Wasatch Photonics

WP 532 Raman Spectrometer Series

When efficiency matters most

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	Regulated	TEC Cooled
Wavenumber Range (λ_{ex} = 532 nm)		250 - 3250 cm^{-1}		250 - 3100 cm^{-1}
Resolution	10 µm slit	6 cm^{-1}		
	25 µm slit	8 cm^{-1}		
	50 µm slit	14 cm^{-1}		
f-number (f/#)		1.3		
Connector (fiber coupled models only)		SMA 905		

DETECTOR & ELECTRONICS			
DETECTOR COOLING OPTIONS >	Ambient	Regulated	TEC Cooled
Hamamatsu Detector	S11510-1006 CCD	S11511-1006 CCD	S10141-1007 CCD
Detector Temperature	ambient	10°C	-15°C
Detector Temperature Stability	-	± 0.2°C	± 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% / 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
Size	16.5 x 16.2 x 6.7 cm
Weight	1.8 kg
Operating Temperature	0 °C to 40 °C, non-condensing

Custom options available upon request

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