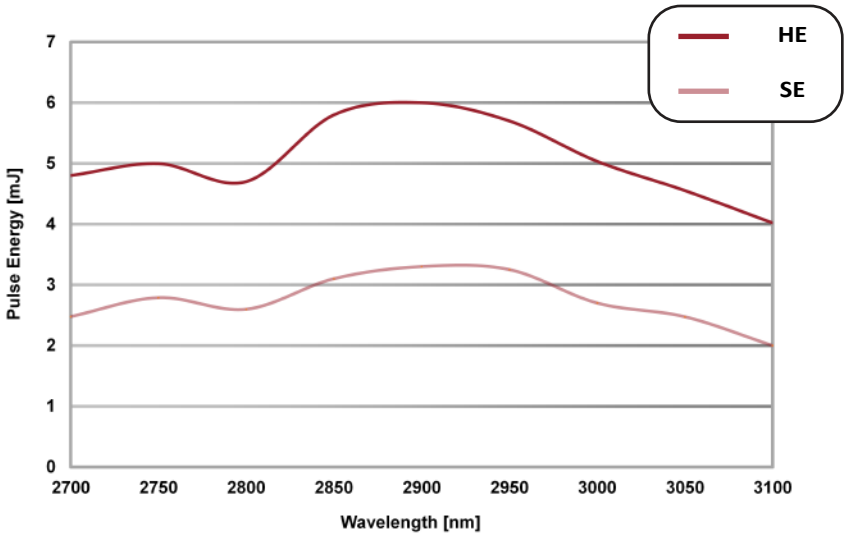
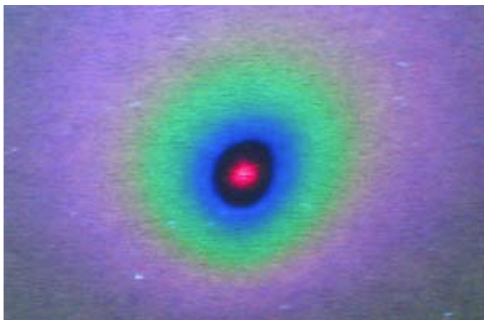
Opolette™ 2731/3034

The *Opolette*™ 2731/3034 tunable laser series utilizes optical parametric oscillator (OPO) technology to generate wavelengths over a broad range in the MIR. Designed for portability, the entire laserhead fits into a 7x12" footprint and ships completely sealed to protect optical components from the environment. Requiring no installation, the system includes verification hardware to check alignment after shipping or relocation. A built-in red laser diode is aligned to overlap with the mid-IR output for beam guidance. Wavelength tuning is motorized and computer controlled.

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

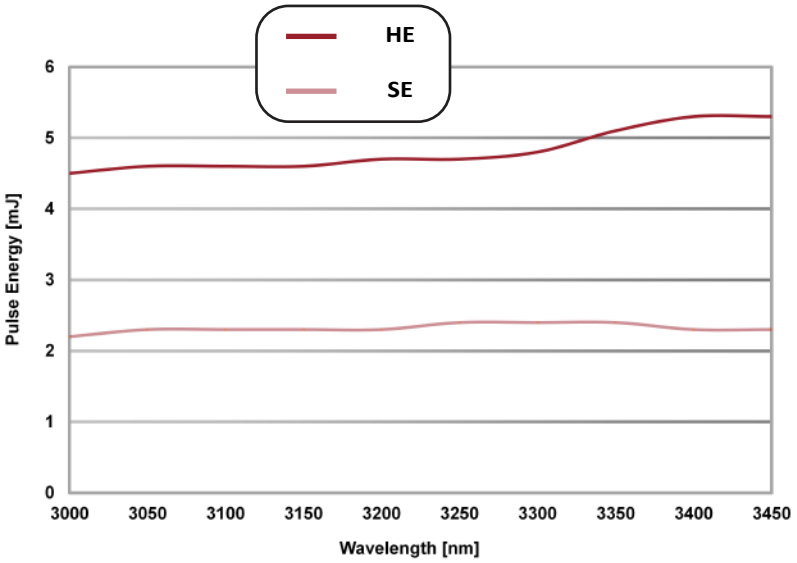


Model 2731 covering tuning ranges from 2700 to 3100 nm. Tuning curves represent nominal values.



Picture shows MIR OPO beam heating a liquid crystal sheet with built-in guidance laser overlapping the center area.

System includes access to residual 1064 pump laser beam.



Model 3034 covering tuning ranges from 3000 to 3450 nm. Tuning curves represent nominal values.

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OPOTEK LLC
TUNABLE LASER SYSTEMS

www.opotek.com

Specifications

	Opolette™ SE 2731/3034	*Opolette*™ HE 2731/3034	Notes
Wavelength Range (nm)	2700 - 3100		motorized | model 2731
	3000 - 3450		motorized | model 3034
Pulse Energy (mJ)	See tuning curve		nominal
Pulse-Pulse Stability (% RMS)	< 2.5	< 2.0	measured at 3000 nm (1000 pulses)
Spectral Linewidth (cm^{-1})	3 - 4		theoretical
Linear Polariation	Vertical		
Beam Divergence (mrad)	< 10		FWHM | X-axis
	< 5		FWHM | Y-axis
Pulse Length (ns)	7		FWHM | ± 2 ns | nominal
Repetition Rate (Hz)	20		divide-by-N lower repetition rates
Beam Diameter (mm)	3	4	near-field
Residual 1064 Pump Access (mJ)	25	50	varies based on OPO wavelength

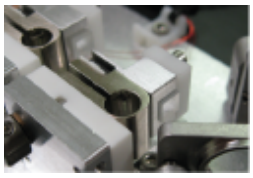
Features

Integrated Pump Laser	Light and compact with quick connect cables and 50 million pulse flashlamp lifetime
Residual Pump Beam Access	Optical hardware to redirect residual 1064 beam for experimental use
Alignment Diode Laser	Red diode laser module aligned to overlap with OPO beam path
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
Software Development Kit	Integration of system functions into third-party programming environments

Options

Motorized Variable Attenuator

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



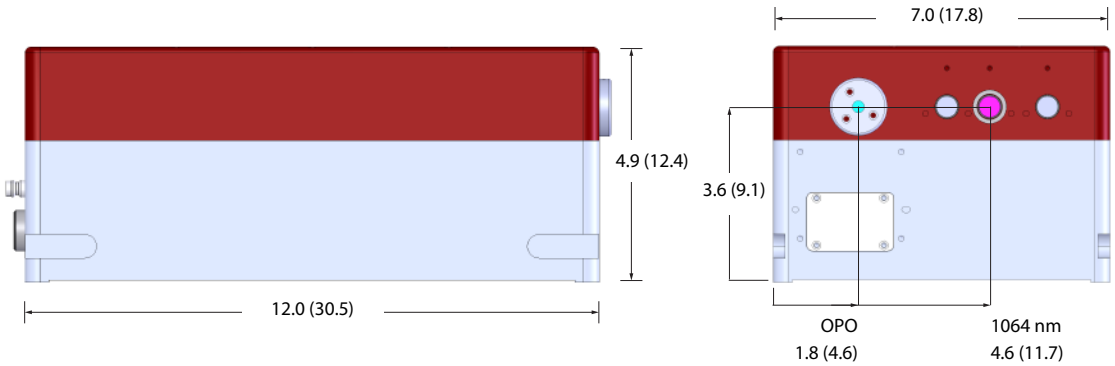
Harmonics Addition

Addition of motorized, temperature-controlled, hermetically sealed harmonic generators for access to 355 nm

Protective Hard Case

Two protective hard cases with custom foam padding in place of standard wooden crate

Dimensions



OPO Laser Head	25 lbs (11 kg)
OPO Control Electronics	11.5 (29.2) x 10.3 (26.2) x 3.8 (9.7) | 5 lbs (2.3 kg) | universal line voltage
Pump Laser Power Supply	17.2 (43.5) x 5.3 (13.3) x 14.2 (36.0) | 31 lbs (14 kg) universal line voltage | closed-cycle water-cooled