SM303

High Performance TE-Cooled Backthinned Spectrometer

Scientific-grade High Performance

Extremely Low Dark Noise and Stray Light for Spectrophotometer/ Spectroradiometer

High Signal to Noise Ratio

High Ultra-Violet Quantum Efficiency

High Speed Data Acquisition

Dark Option (Auto Shutter)

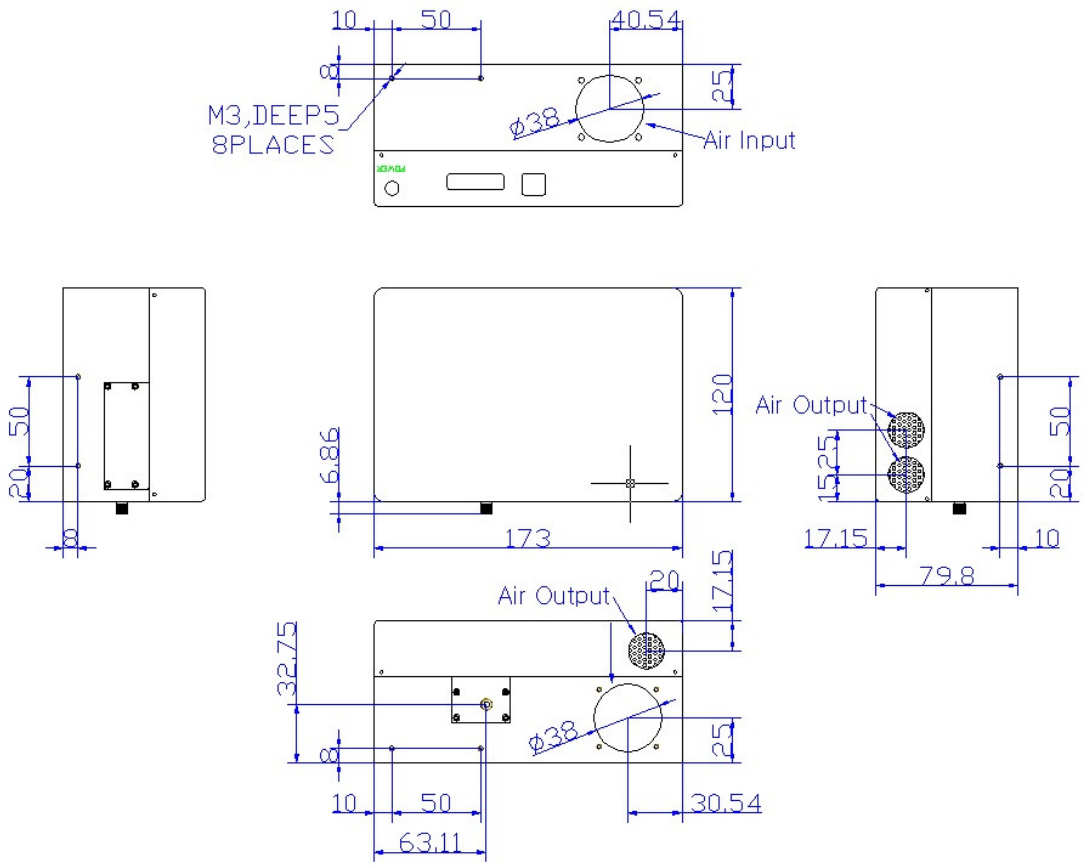
The Choice for Low Signal Level Applications

Spectral Products is offering the new SM303 TE cooled back-thinned 1024 pixel array CCD spectrometer. The SM303 is ideal for UV/VIS/NIR spectrometry that requires very high signal to noise ratio and/or high dynamic range, like fluorescence, Rama, LED property testing applications. The back-thinned CCD has excellent sensitivity in UV and allows deep UV application.
Well designed housing allows up to a 850nm measurement window from 200nm to 1050nm (smaller measurement window sizes increase spectral resolution and light sensitivity) with very low stray light. The TE cooled detecor also help to measure very low light signals by reducing the noise level in long integration times. Thanks to the hidynamic range and the low noise, the SM303 is also ideal for radiometric measurement applications. Standard interface to the SM303-Si is a USB 1.1/2.0 compatible interface with 16-bit. 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	6.81”X4.72”X3.14” (173mm X 120mm X 79.8mm)
Weight	4.5lbs (2.0kg)
Fiber Optic Connector	SMA905 N.A.=0.22 Optical Fiber Input
Detector	
Detector	Hamamatsu S7031-1006 (TE Cooled Backthinned FFT CCD)
Cooling	One Stage TE(thermo-electric) Cooling(-10°C)
Spectral Response Range	~200 -1050nm
Pixels	1044 X 64 pixels (Total) 1024 X 58 pixels (Effective)
Pixel Size	24 um X 24 um
Active Area	24.576 mm X 1.392 mm
Full Well Capacity	300 Ke- (Vertical) 600 Ke- (Horizontal)
Quantum Efficiency	>90% @ 650nm
Optical Specification	
Wavelength Range	Full Range : ~200-1050nm UV/VIS Range : ~200-800nm Visible Range: ~300-900nm other user customized range
Optical Resolution	~0.3-7nm, dependent on spectral range, slit width, fiber diameter
Dark	Auto Shutter
Dark Noise RMS	< 2 RMS counts in 16bit @ 35msec integration time
Signal to Noise Ratio	1000 : 1
Stray Light	<0.05% AVG
Filter	Second Order Blocking Filter Installed
Electrical Specification	
ADC resolution	16bit (0-65535)
Minimum Integration Time	7msec
Interface	USB 1.1/2.0 Compatible
Trigger Mode	Free Run Mode Software Trigger Mode External Trigger Mode (9-pin connector) (TTL Edge Trigger Input / Digital Output for Monitoring)
Power Input	100-240V(47-63Hz),1.9A
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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