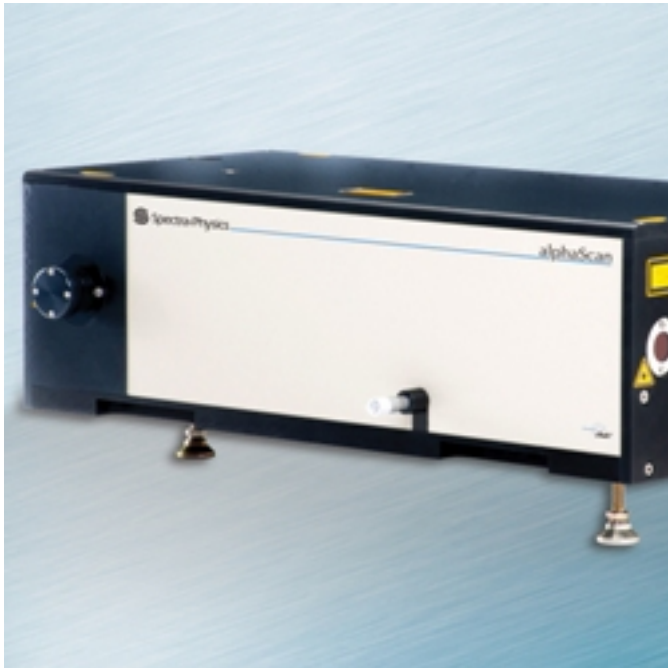


# Integrated Laser-OPO for Photoacoustic Imaging



Spectra-Physics®, a Newport Corporation brand, introduces alphaScan, a compact integrated optical-parametric oscillator (OPO) and pump laser that outputs high energies in the near-infrared (NIR) for photoacoustic imaging. With a rapid-scan option, the system is capable of switching wavelengths in alternating laser pulses for differential measurements, enabling enhanced imaging and signal quality. The system is software controlled and fully automated for simple operation in biological imaging and spectroscopy applications. “With its high energies and flexible tunability, alphaScan is a powerful, yet easy-to-use, compact device,” said Herman Chui, senior director of product marketing for Spectra-Physics. “This system is ideal for the promising photoacoustic technique for imaging the structure of live tissues for cancer research.”

Photoacoustic imaging, also known as photoacoustic tomography, is an emerging technique for imaging live tissue at depths up to 10 cm for detecting tumors and cancer research. Using this method, the laser light locally excites acoustic waves in the live tissue for high resolution, spectroscopic imaging at very large depths.

The new alphaScan delivers >50 mJ of pulse energy in the near infrared, useful for biological applications utilizing the hemoglobin absorption region. The rapid-scan option allows the system to tune up to 100nm between alternating pulses for the simultaneous detection of two distinct markers, or differential absorption measurement of two wavelengths. The system integrates proven, highly reliable technology, including a Spectra-Physics Quanta-Ray® laser and green-pumped Scan Series OPO, into a single, compact, and easy-to-use device.

### Spectra-Physics

[www.newport.com/alphaScan](http://www.newport.com/alphaScan) [1]

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**Links:**

[1] <http://www.newport.com/alphaScan>