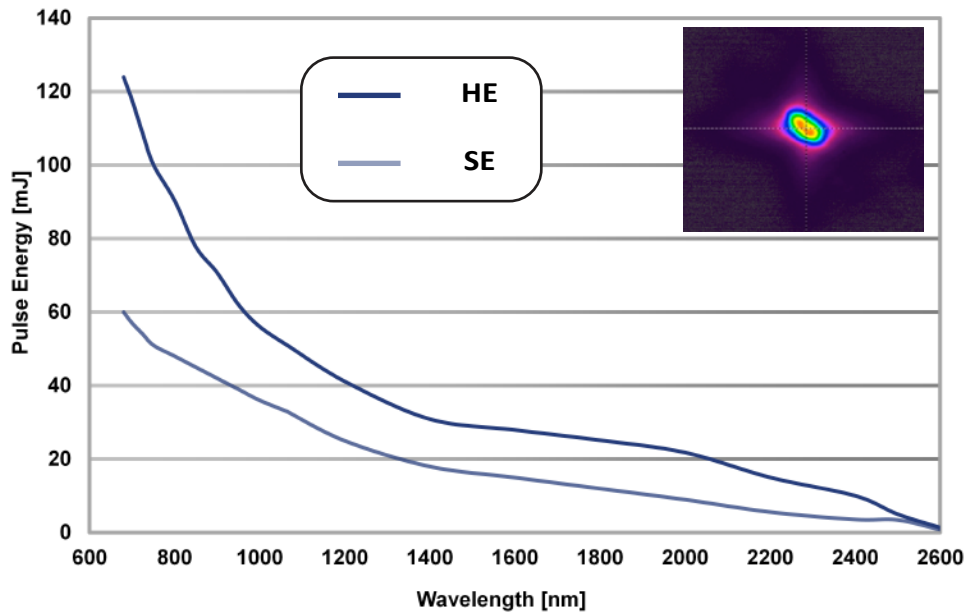


# RADIANT™ 532

The RADIANT™ tunable laser series utilizes optical parametric oscillator technology to generate wavelengths over a broad range in the NIR. Integration of system components into one compact unit increases ruggedness, minimizes misalignment and allows the user to reposition the system. Included verification hardware enables the user to confirm that beam paths are preserved after shipment or relocation. Hermetically sealed modules protect sensitive optical materials from the environment. All tunable beams exit the system from the same port resulting in one beam path to the end-user's application. Wavelength tuning is motorized and computer controlled.



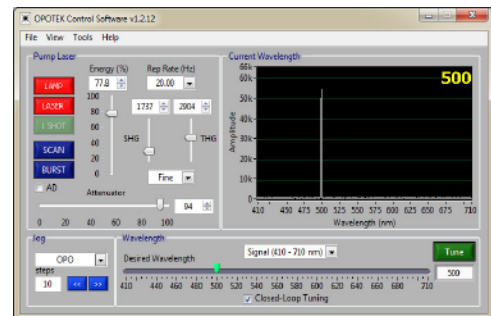
All-in-one design integrates pump laser, OPO, harmonics, optics and control electronics



Low divergence, hermetically sealed Arrow™ OPO Cavity with over 40% peak conversion efficiency. Typical far field beam profile at 750 nm shown in insert. Tuning curves represent nominal values.



System includes access to full power 532/1064 pump laser beams.



Built in Wavemeter™ monitors wavelength in real-time and provides feed-back for harmonics auto-optimization and Closed-Loop Tuning™.



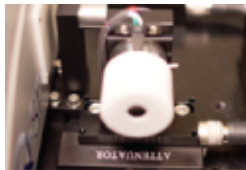
**Specifications**

|  | RADIANT™ SE 532 LD    | RADIANT™ HE 532 LD | Notes                              |
|--|-----------------------|--------------------|------------------------------------|
| Wavelength Range (nm)                  | 680 - 2600            |                    | motorized   auto range selection   |
| Peak Pulse Energy (mJ)                 | 60                    | 120                | see tuning curve   nominal         |
| Peak Efficiency (%)                    | > 35                  | > 40               | peak OPO energy ÷ pump energy      |
| Pulse-Pulse Stability (% RMS)          | < 3.0                 | < 2.0              | measured at 750 nm (1000 pulses)   |
| Spectral Linewidth (cm <sup>-1</sup> ) | 10 - 20               |                    | theoretical                        |
| Linear Polarization                    | Horizontal : Vertical |                    | signal : Idler                     |
| Beam Divergence (mrad)                 | < 2                   |                    | FWHM   signal                      |
| Pulse Length (ns)                      | 5                     |                    | FWHM   ± 2 ns   nominal            |
| Repetition Rate (Hz)                   | 10 or 20              | 10                 | divide-by-N lower repetition rates |
| Beam Diameter (mm)                     | 6.5                   | 9                  | near-field                         |
| Residual 532 Pump Access (mJ)          | 40 - 50               | 80 - 100           | varies based on OPO wavelength     |

**Features**

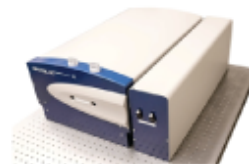
- Integrated Pump Laser: Light and compact with quick connect cables and 100 million pulse flashlamp lifetime
- Full Power Pump Beam Access: End-user insertable mirrors to redirect full power 532/1064 beams for experimental use
- Harmonics: Motorized phase matching, temperature-controlled, hermetically sealed
- Alignment Verification™: Hardware provided to verify system alignment after movement
- External Triggering: Flashlamp and Q-switch IN/OUT, TTL, BNC connectors
- Computer Control: All laser and OPO functions, SCAN/BURST modes
- Wavemeter™: Real-time wavelength monitoring, Closed-Loop Tuning™ and harmonics auto-optimization
- Software Development Kit: Integration of system functions into third-party programming environments

**Options**



**Motorized Variable Attenuator**

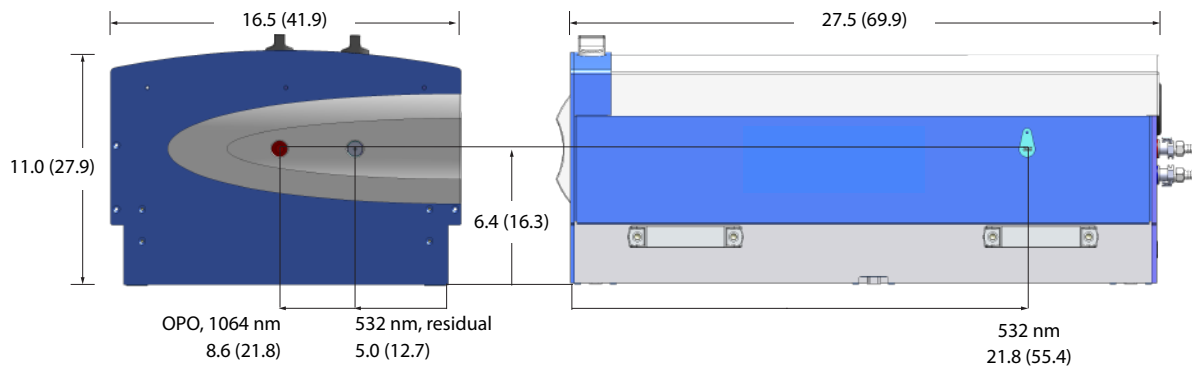
Internal PC-controlled optical attenuator to vary the OPO pulse energy, removeable



**4th Harmonic Generator**

External housing for a fourth (266 nm) harmonic generator

**Dimensions**



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

100 lbs (45.4 kg)  
integrated | 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

