SPECIFICATIONS

Spectroscopy

Temperature-Stabilized Back-Thinned CCD Array Spectrometers

Enhanced UV NIR Response

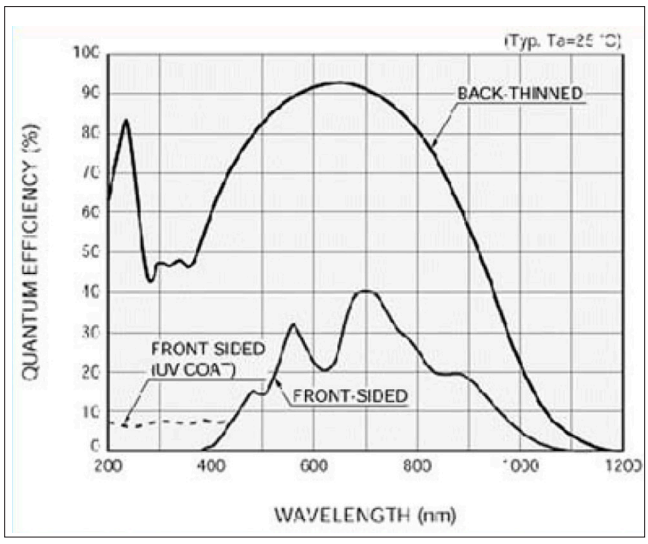
PerkinElmer offers high-performance, high-sensitivity spectrometers using a high-quantum-efficiency, thinned and back-illuminated, temperature-stabilized 2D FFT CCD array, exhibiting low noise and low dark levels. These spectrometers are especially suited for low-light-level applications.

S10420 Series

Flat spectral response from 180 nm to 1200 nm; high quantum efficiency from UV to NIR region

S11510 Series

Enhanced sensitivity in NIR region, quantum efficiency 40% at 1000 nm Ideally suited for Raman spectroscopy



Common Features

- Symmetric design resulting in lower stray light and tighter optical resolution
- High-wavelength accuracy
- Low sensitivity to temperature changes
- Enhanced 8051 microprocessor
- 18-bit A/D (16-bit displayed) with DAC offset
- Fast USB 2.0 interface
- Nonscanning device – acquire full spectrum in milliseconds
- Small, rugged, portable

Our Spec32™ is a data-acquisition package with several data-processing techniques included. Also supplied are our Lab View VI, Active X application, and DLLs.

All devices are compact, rugged, portable, and well suited for OEM applications.

PerkinElmer®
For the Better

Product Specifications

Part Number	2DCCD-10420	2DCCD-11510
Spectrometer		
Spectral Range (nm)*	180-1200	
Linear Dispersion (nm/pixel)	defined by spectral range	
Resolution FWHM (nm)	defined by linear dispersion	
Wavelength Accuracy*	¼ pixel	
Input Fiber Options	**Single Fiber**	**Bundle Fiber**
Core Diameter (microns) 400	400	50 (19 fibers) or 100 (7 or 19 fibers)
Material	Ultra Low OH or High OH	Ultra Low OH or High OH
Connector	905 SMA	905 SMA
Input Slit Width (microns)	25, 50, 100 or none (fiber itself)	
Optics	f/3	
Gratings		
Lines/mm	200, 300, 400, 600, 1200, 1800, 2400, 3600	
Coating Material	Aluminum or Gold	
Order Sorting Filter	Available	
*nominal, factory set, user-defined range in that spectral region		
Detector		
Material Type	Silicon, thinned and back illuminated, UV and SWIR enhanced, high quantum efficiency	
Number of Elements	1024 H X 64 V	
Pixel Dimensions (WxH)	4 µm X 14 µm	
Active Area	14.336 mm H X 0.896 mm V	
Full Well Depth	80,000 e- Vertical x 200,000 e- Horizontal	60,000 e- Vertical x 300,000 e- Horizontal
Electronics		
Integration Times	3 ms to 167 s	
A/D Converter	16 Bit	
Readout Speed	6 µs per pixel	
Readout Noise **	<4 counts RMS	
Offset DAC	Yes	
Memory	On-Board	
Microprocessor	Enhanced 8051	
Strobe	TTL compatible	
Lamp Drivers	Two	
*18 Bit A/D, 16 Bit displayed **nominal		
Power Requirements		
Voltage	5V DC	
Current	8.0 Amps	
Power Supply	Included	
Communications		
USB 2.0 Interface		
Internal Wavelength Calibration		
Internal Mercury-Argon or Xenon Line Source Available		
Physical Dimensions		
Dimensions	6.535"L X 4.173"W X 3.0"H	
Weight	2 lb	
Software		
The following is included with every spectrometer purchase: Spec32™, DLLs, Lab View VI, Active X App, all with user manuals		
Warranty and Support		
Warranty	1 year	
Extended Warranty	Available	
Support	Several support packages available	
Telephone		

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