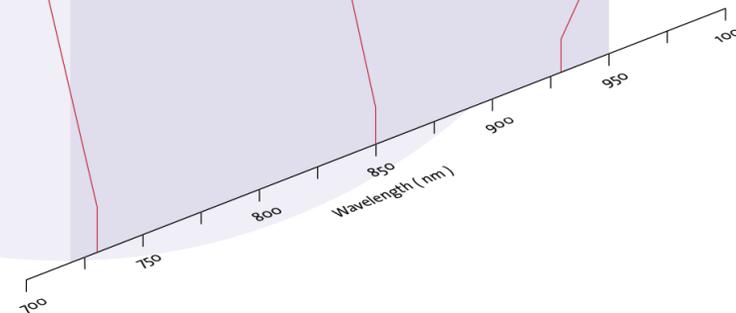
Reaching GFP

Multi-photon laser scanning projection image of a single hippocampal neuron grown in isolation, expressing a rab3A-e-GFP construct excited at 850 nm.
Courtesy of H. Chen, N.A. Lambert, J.R. Goldenring and S.S. Vogel, Medical College of Georgia.



Widest tuning range

Combined transmission and two-photon fluorescence image of growing lily pollen tubules expressing YFP excited at 930 nm.
Courtesy of R. Parton, Edinburgh University, and J. Girkin, Centre for Biophotonics, Strathclyde University.



one laser
many wavelengths

Unmatched reliability.

With our Verdi™ laser as its pump source, Chameleon is among the most efficient and reliable—and quietest—ultrafast lasers on the market. That's because Verdi is a rugged, quasi-monolithic ring laser with no moving parts, manufactured in clean rooms using Coherent's patented, time-tested Permalign™ robotic assembly technique for greater reliability. And because freedom from noise is essential to the success of non-linear optics or multi-photon microscopy experiments, you'll be glad Verdi is the engine in your Chameleon.

In addition to exhibiting the industry's highest pump diode-to-green light conversion efficiency, Verdi lasers also incorporate our proprietary AAA™ (aluminum-free active area) diodes. This technology provides a longer lifetime than competitive products, resulting in lower costs for maintenance and service. And, because Coherent manufactures these pump diodes, we are able to provide a significant advantage in total quality control—as well as a lower total cost of ownership.

Industry-leading support.

As a pioneer in the laser industry, Coherent is continually at the forefront of new dependable laser innovations. These include significant improvements in the ease with which our products can be used, as well as in how they can be integrated into your systems. The Chameleon laser continues this tradition, building on Coherent's industry-leading experience in manufacturing diode-pumped, ultrafast solid-state lasers.

Beyond the high-performance lasers themselves, Coherent offers the most extensive worldwide support in the industry, including telephone, fax, e-mail, and Internet product assistance. Additionally, with product inventory locations in Japan, Europe, and North America, you get peace of mind knowing that problems will be taken care of in the most expeditious manner possible.

If you'd like more information on Chameleon or other Coherent lasers for research, give us a call at 800-527-3786. Or visit our Web site at www.Coherent.com.

The Chameleon ultrafast laser. The widest tuning range. Automatically.

