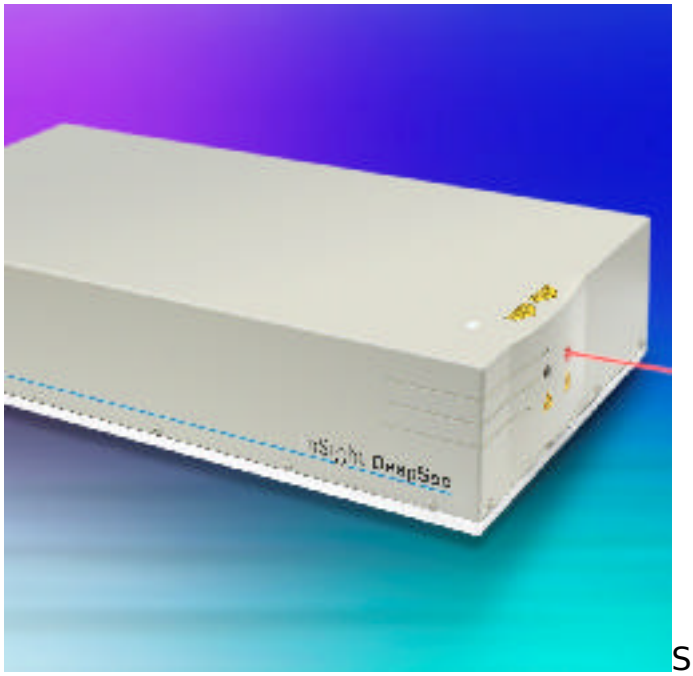
Ultrafast Laser for Deep Tissue Imaging



Spectra-Physics, a Newport Corporation brand, introduces InSight DeepSee, an extraordinary new ultrafast laser system that takes multiphoton imaging to new depths. Based on a novel proprietary technology, the new InSight DeepSee delivers nearly double the tuning range of existing ultrafast lasers and provides seamless access to long infrared wavelengths for deepest in vivo imaging. Robust and fully automated, InSight DeepSee provides easy-to-use, hands-off operation, freeing users to focus on their critical research. “InSight DeepSee incorporates our most advanced technology in a turn-key system with revolutionary performance,” said Dave Allen, general manager and vice president for Spectra-Physics. “This extraordinary laser redefines multiphoton imaging by enabling users to readily image at dramatically greater depths.”

InSight DeepSee features an unprecedented 680 to 1300nm continuous tuning from a single source, short 100fs pulse widths and highest peak power levels into the infrared where imaging penetration depth is maximized. Spectra-Physics’ integrated, patent-pending DeepSee, the industry-standard dispersion pre-compensator, delivers the short pulses through a microscope to the sample for maximum fluorescence. A dual wavelength option is available for advanced imaging techniques, including uncaging, coherent anti-Stokes Raman scattering (CARS) imaging, and multi-modal imaging.

This fully-automated ultrafast laser can be seamlessly tuned, with the click of a mouse, to any wavelength within seconds. The laser system also has ideal beam characteristics optimized for multiphoton imaging. InSight DeepSee is designed, built and tested to stringent quality standards for hands-free, reliable operation.

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