Wasatch Photonics

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
- Fiber coupled & free space models
- Compact, robust & configurable
- Excellent thermal stability

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 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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WP 532 ER Raman Spectrometer Series

STANDARD PRODUCT SPECIFICATIONS & OPTIONS

The configuration options for our build-to-print 532 nm Raman spectrometers include slit size (resolution), sample coupling (fiber coupled or free space), and detector cooling. We offer ambient 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 (λ_{ex} = 532 nm)		250 - 4300 cm^{-1}	250 - 4000 cm^{-1}
Resolution	10 µm slit	6 cm^{-1}	10 cm^{-1}
	25 µm slit	8 cm^{-1}	14 cm^{-1}
	50 µm slit	14 cm^{-1}	19 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	-	± 0.1°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% / 77%	86% / 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	7 ms - 60 s	25 ms - 60 s
Maximum Sample Frequency	285 Hz	
Communications	USB 2.0 Type B connector	

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
Power Consumption	<500 mA @ 12 V	<500 mA @ 12 V
Operating Temperature	0 °C to 40 °C, non-condensing	

Custom options available upon request

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