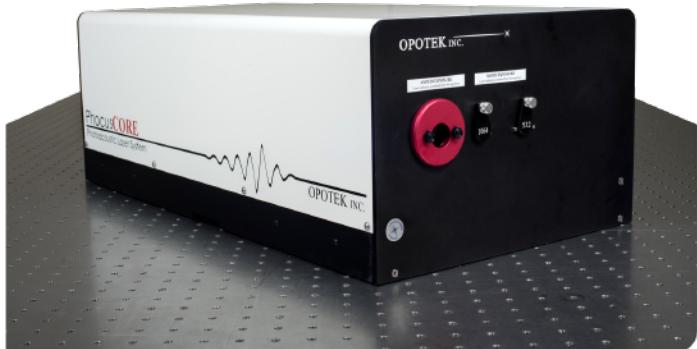
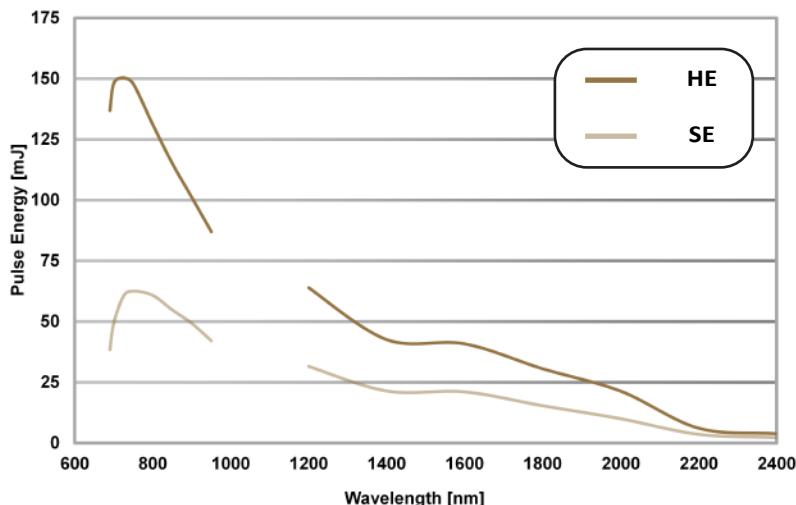


Phocus™ CORE

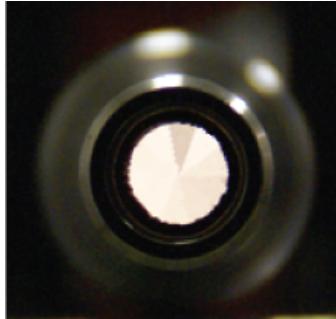
Based on the Ring-Cavity™ optical parametric oscillator (OPO) technology, the Phocus™ CORE incorporates essential features required for a photoacoustic imaging source in a low cost, compact housing. Designed for OEM applications, the system can be integrated into instrumentation with space constraints. The default configuration includes motorized harmonics, access to residual 1064/532 nm and OPO fiber bundle delivery through interlocked port. Customizable fiber bundles provide the flexibility to integrate the light into commercial instrumentation. Motorized tuning, motorized harmonic and fiber bundle delivery provide a completely, hands-free tunable laser system.



All-in-one design integrates pump laser, OPO, harmonics and optics.



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



A fiber bundle connected to an interlocked port is included for access to OPO beam.



System includes free space access to residual 532/1064 pump laser beam.



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.

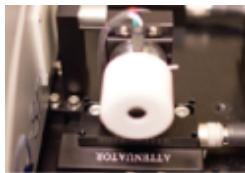
Specifications

	Phocus™ SE CORE	Phocus™ HE CORE	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
Residual 532 Pump Access (mJ)	20 - 40	70 - 100	varies based on OPO wavelength

Features

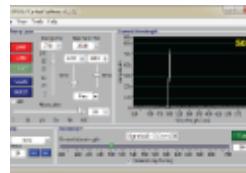
- Integrated Pump Laser
- Residual Pump Beam Access
- Harmonics
- Alignment Verification™
- External Triggering
- Computer Control
- Energymeter™
- Software Development Kit
- Light and compact with quick connect cables and 100 million pulse flashlamp lifetime
- Optical hardware to redirect residual 532/1064 beams for experimental use, free-space access only
- 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



Motorized Variable Attenuator

Internal PC-controlled optical attenuator to vary the OPO pulse energy, removable



Wavemeter™

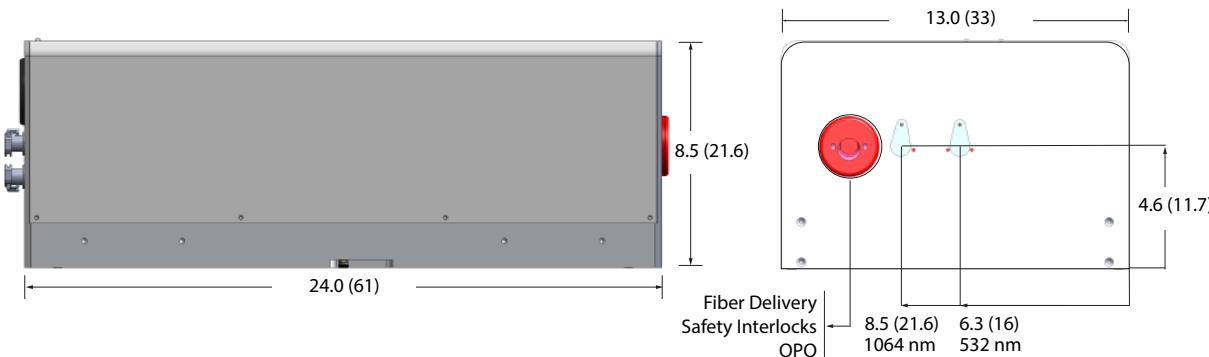
Real-time wavelength monitoring and Closed-Loop Tuning™



Fast Tuning™

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

Dimensions



OPO Laser Head
OPO Control Electronics
Pump Laser Power Supply

61 lbs (28 kg)
11.5 (29.2) x 10.3 (26.2) x 3.8 (9.7) | 5 lbs (2.3 kg) | universal line voltage
20 (50.7) x 11.1 (28.3) x 20.2 (51.3) | 59.5 lbs (27 kg)
universal line voltage | closed-cycle water-cooled

Version 2002d0118 © 2018

Trademarks are the property of OPOTEK.

All dimensions approximate in inches (centimeters).

All specifications are subject to change due to ongoing product improvements.

