



Photon Control

The SPM-002 is the most versatile spectrometer in the Photon Control product line. It is now available with a Hamamatsu S9840 back-thinned CCD detector for very high UV sensitivity. It also has a dynamic range of 5200:1 and 16-bit A/D converter resolution. It uses a proprietary optical design to achieve a higher resolution than other spectrometers of the same size on the market. Our spectrometers are the only ones equipped with an internal DSP chip. This DSP is capable of handling complex signal processing tasks. It also boasts powerful software based on Labview which can be easily integrated into existing software using one of our development kits.

The SPM-002 works very well with the SPL family of light sources and other accessories available at Photon Control. Contact us for more details.

Other Highlights:

- compact size and 2048 pixels for high resolution
- feature rich software interface including data logging and beam profiling which can be user integrated using Software Development Kits for Labview, Visual C++ and Visual Basic

SPM-002 BACK-THINNED CCD SPECTROMETER



PRODUCT MODEL**SPM-002-BT****SPM-002-DT****SPM-002-ET****PERFORMANCE SPECIFICATIONS**

Spectral Range (nm)	190-400	200-850	200-1090
Detector	Hamamatsu S9840 Back-Thinned CCD	Hamamatsu S9840 Back-Thinned CCD	Hamamatsu S9840 Back-Thinned CCD
Resolution (FWHM) (nm) (center/outer spectral range)	0.4/0.6	0.5/1.5	0.8/2
Fiber Input	SMA	SMA	SMA
Focal Length (mm)	70	70	70
Order Blocking Filters	No	Yes	Yes
A/D Resolution	16-bits	16-bits	16-bits
CCD Pixels	2048	2048	2048
Integration Time Range	2 milliseconds to 65 seconds	2 milliseconds to 65 seconds	2 milliseconds to 65 seconds
Triggering	Hardware trigger	Hardware trigger	Hardware trigger
Maximum Refresh Rate (Hz)	50	50	50

OPERATING SPECIFICATIONS

Temperature (°C)	-10 to +55	-10 to +55	-10 to +55
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ELECTRICAL SPECIFICATIONS

Interface	USB 2.0 High Speed at 480 Mbps	USB 2.0 High Speed at 480 Mbps	USB 2.0 High Speed at 480 Mbps
Power Requirements	10-30 VDC, 300 mA Max @ 12 VDC	10-30 VDC, 300 mA Max @ 12 VDC	10-30 VDC, 300 mA Max @ 12 VDC

PHYSICAL SPECIFICATIONS

Dimensions (mm)	101.5 x 90 x 53.4	101.5 x 90 x 53.4	101.5 x 90 x 53.4
Weight (g)	475	475	475
Slits (µm)	10	10	10

PRODUCT OPTIONS AND ACCESSORIES

Fiber Patchcords	SMA 905 connectors SMA 905 connectors SMA 905 connectors SMA 905 connectors	100 µm core 200 µm core 400 µm core 600 µm core	UV/VIS UV/VIS (Standard) UV/VIS UV/VIS
Slit Width (micron)	Other slit sizes such as 5, 25, 50, 75 and 100 micron are available upon request		
Fiber Input Receptacle	FC or ST receptacles available upon request		

Note: All spectrometers are shipped with an optical fiber patch cord, USB cable, user manual and an external power adapter.

PRODUCT APPLICATIONS

- Plasma Monitoring
- Laser characterization and tuning
- Biophotonics
- Fluorescence
- Gas analysis
- Reflectance, Transmission, Absorption
- Quantum Dot analysis
- Molar concentration
- Optical inspection
- Chemical analysis
- Thin film thickness measurement
- Sensors

PRELIMINARY SPECIFICATIONS

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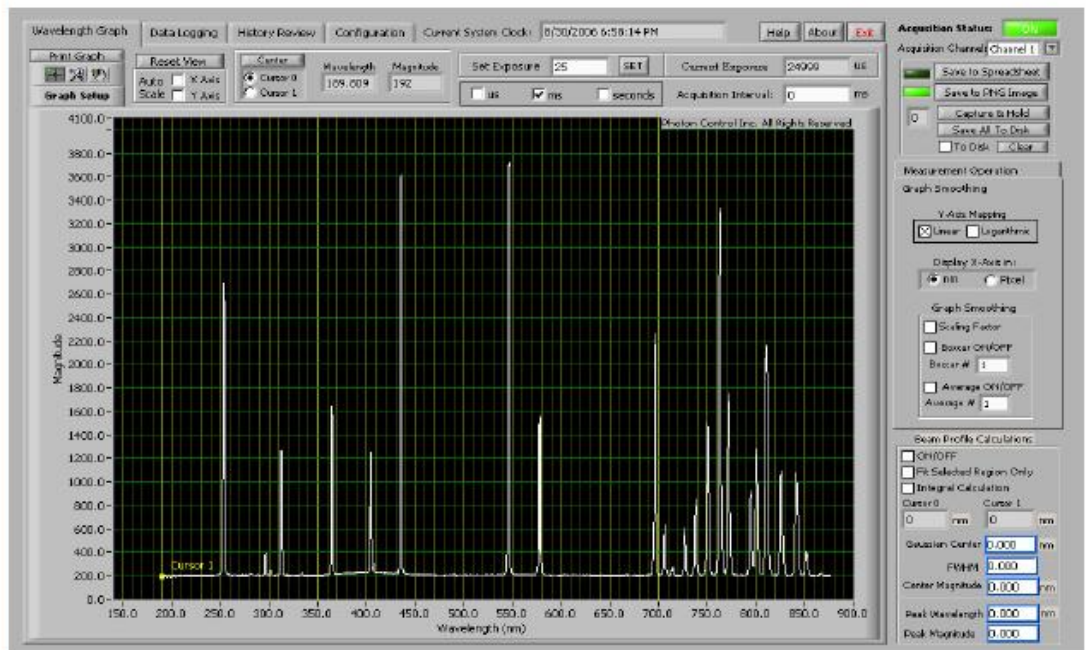
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SOFTWARE SPECIFICATIONS - SPM-002

Features

- Convenient spectrum display controls such as zoom, pan and cursors
- Linear and logarithmic scaling
- Dark background subtraction
- Transmittance and Reflectance measurement
- Boxcar and time based pixel averaging
- Beam profile calculators such as Gaussian center and FWHM (Full Width Half Maximum)
- Extensive data logging control
- History review panel with the ability to view an entire logging session and zoom in on a particular spectrum
- Post experiment analysis available in history review panel
- Convenient snapshot to spreadsheet and png file controls
- Capture and hold function
- Access up to 5 spectrometers at a time

Photon Control Spectrometer User Interface Main Panel



Software Development Kits (Windows)

- LabView
- Visual C++ and Visual Basic

Interface Software Platforms

- Windows 2000/XP

ISO 9001:2000



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SPECIFICATIONS ARE SUBJECT
TO CHANGE WITHOUT NOTICE

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PRELIMINARY SPECIFICATIONS

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