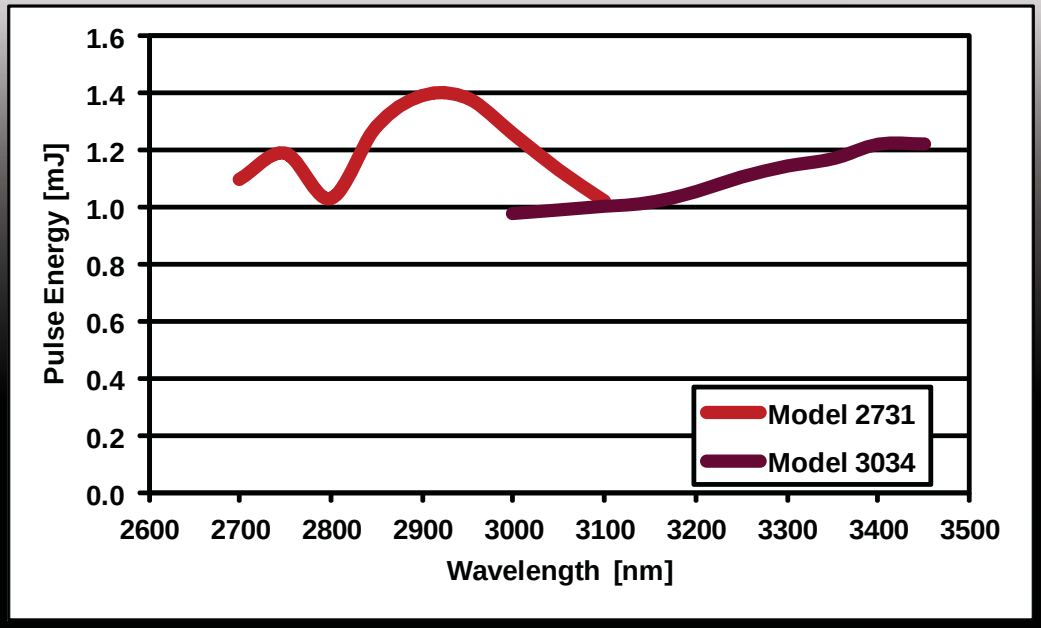
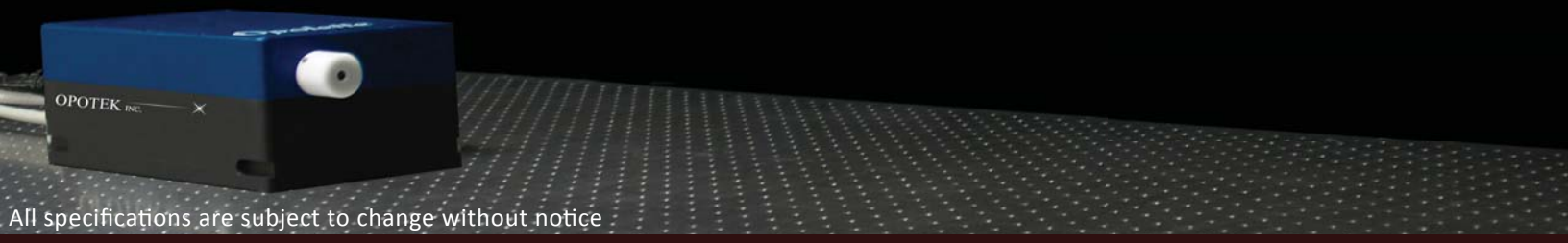
IR *Opolette*™ HR

The IR *Opolette*™ HR series of products are **ultra-compact**, turn-key tunable laser systems that utilizes OPOTEK's optical parametric oscillator (OPO) technology to generate **mid-IR wavelengths**. The OPO is pumped by a **diode-pumped solid state (DPSS) Nd:YAG laser at 100 Hz**. All system components (pump laser, OPO and optional accessories) are integrated into a **single unit** which results in a compact, **9x12"** footprint that **requires no installation**. The system includes **access to the 1064 nm pump beam**. A **built-in 635 nm laser diode** is aligned to overlap with the mid-IR output for beam stirring guidance. Wavelength tuning is **motorized** and **PC controlled** through a single USB port. The end-user can operate the system with little to no maintenance or laser expertise. A **software development kit** (SDK) is available for integrating system functions into end-user software. A number of options are available for added functionality such as the addition of harmonic modules for 532 and 355 nm laser light generation and variable power attenuation.

Tuning Curve



Tuning curves represent nominal values. Performance may vary depending on installed options.



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Pump Laser Specifications			
Pump Laser Specifications	Nd:YAG	Diode pumped	
Pump Wavelength	1064 nm		
Pulse Repetition Rate	100 Hz	Computer selectable lower repetition rate	
Pulse Length	9 ns	Nominal	
Beam Diameter	3 mm	Nominal	
External Trigger	Diode and Q-Switch		
OPO Parameters			
Wavelength Tuning Range	2700 - 3100 nm 3000 - 3450 nm	Model 2731 Model 3034	Continuous tuning
Peak OPO Energy	1.4 mJ 1.2 mJ	Model 2731 Model 3034	See tuning curve
Spectral Linewidth	~ 4 - 7 cm^{-1}	FWHM	
Polarization (Linear)	Horizontal		
Access to residual 1064 nm	20 mJ	Simultaneous with OPO	
Built-in laser diode	635 nm	OPO beam guidance	
Computer Control	All laser and OPO functions	ON, OFF, Power, Rep-Rate, Tuning, Scan	

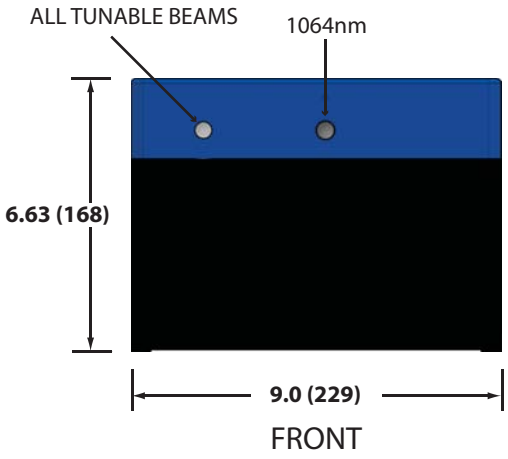
Options	Option Code	Description
Harmonics for 355 and 532 nm	**-2X/3X**	Generate 532 nm and/or 355 nm
Motorized Variable Attenuator[1]	**-MVA**	Change OPO output from 0 - 100% via computer
Software Development Kit	**-SDK**	Integration of system functions into third-party software

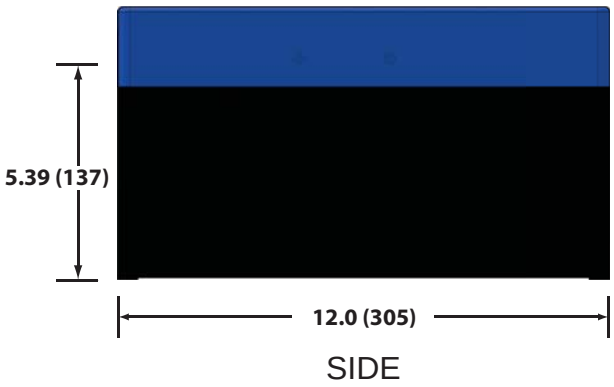
1) Max OPO output less by 10%

Laser Head Dimensions

Approx. Dimensions: inches (mm)

Weight: 30 lbs (13.6 kg)





	Pump Laser Power Supply	Control Electronics Unit	Cooling Unit
Dimensions (L x W x H)	18.0 (457) x 19.0 (483) x 3.5 (89)	11.5 (292) x 10.25 (260) x 3.75 (9)	7.5 (191) x 5.0 (127) x 7.0 (178)
Weight	13.2 lbs (29 kg)	5 lbs (2.27 kg)	8 lbs (3.63 kg)
Voltage	Single phase, 90 - 240 V	Single phase, 90 - 240V	Single phase, 90 - 240V
Input Power	< 300 W	< 100 W	200 W
Cooling			Closed-cycle water cooled

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