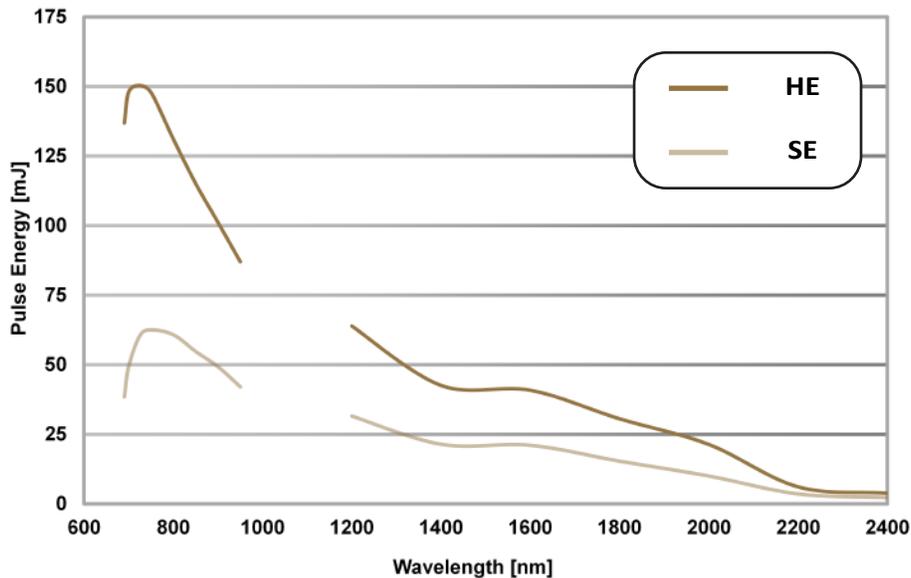
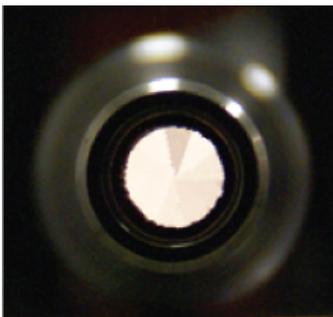


Phocus™ ESSENTIAL

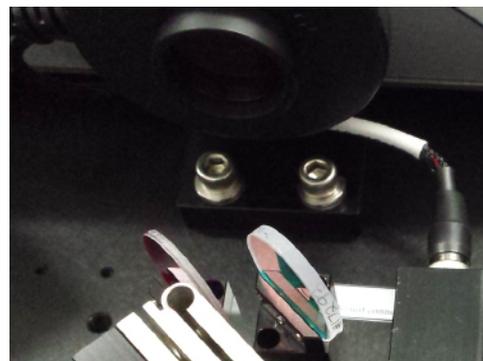
Based on the Ring-Cavity™ optical parametric oscillator (OPO) technology, the Phocus™ ESSENTIAL represents the ideal light source for photoacoustic imaging applications that require high pulse energies and NIR wavelengths for deep penetration of biological tissue. High damage thresholds combined with minimal maintenance and turn-key operation reduce system down-time and allow ease of operation. The system provides an ultra-compact, light-sealed, transportable cart designed for deployment into pre-clinical environments. A customizable, safety-interlocked fiber bundle delivers light from the system to the instrumentation and prevents system operation without fiber attachment. Motorized harmonics and fiber bundle delivery provide a completely, hands-free system tunable laser system.



Unique, Ring-Cavity™ OPO design increases the OPO damage threshold while maintaining high efficiency in order to deliver short, nanosecond pulses.



System includes a fiber bundle for easy, safe access to all beams.



Built in Energymeter™ monitors OPO pulse energy in real-time and provides feed-back for harmonics auto-optimization and logs pulse energy for data normalization.



Specifications

	Phocus™ SE ESSENTIAL	Phocus™ HE ESSENTIAL	Notes
Wavelength Range (nm)	690 - 950 & 1200 - 2400		motorized auto range selection
Peak Pulse Energy (mJ)	60	150	see tuning curve nominal
Peak Efficiency (%)	> 35	> 40	peak OPO energy ÷ pump energy
Pulse-Pulse Stability (% RMS)	< 2.0		measured at 750 nm (1000 pulses)
Spectral Linewidth (cm ⁻¹)	30 - 80		theoretical
Fiber Bundle Transmission (%)	> 70		690 - 950 nm energy values before fiber transmission
Pulse Length (ns)	5		FWHM ± 2 ns nominal
Repetition Rate (Hz)	20	10	divide-by-N lower repetition rates

Features

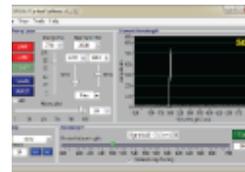
- Integrated Pump Laser
 - Harmonics
 - Alignment Verification™
 - External Triggering
 - Computer Control
 - Energymeter™
 - Software Development Kit
- Light and compact with quick connect cables and 100 million pulse flashlamp lifetime
 - Motorized phase matching, temperature-controlled, hermetically sealed
 - Hardware provided to verify system alignment after movement
 - Flashlamp and Q-switch IN/OUT, TTL, BNC connectors
 - All laser and OPO functions, SCAN/BURST modes
 - Real-time pulse energy monitoring, logging for data normalization and harmonics auto-optimization
 - Integration of system functions into third-party programming environments

Options



Fast Tuning™

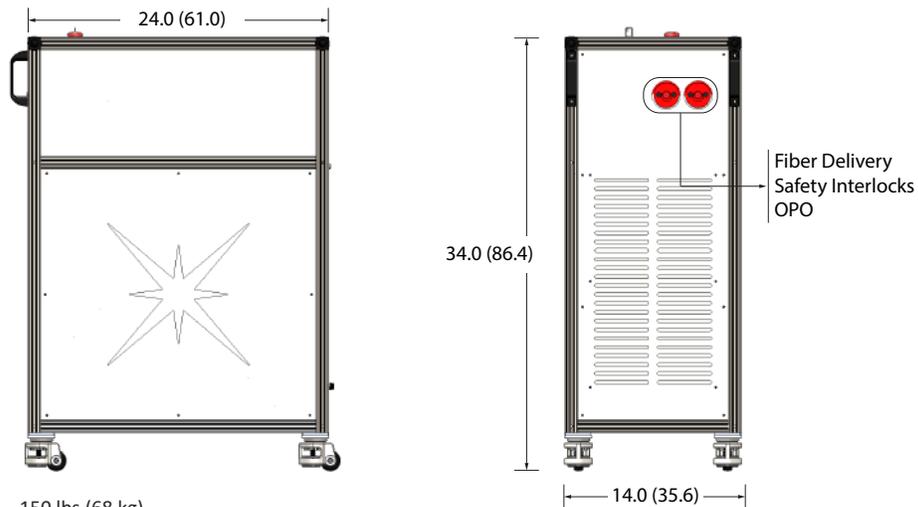
Wavelength can be tuned to any value within 690 - 950 or 1200 - 2400 nm at every pulse



Wavemeter™

Real-time wavelength monitoring and Closed-Loop Tuning™

Dimensions



- OPO Laser Head
- OPO Control Electronics
- Pump Laser Power Supply

150 lbs (68 kg)
 integrated | universal line voltage
 integrated | universal line voltage | closed-cycle water-cooled
 universal line voltage | closed-cycle water-cooled

