



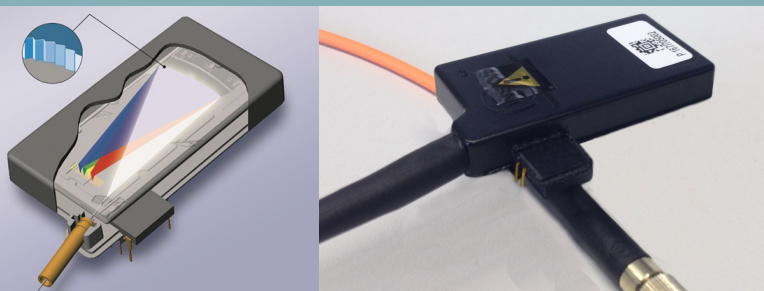
integrated spectral solutions



THE SPECTRAL SENSING COMPANY

UV VIS SENS HR3 micro spectrometer

Monolithic micro spectrometer for spectral sensing applications



Product features:

- » no moving parts
- » excellent mechanical, optical and thermal stability
- » unsurpassed price-performance ratio
- » small dimensions, light weight
- » easy and flexible handling

Excellent optical performance characteristics and inter instrument agreement due to a microinjection molded hollow cavity waveguide design. The use of a state-of-the-art photo detector facilitates the precise measurement in the UV/VIS range for hand held devices as well as for in-line process sensors.

Typical applications range from instrumental analysis, biological and clinical systems to colorimeters, food inspection systems and fluorescence measuring devices.





Entrance fiber	300/330 μm ; NA = 0.22; Low OH-
Entrance slit	15 μm * 300 μm
Spectral range (specified)	350 - 850 nm
Spectral range (accessible)	280 – 1050 nm
Spectral resolution	3 nm _{FWHM}
Spectral accuracy	≤ 1 nm (typ.)
Reproducibility	≤ 0.1 nm
Blazed wavelength	420 nm
Stray light attenuation	> 17dB with GG495 at 470 nm (30 dB using SC30)
Dark noise	< 10 cts (16 bit ADC)
Sensitivity at 650 nm (with 16 bit ADC)	> 2.5 E 15 cts*nm / Ws
Signal to noise ratio (with 16 bit ADC)	>1500 at T _{Integration} = 0.25 ms
Thermal wavelength stability	< 0.05 nm/K
Dispersion	0.98 nm/pixel
Integration time	0.1 - 40,000 ms
Detector array	S-CMOS
Humidity	0% - 90% non condensing
Electronics	16 bit; connector: USB
Fiber connector	SMA 905 or customized
Operating temperature	0°C to 40°C
Storage temperature	-40°C to 60°C

Versions:	Module/M	OEM-System/S	Evaluation-System/H
Dimensions (LxWxH)	54 x 42 x 9.1mm 2.13" x 1.65" x 0.36" in	67 x 42 x 22mm 2.46" x 1.65" x 0.87" in	69.3 x 55 x 13.6 mm 2.73" x 2.17" x 0.54" in
Weight	22g/ 0.048lb (incl. Fiber and SMA 905 connector)	46g/ 0.1lb (incl. Fiber and SMA 905 connector)	48 g / 0.1 lb
Fiber length	450 mm; ± 25 mm / 17.7" ± 1 in	450 mm; ± 25 mm / 17.7" ± 1 in	-
Optical interface	Fiber 300/330 μm ; NA = 0.22; low OH- / SMA 905	Fiber 300/330 μm ; NA = 0.22; low OH- / SMA 905	SMA 905 socket
Triggering	-	16 bit ADC, TTL signal (e.g. to control lamps, shutter, flash lights), synchronized with measurement, adjustable delay, TTL user bit, LV-TTL lamp or shutter control output	16 bit ADC, TTL signal (e.g. to control lamps, shutter, flash lights), synchronized with measurement, adjustable delay, TTL user bit, LV-TTL lamp or shutter control output
Interfaces	-	USB Full Speed, UART	USB Full Speed, UART
Connectors	DIL 22	USB 2.0 (micro B socket)	USB 2.0 (micro B socket)
Accessories	Product Manual	Test Report, Product Manual, SPECview spectroscopy software, SPECcon Interface DLL (Native C++)	Test Report, Product Manual, SPECview spectroscopy software, SPECcon Interface DLL (Native C++)
Power requirements	5V	Via USB or external 5V	Via USB or external 5V
Power consumption	25 mW	1.5 W (typ.)	1.5 W (typ.)

All data are subject to change without prior notice