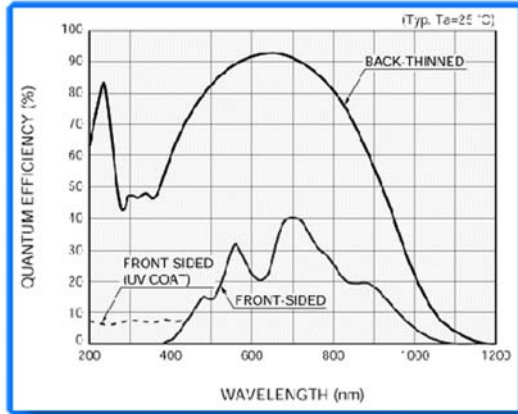


High Sensitivity Spectrometers

Back Thinned 2D FFT CCD Array



- *Enhanced UV and SWNIR response*
- *High dynamic range*
- *Spectral response from 180nm to 1200nm*
- *2D FFT back thinned CCD array*
- *Enhanced 8051 microprocessor*
- *Up to 18 bit A/D (16 Bit displayed) with DAC offset*
- *Fast USB2.0 interface*
- *Non-scanning device, acquire full spectrum in milliseconds!*
- *Small, rugged, portable*

Control Development, Inc., offers high performance, high sensitivity spectrometers, using a high Quantum Efficiency thinned and back illuminated T.E. cooled 2D FFT CCD array, exhibiting low noise and low dark levels. These spectrometers are especially suited for low light level applications.

All our spectrometers come with free application software. CDI Spec32 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 our devices are compact, rugged, portable and well suited for OEM applications. We will custom design spectrometers for your application usually at no extra charge.



Product Specifications

Part Number	2DCCD-512 X 64	2DCCD-1024 X 64
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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	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)
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Optics

Gratings	f/2 or f/3
Lines/mm	200, 300, 400, 600, 1200, 1800, 2400, 3600
Coating Material	Aluminum or Gold

Order Sorting Filter	Available
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*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	512 X 64 or 1024 X 64	
T.E. cooling	single stage	
Pixel Dimensions (WxH)	24 µm X 24 µm	

Electronics

Integration times	4 ms to 167 s	7.1 ms to 167 s	(model dependent, auto mode)
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		

*18-Bit A/D, 16-Bit displayed **nominal

Power Requirements

Voltage	5V DC
Current	8.0 Amps
Power supply	Included

Communications

USB2.0 Interface

Internal Wavelength Calibration

Internal Mercury-Argon line source option available

Physical Dimensions

Dimensions	6.535"L X 4.173"W X 3.0"H
Weight	2 lb

Software

The following is included free 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	9:00 AM to 5:00 PM, EST, Mon-Fri.