



# Opolette HE 2940

## PULSED LASER

The Opolette HE 2940 pulsed laser is tuned to the maximum wavelength absorption of water and other molecules with -OH and -NH functional groups. At 2940 nm, biomolecules relevant to life sciences can be ablated or desorbed intact for capture, ionization or other manipulations on the sub-milli cross-section scale.

### SYSTEM FEATURES

- Integrated pump laser with quick connect cables
- Flashlamp based pump laser with minimal maintenance
- End user replaceable flashlamp (50 million shot lifetime) and DI cartridge
- Flashlamp and/or Q-Switch external triggerin
- No factory installation required
- Alignment verification
- Control software and software development kit (SDK)
- Access to residual pump laser wavelength (1064nm)

### AVAILABLE OPTIONS AND ACCESSORIES

**External Motorized Variable Attenuator (eMVA):** End-user installable/removable. Reduces max OPO by 10-15% when installed. Computer controlled.

**Fiber Delivery Kit:** Fiber coupler is mounted directly to the system. Single fiber. High power SMA connection at both ends. 450 $\mu$ m core. NA=0.22. Approximately 60% transmission.

### OPO SPECIFICATIONS

Wavelength Range (nm)	2940
Peak OPO Energy (mJ)	6.0
Pulse to Pulse Stability (%) <sup>1</sup>	< 2
Pump Laser Residual Energy (mJ)	100 at 1064 nm
Linewidth (cm <sup>-1</sup> )	4 - 7
Pulse Duration (ns)	6
Beam Diameter (mm) <sup>2</sup>	4
Beam Divergence (mrad) <sup>3</sup>	< 5 (vertical); < 10 (horizontal)
Polarization	Vertical

### PUMP LASER SPECIFICATIONS

OPO Pump Wavelength (nm)	1064
OPO Pump Energy (mJ)	100
Pulse Duration (ns)	7
Beam Divergence (mrad)	< 3
Pulse to Pulse Stability (%) <sup>4</sup>	< 2
Pulse Repetition Rate (Hz)	20

<sup>1</sup> RMS @ peak OPO wavelength, 99% of shots      <sup>3</sup> Full angle, at 1/e<sup>2</sup> of the peak; at peak wavelength

<sup>2</sup> at output of the laser

<sup>4</sup> RMS, 99% of shots

### OPERATING REQUIREMENTS (all systems)

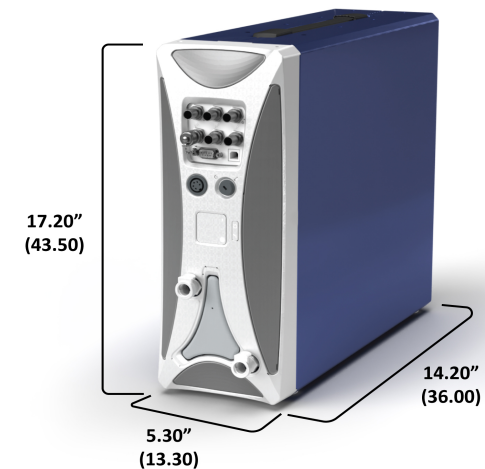
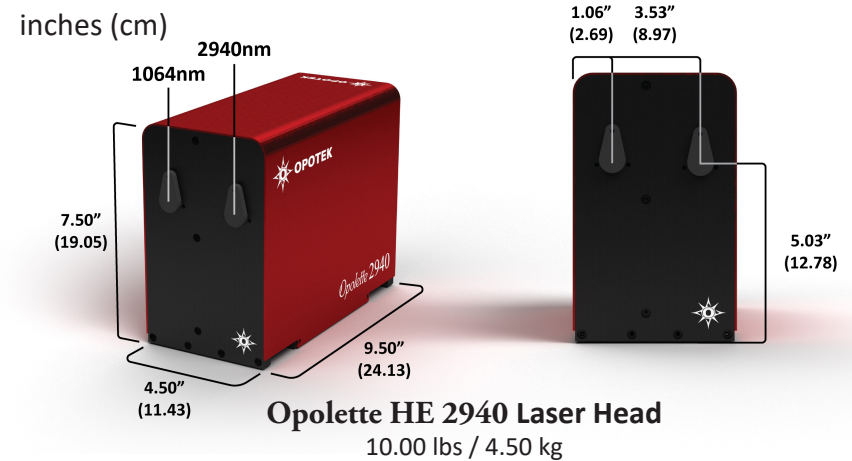
**Cooling System** Integrated air-water heat exchanger (included)

**Coolant** Distilled water

**Temperature** 64-82°F / 18-28 °C

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

### DIMENSIONS



VERSION 1.00

Due to ongoing product improvements, all specifications are subject to change without notice. All tuning curves represent nominal values.

