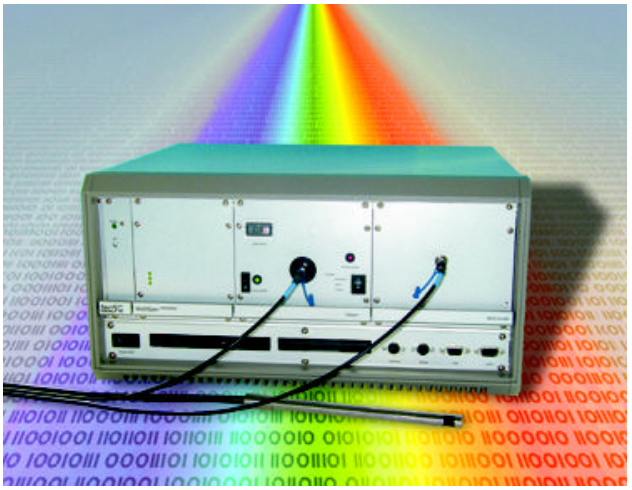
MultiSpec

OEM Detectorarray Spectrometer Systems

MultiSpec is a modular instrument family of fast and process capable simultaneous readout spectrometer systems for the UV/VIS/NIR, based on flexible 19“- chassis technology. Various spectral ranges, resolutions and PC-interfaces are available. The integrated spectrometers are high-quality optical modules without moving parts and with high reliability and long term stability. An electronic multiplexer makes multi-channel sampling possible. The standardized SMA-connectors at the front side allow the connection of fibres and various probes.



MultiSpec*StandAlone*

- **possible spectral range from 200 – 1700 nm (- 2200*)**
- **fast, precise, robust**
- **modern detector array technology**
- **wide dynamic range**
- **various Operating Electronics**
- **versatile software packages**

Spectrometer module

MultiSpec systems are based on the monolithic spectrometers from Carl Zeiss. The high light sensitivity and the extreme stability of this component allow together with the tec5 15/16-bit electronics very accurate measurements with high dynamic. The spectrometers are available with various wavelength ranges and resolutions. In addition you can control two different types of spectrometers in parallel.

Plug-In-cassette design

MultiSpec systems follow a modular concept. Each component, such as spectrometer or lamp module, are integrated in cassettes, which can be changed easily. So you keep the necessary flexibility for future measuring demands.

Operating electronics

Different interfaces guarantee easy transfer from laboratory to process:

MultiSpec*Desktop*: The Desktop version with PCI-Bus plug-in board is especially suitable for laboratory use.

MultiSpec*Remote*: The Remote version offers a RS-232/RS-485 interface. With RS-485 an external control by host PC from up to 6 units over a distance of more than 1 km is possible.

MultiSpec*StandAlone*: The Stand-Alone line with integrated embedded PC offers a powerful and compact unit. For process communication it provides Ethernet interface, analog 4...20mA outputs and digital I/O´s.

Electronic multiplexer

Electronic spectral sensor multiplexers provide important advantages in case sample and reference data have to be acquired at the same time (2-channel-operation) or spectra at different measurement locations have to be taken sequentially. The tec5 multiplexer has no moving parts and is very fast. Variations of the light source or the temperature can be compensated.

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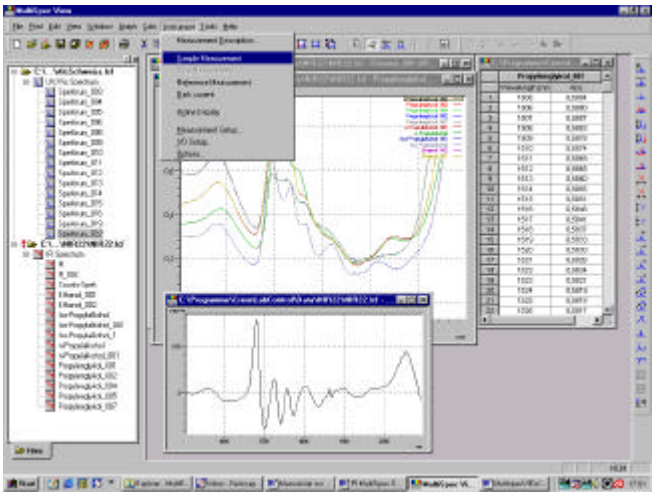
Light Sources

- Usable wavelength range:
  Halogen lamp: 360nm – 2400nm
  Deuterium lamp: 200nm – 600nm
  Shine through lamp: 200nm – 2400nm
  Xenon flash lamp: 200nm – 1100nm
- Lamp and shutter control
- 2 internal filter ports

Software modules

- MultiSpec*View* and MultiSpec*Calc*
  Modern and powerful 32 Bit software packages based on Spectacle™ from CreonLabControl
- MultiSpec*Pro* process software with various data processing algorithms (e.g. color evaluation / chemometrics) based on LabVIEW™
- 32 Bit function library for LabVIEW™ and programmer interface for C++/ VB/ Delphi for the development of application specific software
- Additional modules on request



Spectroscopy software MultiSpec*VIEW*

Accessories

Equipped with appropriate fiberoptics and probes the system can be adapted for your measurement task. We assist you in finding the optimized solution.

Technical Data:

Spectral sensor
(Specifications depend on applied module)

Spectral range:	200 – 1700 nm (*- 2200 nm on request)
Resolution (Rayleigh):	2.5 - 18 nm
Pixel dispersion:	0.8 - 6 nm
Wavelength-precision:	0.1 - 0.6 nm
Number of pixels:	128 / 256 / 512 / 1024
Noise:	< 0.00005 abs. rms for Si-array < 0.0002 abs. rms for InGaAs-array

Operating Electronics
(Specifications depend on applied module)

Resolution:	15 / 16 Bit
Measurement time:	variable from 1.5 ms – 6 s

Optical Interface

Standard-SMA connectors

Other

Power supply:	110/220V, 50/60Hz
Dimensions: (Std.-enclosure)	18 x 427 x 411 [mm] (3/4 HE / 84TE)
Weight:	≈ 12 kg
Operating temperature:	0 °C – 45 °C

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