

WP 532 ER Raman Spectrometer Series

When you need extended range



FEATURES AND BENEFITS

f/1.3 input to capture more light

Superior optical design based on patented transmissive VPH grating

>10x faster data sampling rates

TEC cooling option for best SNR

SMA fiber coupled, free space, and integrated laser models

USB, Ethernet & Bluetooth connectivity

Compact, robust & configurable

We've maximized the efficiency of our spectrometers to give you more sensitivity, better SNR, and faster measurements. Collect more light with our f/1.3 input, keep more light with our high transmission VPH gratings & diffraction-limited optics, and detect more light with scientific-grade detectors. Our build-to-print options for resolution, detector cooling, and sample coupling allow you to configure a spectrometer or integrated system with the exact performance you need.

Wasatch Photonics offers the expertise & testing to find your optimal Raman solution. Contact us to get started!

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STANDARD PRODUCT SPECIFICATIONS & OPTIONS

The configuration options for our build-to-print spectrometer and integrated laser systems include slit size (resolution), sample coupling (fiber coupled or free space), and detector cooling. We offer ambient, regulated, and TEC cooled detectors, allowing you to balance your required signal to noise (SNR) and temperature stability with cost for the best possible value.

OPTICAL			
DETECTOR COOLING OPTIONS >		Ambient	TEC Cooled
Wavenumber Range ($\lambda_{ex} = 532 \text{ nm}$)		250 - 4300 cm^{-1}	250 - 4000 cm^{-1}
Resolution	25 μm slit	14 cm^{-1}	12 cm^{-1}
	50 μm slit	26 cm^{-1}	23 cm^{-1}
f-number (f/#)		1.3	
Connector (fiber coupled models only)		SMA 905	

DETECTOR & ELECTRONICS			
DETECTOR COOLING OPTIONS >		Ambient	TEC Cooled
Hamamatsu Detector		S10420-1006 CCD	S10141-1007 CCD
Detector Temperature		ambient	-15°C
Detector Temperature Stability		-	$\pm 0.1^\circ\text{C}$
Active Pixels		1024 x 64	1024 x 122
Pixel Size		14 x 14 μm	12 x 12 μm
Detector Quantum Efficiency: Average / Peak		76% / 78%	87% / 89%
Dynamic Range		50,000	37,500
Signal to Noise Ratio (SNR)		500:1	2400:1
Readout Noise		6 e- RMS	4 e- RMS
Integration Time		1 ms - 60 s	
Maximum Sample Frequency		285 Hz	
Communications		USB 2.0 Type B connector, Ethernet and Bluetooth optional	

MECHANICAL & ENVIRONMENTAL			
Fiber or Free Space Coupled		Ambient	TEC Cooled
Size		16.8 x 10.8 x 4.8 cm	21.5 x 15.0 x 7.5 cm
Weight		1.0 kg	3.0 kg
Operating Temperature		0 °C to 40 °C, non-condensing	

Custom options available upon request

