

SM245

Low Noise Compact CCD Spectrometer

Wide Spectral Range (Up to 200~1050nm)

Enhanced Dark Current Noise

High Speed Data Acquisition

Compact & Modular Design



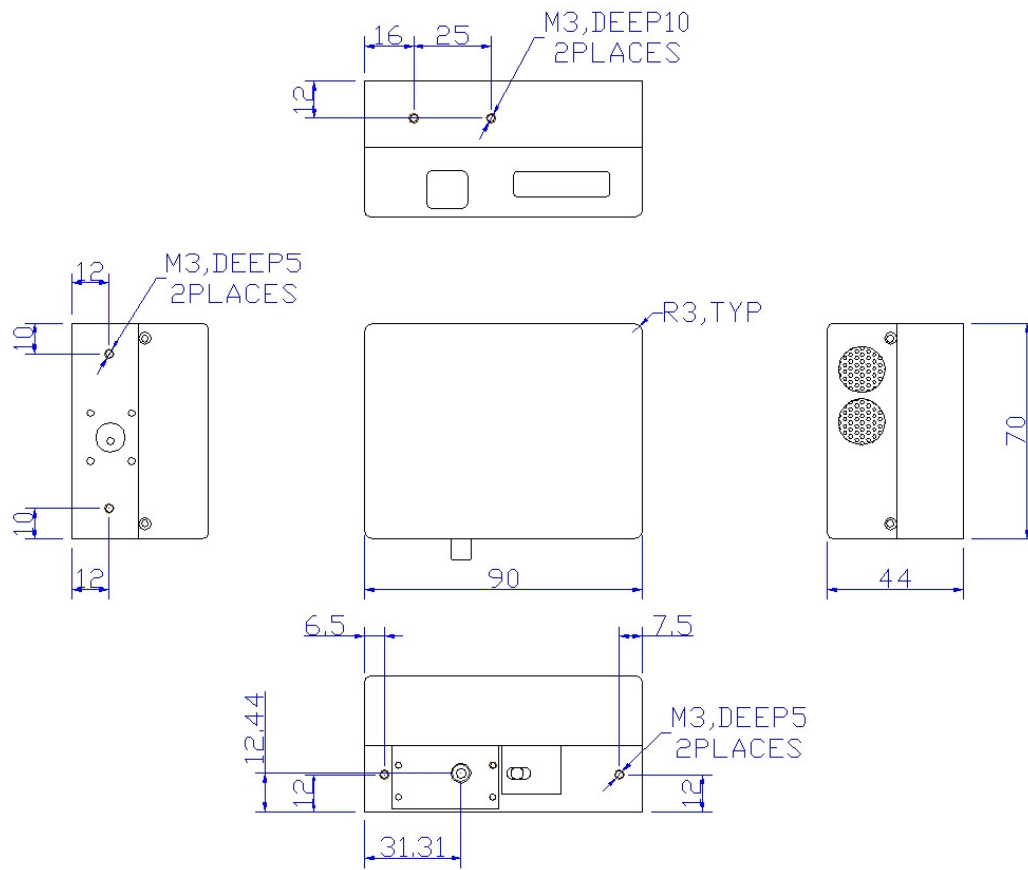
The Choice for high speed data acquisition Applications

Spectral Products is offering the new SM245 high speed 2048 pixel array CCD spectrometer. Thanks to the enhanced design on the electronic board of the SM245, the dark current noise level as well as the data acquisition speed have improved. Based on SP's special optical bench design, it supports many different applications where spectral or color measurements are required, including high speed data acquisition. The SM245 can accept light directly through its built-in slit or via optical fiber. The durable aluminum housing that encloses the SM245 provides stable optical bench operation over a wide range of temperatures. This array (in conjunction with our special UV coating process and customized order sorting filters) allows up to a 850nm measurement window from 200nm to 1050nm (smaller measurement window sizes increase spectral resolution and light sensitivity). Standard interface to the SM245 is a USB 1.1/2.0 compatible interface with 16-bit. Our USB board can support multichannel configuration up to 8. With this multichannel configuration, a high resolution for wide range or a dual spectrometer system (one for measurement and the other for reference) is possible. Spectral Products applies new UV enhancing coating on the CCD to increase the UV sensitivity below 450nm comparing with the conventional UV coating that is widely used in CCD spectrometers. By the help of this new UV coating, the signal sensitivity below 500nm can get improved ~20-50% more in general. Software support includes a SDK and DLLs for dedicated applications development and our SM32Pro Windows-based spectral acquisition and analysis software.

Specifications :

| Physical Dimension | |
|--------------------------|--|
| Dimensions (Inches) | 3.54" x 2.76" x 1.73" (90mm X 70mm X 44mm) |
| Weight | 1lb (0.4kg) |
| Fiber Optic Connector | SMA905 N.A.=0.22 Optical Fiber Input |
| Detector | |
| Detector | Sony ILX511 (UV Enhanced Coated) |
| Cooling | None |
| Windows Material | Quartz or Glass |
| Spectral Response Range | ~200-1050nm |
| Pixels | 2048 (Effective) |
| Pixel Size | 14 um X 200 um |
| Well Depth | 62,500 e- |
| Optical Specification | |
| Wavelength Range | Full Range : ~200-1050nm |
| | UV Range : ~200-450nm |
| | VIS Range : ~380-760nm |
| | NIR Range : ~550-1050nm |
| | other user customized range |
| Optical Resolution | ~0.3-10nm, dependent on spectral range, slit width, fiber diameter |
| Dark Noise RMS | < 35 RMS counts in 16bit @ 35msec integration time |
| Signal to Noise Ratio | > 300 : 1 |
| Stray Light | <0.1% AVG. |
| Filter | Second Order Blocking Filter Installed |
| Electrical Specification | |
| ADC resolution | 16bit (0-65535) |
| Minimum Integration Time | 1msec |
| Interface | USB 1.1/2.0 Compatible |
| Trigger Mode | Free Run Mode Software Trigger Mode External Trigger Mode |
| Computer | |
| Operating System | Windows 98/Me/2000/XP/VISTA/Win7, 8.0, 8.1, 10 (32/64bit) |
| Software | SM32Pro software included |
| Software Development Kit | Visual C++ DLL /LabVIEW VI SDK |

Case Dimension :



(Size in mm)

Ordering Information : Please indicate product number plus description when ordering

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