



# Phocus MOBILE

## TUNABLE LASER

Based on the ring-cavity optical parametric oscillator (OPO) technology, the Phocus series represents the optimal light source for photoacoustic imaging applications that require high pulse energies and NIR wavelengths for deep penetration of biological tissue. A customizable, safety-interlocked fiber bundle delivers light from the system to the instrumentation and prevents system operation without fiber attachment.



## SYSTEM FEATURES

- Vibration isolated, light sealed transportable cart with shock-absorbing casters
- Temperature controlled, motorized Harmonics (MH)
- Fully integrated pump laser, power supply, control electronics, and OPO
- End user replaceable flashlamp (100 million shot lifetime) and DI cartridge
- Flashlamp and/or Q-Switch external triggering
- No factory installation required
- Alignment verification
- All tunable wavelengths output from a single port
- Interlocked fiber bundle ports
- Standard fiber bundle
- Fiber access to both OPO and residual 532
- Computer controlled via a single USB connection
- Control Software and Software development Kit (SDK)
- Real-time pulse energy monitoring and logging for data normalization (EM)
- Harmonic Auto-Optimization (HAO)
- Fast tuning OPO motor (wavelength can be tuned per laser pulse)

## AVAILABLE OPTIONS AND ACCESSORIES

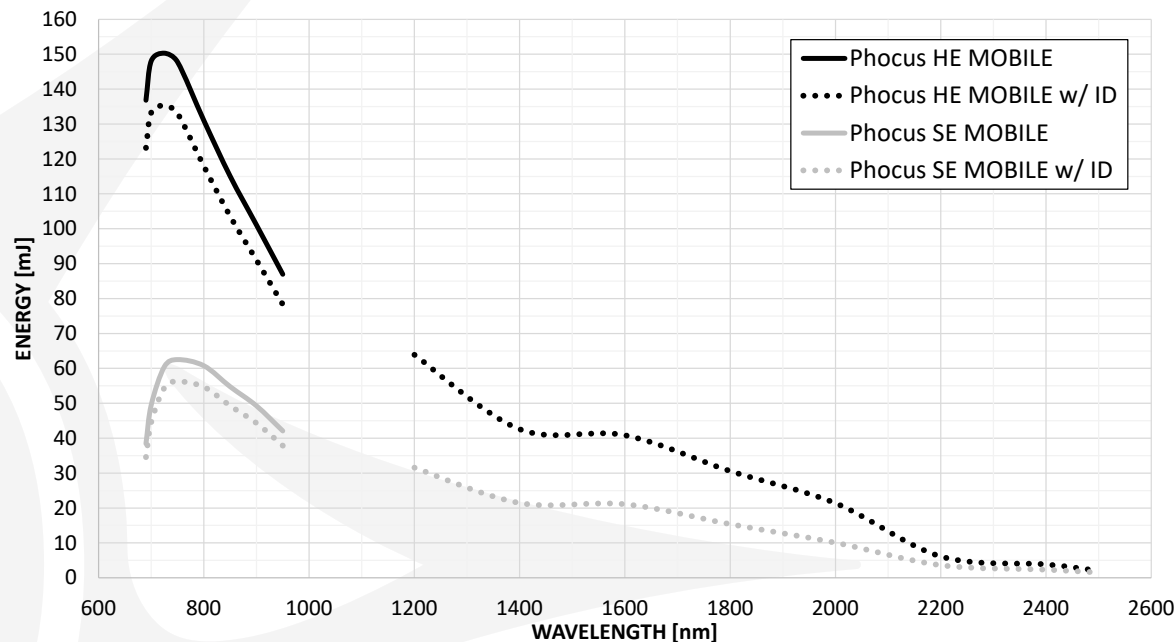
**Extended Tuning Range (ID):** Extends the tuning range to 690-950 & 1200-2500nm. Reduces OPO by 15%.

**Motorized Variable Attenuator (MVA):** Mounted, motorized and computer-controlled Glan Laser polarizer that allows continuously attenuation from 100% down to 1% while maintaining maximum pulse to pulse stability. End user removable/installable. Reduces max pulse energy by 10-15% when installed.

**Custom Fibers available:** Custom outputs and lengths available upon request.

**Wavemeter (WM):** Integrated Wavemeter for real-time monitoring of 690-950 nm wavelengths (1200-2500 nm wavelengths through interpolation) and enabling harmonic auto optimization from near peak energies. Patch fiber and optics included to connect laserhead to Wavemeter.

**1064 nm Access (1X):** Access to residual 1064 nm laser beam through interlocked, fiber bundle accessible port.



**Phocus MOBILE**

OPO SPECIFICATIONS	Phocus SE MOBILE	Phocus HE MOBILE
<b>Beam Delivery</b>	Fiber Bundle	
<b>Wavelength Range (nm)</b>	690 - 950	
<b>Extended Wavelength Range [ID] (nm)</b>	1200 -2500	
<b>Peak OPO Energy (mJ)</b> <sup>1</sup>	60.0	150.0
<b>Pulse to Pulse Stability (%)</b> <sup>2</sup>	< 10	
<b>Pump Laser Residual Energy (mJ)</b>	60 at 532 nm	150 at 532 nm
<b>Linewidth (cm<sup>-1</sup>)</b>	10 - 15	
<b>Tuning Resolution (nm)</b>	< 1	
<b>Pulse Duration (ns)</b>	5	

**PUMP LASER SPECIFICATIONS**

<b>OPO Pump Wavelength (nm)</b>	532	
<b>OPO Pump Energy (mJ)</b>	150	400
<b>Pulse Duration (ns)</b>	6	
<b>Beam Divergence (mrad)</b>	< 0.5	
<b>Pulse to Pulse Stability (%)</b> <sup>3</sup>	< 2	
<b>Pulse Repetition Rate (Hz)</b>	20	10

<sup>1</sup> before fiber, no extended wavelength range

<sup>2</sup> RMS @ peak OPO wavelength, 99% of shots

<sup>3</sup> RMS, 99% of shots

**DIMENSIONS (all systems)**
**Dimensions (L x W x H; inches [cm])** 30.00 x 190.00 x 43.00 [76.20 x 48.26 x 109.22]

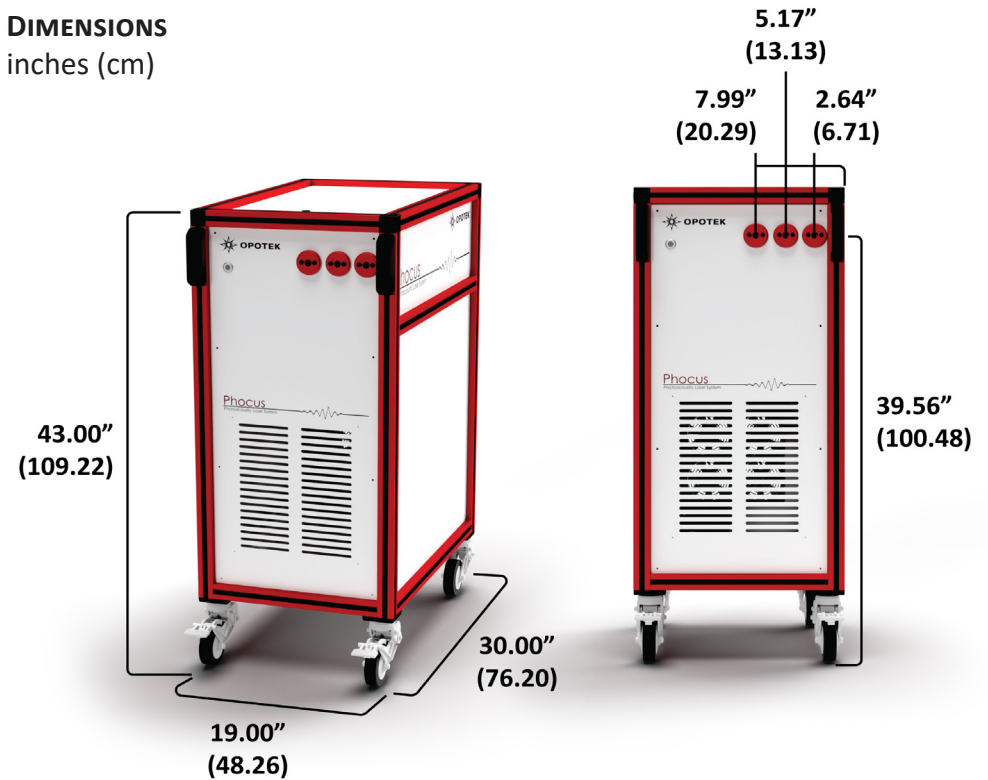
**Weight (lbs [kg])** 280 [127]

**OPERATING REQUIREMENTS (all systems)**
**Cooling System** Integrated air-water heat exchanger (included)

**Coolant** Distilled water

**Temperature** 64-82°F / 18-28 °C

**Power** 100-240 VAC, 50/60 Hz, single phase 1000VAC

**DIMENSIONS**  
 inches (cm)

**19.00"**  
**(48.26)**
**43.00"**  
**(109.22)**
**30.00"**  
**(76.20)**
**39.56"**  
**(100.48)**
**5.17"**  
**(13.13)**  
**7.99"**  
**(20.29)**    **2.64"**  
**(6.71)**

**DANGER**

 INVISIBLE AND/OR VISIBLE LASER RADIATION  
 AND/OR EYE OR SKIN EXPOSURE TO DIRECT OR  
 SCATTERED RADIATION

 ENERGY PER PULSE: 2J MAX  
 PULSE DURATION: 3-20ns  
 TUNABLE OUTPUT UV, VISIBLE, AND IR

Due to ongoing product improvements, all specifications are subject to change without notice. All tuning curves represent nominal values. All dimensions approximate in inches (centimeters).