

*SPM-002-X boasts versatility and high optical resolution at a great price.*



## Description

The SPM-002 - X is very versatile using a proprietary optical design to achieve a higher resolution sets it apart from other spectrometers of the same size on the market. Our spectrometers are the only ones equipped with an internal DSP chip 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-X works extremely well with the SPL family of light sources and other accessories available at Photon Control.

## Applications:

- Visible spectrum/ colour monitoring
- UV, Visible, NIR (Near Infrared)
- Biophotonics
- Transmission
- Laser / Light Source Monitoring
- Absorption
- Fluorescence
- Molar Concentration
- Optical Inspection
- Chemical Analysis
- Reflection
- Scattering

## Features:

- *Compact size but higher resolution than competitors*
- *Inboard DSP saves on having to process data externally*
- *A variety spectral ranges between 190nm and 1090nm*
- *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*
- *Convenient USB interface*

Visit [Photon-control.com](http://Photon-control.com) for more details.

Product Model:	SPM-002-A	SPM-002-B	SPM-002-C	SPM-002-D	SPM-002-E
<b>Performance Specifications</b>					
Spectral Range (nm)	400-700	190-400	350-1000	200-850	200-1090
Resolution (FWHM) (nm) (center/outer spectral range, 10 um slit)	0.5 / 0.6	0.6 / 0.7	0.5 / 1.2	0.6 / 1.6	0.8 / 2
Fiber Input	SMA	SMA	SMA	SMA	SMA
Focal Length (mm)	70	70	70	70	70
Order Blocking Filters	No	No	Yes	Yes	Yes
A/D Resolution	12-bits	12-bits	12-bits	12-bits	12-bits
CCD Pixels	3648	3648	3648	3648	3648
Integration Time Range	10 microseconds to 65 seconds	10 microseconds to 65 seconds	10 micro-seconds to 65 seconds	10 microseconds to 65 seconds	10 microseconds to 65 seconds
Triggering	Hardware Trigger	Hardware Trigger	Hardware Trigger	Hardware Trigger	Hardware Trigger
Maximum Refresh Rate (Hz)	20	20	20	20	20
<b>Operating Specifications</b>					
Temperature (°C)	-10 to +55	-10 to +55	-10 to +55	-10 to +55	-10 to +55
<b>Electrical Specifications</b>					
Interface	USB 2.0 compatible*	USB 2.0 compatible*	USB 2.0 compatible*	USB 2.0 compatible*	USB 2.0 compatible*
Power Requirements	10-30 VDC. 300 mA Max @ 12 VDC or USB powered	10-30 VDC. 300 mA Max @ 12 VDC or USB powered	10-30 VDC. 300 mA Max @ 12 VDC or USB powered	10-30 VDC. 300 mA Max @ 12 VDC or USB powered	10-30 VDC. 300 mA Max @ 12 VDC or USB powered
* Full Speed USB Connection at 12 Mbps					
<b>Physical Specifications</b>					
Dimensions (mm)	101.5 x 90 x 53.4	101.5 x 90 x 53.4	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	475	475
Slits (µm)	25	25	25	25	25
<b>Product Options and Accessories</b>					
Fiber Patchcords	SMA 905 connectors	SMA 905 connectors	SMA 905 connectors	SMA 905 connectors	SMA 905 connectors
			100 µm core	200 µm core	100 µm core
				200 µm core	200 µm core
					200 µm core
					200 µm core
Slit Width (micron)	Other slit sizes such as 10, 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.

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