

*The SPM-002-XT64 is the most versatile spectrometer optical bench in the Photon Control product line. It is equipped with a Hamamatsu S11071-1106 back-thinned CCD detector for very high sensitivity from UV to NIR.*

### Description:

The SPM-002-XT64 has a 2048 x 64 pixel array to collect light efficiently from large core optical fibers. It also has a dynamic range of 6520:1 and 16 bit A/D converter resolution. SPM-002-XT64 has anti-blooming benefits which are very helpful distinguishing adjacent emission lines with large differences in power levels. What sets the SPM-002-XT64 apart from other spectrometers of its kind in the market; is cost competitiveness, a wide range of features and proprietary optical design to achieve a higher resolution.

Our spectrometers are the only ones equipped with an internal DSP chip. This DSP chip is capable of handling complex signal processing tasks. It also boasts powerful software development kits.

The SPM-002-XT64 work extremely well with the SPL family of light sources and other accessories available at Photon Control.

### Applications:

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

Contact us for more details.



### Features:

- Compact size and 2048 x 64 pixels for high resolution and sensitivity
- 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 high speed USB 2.0 interface
- 16-bit A/D resolution

Product Model:	SPM-002-BT64	SPM-002-DT64	SPM-002-ET64
<b>Performance Specifications</b>			
Spectral Range (nm)	190-400	200-850	200-1090
Detector	Hamamatsu S11071-1106 Back-Thinned CCD	Hamamatsu S11071-1106 Back-Thinned CCD	Hamamatsu S11071-1106 Back-Thinned CCD
Resolution (FWHM) (nm) (center / outer spectral range, 10 um slit)	0.6/0.7	0.6/1.6	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 x 64	2048 x 64	2048 x 64
Integration Time Range	3 milliseconds to 10 seconds	3 milliseconds to 10 seconds	3 milliseconds to 10 seconds
Triggering	Hardware trigger	Hardware trigger	Hardware trigger
Maximum Refresh Rate (Hz)	50	50	50
<b>Operating Specifications</b>			
Temperature (°C)	-10 to +40	-10 to +40	-10 to +40
<b>Electrical Specifications</b>			
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
<b>Physical Specifications</b>			
Dimensions (mm)	101.5 x 110 x 53.4	101.5 x 110 x 53.4	101.5 x 110 x 53.4
Weight (g)	475	475	475
Slit (µm) (standard)	25	25	25
<b>Product Options and Accessories</b>			
Fiber Patchcords	SMA 905 connectors SMA 905 connectors SMA 905 connectors SMA 905 connectors	100 um core 200 um core 400 um core 600 um core	UV/VIS UV/VIS (Standard) UV/VIS UV/VIS
Slit Width (micron)	Other slit sizes such as 5, 10, 50, 75 and 100 micron are available upon request		
Fiber Input Receptacle	FC receptacle 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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WARRANTY: All Photon Control Spectrometer products come with a 1-year warranty. Some limitations apply, please contact us for more details.

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