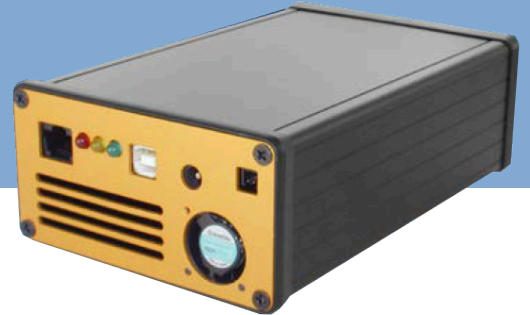


## Spectroscopy

## Diode-Array Spectrometers

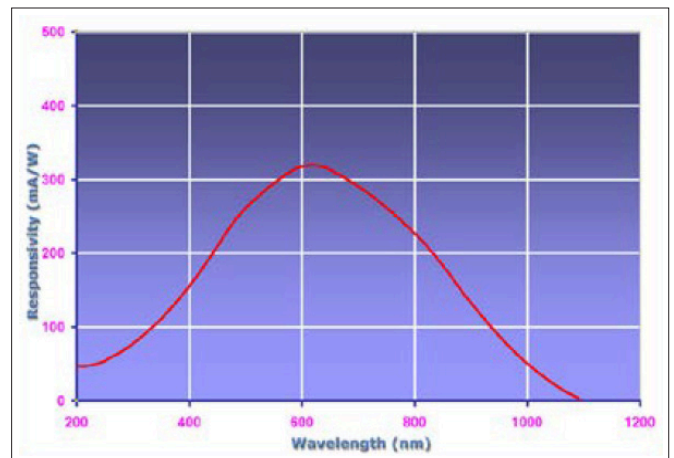


PerkinElmer uses silicon photo-diode arrays to provide high-performance spectrometers at very affordable prices for UV/Vis/SWNIR spectroscopy. Our diode-array spectrometers, with their deep well and high dynamic range are ideal for high-light-level measurements where small changes need to be detected. Features such as Auto-Cal, on-board EEPROM calibration, and 18-bit electronics provide a lot of performance at a very affordable price.

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

All devices are compact, rugged, portable, and well suited for OEM applications, as well as process, QC, laboratory, and educational purposes.

- Deep well and high dynamic range
- Spectral response from 200 nm to 1100 nm
- 512-element diode array
- Enhanced 8051 microprocessor
- Up to 16-bit A/D
- Offset DAC
- Fast USB 2.0 interface
- Non-scanning device – a acquire full spectrum in milliseconds
- Small, rugged, portable



## Product Specifications

Part Number	PDA-512
<b>Spectrometer</b>	
Spectral Range (nm)*	200-1100
Linear Dispersion (nm/pixel)	defined by spectral range
Resolution FWHM (nm)	defined by linear dispersion
Wavelength Accuracy*	¼ pixel
<b>Input Fiber Options</b>	
<b>Single fiber</b>	
Single Fiber	
Core Diameter (microns)	400
Material	Ultra Low OH or High OH
Connector	905 SMA
Input Slit Width (microns)	25, 50, 100 or none (fiber itself)
<b>Optics</b>	f/2 or f/3
<b>Gratings</b>	
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	
<b>Detector</b>	
Material Type	Silicon
Number of Elements	512
Temperature Control	heated, temperature stabilized
Pixel Dimensions (WxH)	25 µm X 500 µm
<b>Electronics</b>	
Integration Times	1.7 ms to 16 s
A/D Converter	16 Bit
Readout Speed	6 µs per pixel
Readout Noise **	<2 counts RMS
Offset DAC	Yes
Memory	On-Board
Microprocessor	Enhanced 8051
Strobe	TTL compatible
Lamp Drivers	Two
*nominal	
<b>Power Requirements</b>	
Voltage	5V DC
Current	8.0 Amps
Power Supply	Included
<b>Communications</b>	
USB 2.0 Interface	
<b>Internal Wavelength Calibration</b>	
Internal Mercury-Argon line source option available	
<b>Physical Dimensions</b>	
Dimensions	6.535"L X 4.173"W X 3.0"H
Weight	2 lb
<b>Software</b>	
The following is included free with every spectrometer purchase Spec32™, DLLs, Lab View VI, Active X App, all with user manuals	
<b>Warranty and Support</b>	
Warranty	1 year
Extended Warranty	Available
Support	Several support packages available
Telephone	

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