



HOLMARC OPTO-MECHATRONICS PVT. LTD

SCANNING SPECTROMETER



APPLICATION AREAS
Emission & Absorption study | Fluorescence
Bioluminescence | Chemiluminescence
Raman Spectroscopy | Calorimetry

Model : HO-SP-S100M & HO-SP-S100S

Scanning spectrometer is specially designed and developed for industrial and academic research laboratories in the fields of biology, chemistry, physics, environmental science and engineering. This device works in the wavelength range of 350 to 960nm. Scanning spectrometer can rapidly scan a range of wavelengths and record light intensity at each wavelength.

This instrument uses a concave mirror to collimate the light from input port. Input and output ports of the spectrometer are fitted with precise, micrometer controlled variable slits. A plane holographic grating is used to diffract the input light that is subsequently focused by a second concave mirror. The holographic gratings used in the instrument minimize stray light for the highest sensitivity and accuracy. A stepping-motor controlled sine drive positions the grating, which is mounted on a precision rotary table. The sine drive delivers a linear relationship between stepper motor motion and wavelength of interest. It includes a mechanism to change the wavelength selected by the software and to record the resulting changes in the measured quantity as a function of the wavelength. Results are obtained as spreadsheet.



Specifications:

Optical path configuration	Czerny-Turner type
Dispersion element	Holographic grating
Grating density	1200 grooves / mm
Relative diffraction efficiency	45 - 65% (Visible)
Wavelength range	350 - 960nm
Resolution	0.1nm
Wavelength Repeatability	± 0.5 nm
Slit width	0 - 4mm (Micrometer Controlled)
Detector	Si photodiode or PMT
PMT, detection range	200 - 850nm
Si photodiode, detection range	350 - 1100nm
Interface	USB 2.0 or RS-232
Data formats	Spreadsheet

There are two types of single channel detectors for using with scanning spectrometers Photomultiplier Tube (Model: HOSP-S100M) and Silicon photo diode (Model: HO-SP-S100S).

For general emission and absorption experiments, scanning spectrometer with silicon photo diode is suitable. PMT detectors typically offer much higher sensitivity to low light levels than silicon photo diode and are well suitable for Raman spectrum, fluorescence, bioluminescence and chemiluminescence.

www.holmarc.com

e-mail.: sales@holmarc.com

FEATURES

- Multitude of research and laboratory applications
- High resolution spectral analysis (0.1nm) of spectral emission and absorption lines
- High wavelength accuracy
- 350 - 960nm spectral range in a single scan
- Optional photomultiplier and silicon photo diode detector
- Adjustable Input and output slit to control the spectral resolution (bandpass)
- Adjustable wavelength steps
- RS-232 and USB to serial port extension module
- Optional optical port with optical output and detector input ports

