# PhotonControl

Compact in size with a higher resolution 16-bit A/D converter and high speed USB interface, the SPM-002-XH uses a proprietary optical design to achieve a higher resolution than other spectrometers of the same size.

## Overview:

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 that can be easily integrated into existing software using one of our development kits.

## Applications:

- Visible spectrum/ color monitoring
- UV, Visible, NIR (Near Infrared)
- Biophotonics
- Transmission
- Laser/ Light Source monitoring
- Absorption
- Fluorescence
- Molar concentration
- Optical inspection
- Chemical analysis
- Reflection
- Scattering

## Contact us

Photon Control is a leader in precision measurement solutions, specializing in customization and OEM manufacturing. Visit www.photon-control.com for more information, or contact us at info@photon-control.com with your measurement requirements for engineering guidance and a quote. Ask about bundling your calibration source with some of our other spectral products like spectrometers and fiber patch cords.

## Features

- Compact size but higher resolution than competitors

- Inboard DSP saves on having to process data externally

- Spectral ranges between 190nm and 1090nm

- Includes feature rich SpecSoft display and analysis software for data logging

- Convenient USB interface

- 16-bit A/D converter and USB 2.0 high speed interface

- Compatible with the SPL family of light sources, accessories, software development kits and SpecSoft Pro from Photon Control

- Powerful LabVIEW-based software

Certified System

ISO 9001:2008
QMI-SAI Global

## Technical Specifications

| Specifications | | | | | |
| --- | --- | --- | --- | --- | --- |
| SPM-002: | -AH | -BH | -CH | -DH | -EH |
| Spectral Range (nm) | 400-700 | 190-400 | 350-1000 | 200-850 | 200-1090 |
| Resolution (center/ outer) (nm)* | 0.5/0.6 | 0.6/0.7 | 0.5/0.7 | 0.6/1.6 | 0.8/2 |
| Standard Slit (um) | 25 | 25 | 25 | 25 | 25 |
| Detector Type | CCD | CCD | CCD | CCD | CCD |
| Pixels | 3648 | 3648 | 3648 | 3648 | 3648 |
| A/D Converter (bits) | 16 | 16 | 16 | 16 | 16 |
| Exposure Time Range | 10usec to 65 sec | 10usec to 65 sec | 10usec to 65 sec | 10usec to 65 sec | 10usec to 65 sec |
| Temperature Range ( C ) | -10 to 55 | -10 to 55 | -10 to 55 | -10 to 55 | -10 to 55 |
| Focal Length (mm) | 70 | 70 | 70 | 70 | 70 |
| Triggering | Hardware Trigger | Hardware Trigger | Hardware Trigger | Hardware Trigger | Hardware Trigger |
| Maximum Refresh Rate (Hz) | 50 | 50 | 50 | 50 | 50 |
| Interface | USB 2.0 | USB 2.0 | USB 2.0 | USB 2.0 | USB 2.0 |
| Power Requirements | 10-30 VDC | 10-30 VDC | 10-30 VDC | 10-30 VDC | 10-30 VDC |
| Dimensions | 101.5 x 90 x 54.3 | 101.5 x 90 x 54.3 | 101.5 x 90 x 54.3 | 101.5 x 90 x 54.3 | 1001.5 x 90 x54.3 |
| Weight (g) | 475 | 475 | 475 | 475 | 475 |

## Product Options and Accessories

| | |
| --- | --- |
| CWA-SMA-100-V-2 | Fiber Optic Patch Cord - SMA 905 connector - 100 micrometer core - VIS/NIR - 2m |
| CWA-SMA-200-V-2 | Fiber Optic Patch Cord - SMA 905 connector - 200 micrometer core - VIS/NIR - 2m (Standard with -A and -C) |
| CWA-SMA-100-U-2 | Fiber Optic Patch Cord - SMA 905 connector - 100 micrometer core - UV/VIS - 2m |
| CWA-SMA-200-U-2 | Fiber Optic Patch Cord - SMA 905 connector - 200 micrometer core - UV/VIS - 2m (Standard with -B, -D, -E) |

Note: All spectrometers are shipped with an optical fiber optic patch cord, USB cable, user manual, external power adapter and SpecSoft display and analysis software. Software Development Kits and SpecSoft Pro are available at additional costs.