

# Raman Spectroscopy Systems



- *Plastic sorting and analysis*
- *Carpet fiber sorting and analysis*
- *Water quality analysis*
- *Gas analysis*
- *Characterization of archaeological materials*
- *Polymorph identification in pharmaceutical manufacturing, R&D, and QC*
- *Quality control and identification testing of raw materials*
- *Counterfeit drug detection*
- *Drug and explosive detection*
- *Chemical and petrochemical analysis*



These integrated systems are ideal for teaching purposes, laboratory, and QC use. Special probes are available for process control applications.

- *Fully integrated system includes 2DCCD array spectrometer, diode laser, fiber optic probe, and software*
- *Choice of 532nm or 785nm excitation*
- *16-bit A/D, Offset DAC*
- *Non-scanning device, acquire full spectrum in milliseconds!*
- *Small, rugged, portable*
- *Free: DLLs, Active X interface, LabViewVI*

Free application software is included with every system. CDI Spec32 is an acquisition package with several data-processing techniques included. This includes our Lab View VI, Active X application, and DLLs.

All our devices are compact, rugged, portable, and well suited for OEM applications as well as process, QC, laboratory, and educational purposes. We will custom design spectrometers for your application usually at no extra charge.

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**CONTROL DEVELOPMENT**  
THE PRICE PERFORMANCE LEADER...

## Product Specifications

Part Number	R532-1024	R785-1024
Spectral Range (cm <sup>-1</sup> )*	200 to 3700	200 to 2200
Linear Dispersion (cm <sup>-1</sup> /pixel)**	3.7	2.1
Resolution FWHM (nm)	defined by linear dispersion	
Wavelength Accuracy*	¼ pixel	
<b>Input Fiber</b>		
Single fiber		
Core Diameter (microns)	200	400
Material	Ultra Low OH	Ultra Low OH
Connector	905 SMA	905 SMA
Input Slit Width (microns)	25	25
<b>Optics</b>	f/3	f/3
<b>Gratings</b>		
Lines/mm	1200	1800
Coating Material	Aluminum	Gold
<b>Order Sorting Filter</b>	Built into probe	Built into probe

\*nominal, \*\* average

### Detector

Material Type	Silicon, thinned and back illuminated for enhanced VIS and NIR response
Number of elements	1024 X 64
T.E. cooling	Single stage peltier cooler
Pixel Dimensions (WxH)	24 µm X 24 µm

### Electronics

Integration times	7.1 ms to 167 s
A/D Converter	16 Bit
Readout speed	6 µs per pixel
Readout Noise *	< 2 counts RMS
Offset DAC	Yes
Memory	On-Board
Strobe	TTL compatible
Lamp Drivers	Two

\*nominal

### Power Requirements

Voltage	85 – 256 VAC, 120 – 870 VDC, 47 – 63 Hz
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### Communications

USB Interface

### Internal Wavelength Calibration

Internal Mercury-Argon line source option available

### Physical Dimensions

Dimensions	11.2"L X 3.5"W X 7.5"H
Weight	8 lb

### Software

The following is included free with every spectrometer purchase:  
Spec32™, DLLs, Lab View VI, and Active X App all with user manuals

### Warranty and Support

Warranty	1 year
Extended Warranty	Available
Support	Several support packages available
Telephone	9:00 AM to 5:00 PM, EST, Mon-Fri.