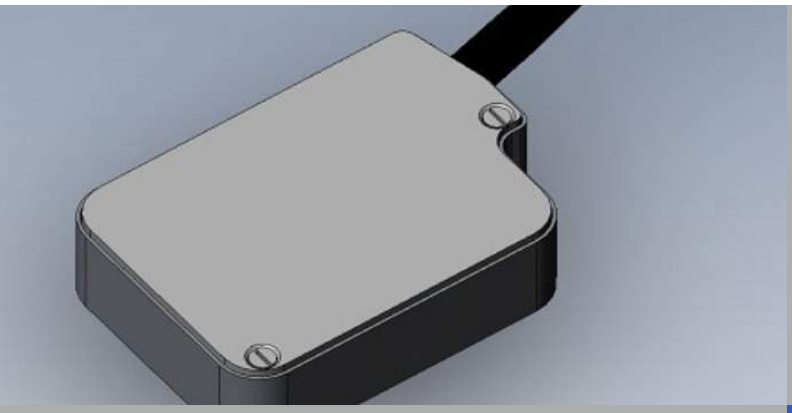
INSION®

integrated spectral solutions

THE SPECTRAL SENSING COMPANY

NIR 1.7 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
- » easy and flexible handling

A new generation of NIR-Systems by INSION GmbH. A high grade of robustness due to an improved monolithic design, brilliant optical characteristics as well as the small dimensions open up possibilities in various new and also common applications.

They are ideal for the use in analytic and diagnostic handheld devices and highly cost efficient because of the excellent inter instrument agreement. Typical applications range from instrumental analysis, biological and clinical systems to material identification and analysis of agricultural and nutrition products.

NIR 1.7 /S

NIR 1.7 /H

Entrance fiber	300/330 µm; NA = 0.22; low OH-
Entrance slit	60 µm x 300 µm
Spectral range	900 - 1700 nm
Spectral resolution [$\Delta\lambda_{FWHM}$]	< 16 nm_{FWHM} / 8.2 nm_{Pixel}
Spectral accuracy	2 nm (typ.)
Blazed grating	g = 5,7 µm
Reproducibility	≤ 0.1 nm
Sensitivity	> 100 E12 cts x nm/Ws @ 1500 nm
Signal to noise ratio (with 16 bit ADC)	≥ 5,000 at $T_{INTEGRATION}$=2 ms
Thermal wavelength stability	< 0.05 nm/K
Dispersion	8.2 nm/Pixel
Integration time	2 - 40,000 ms
Stray light attenuation	> 20dB $_{LWP\ 1200\ ;\ SWP\ 1290}$, (30 dB using SC30)
Operating temperature	0°C to +40°C
Storage temperature	-40°C to +60°C
Humidity	0% - 90% noncondensing
Detector array	InGaAs, 128 elements
Detector temperature regulation	Min. Temp = 5K below ambient temperature Max. Temp =40°C, Tolerance = ±0,03°C

Versions:	**NIR 1.7 /S micro spectrometer OEM system**	**NIR 1.7 /H micro spectrometer**
Dimensions (LxWxH)	108 x 76.6 x 21.5 mm / 4.25“ x 3“ x 0.85“ in	114.6 x 85 x 48.5 mm / 4.51“ x 3.35“ x 1.91“ in
Weight	130 g / 0.29 lbs	500 g / 1.1 lbs
Fiber length	280 mm; + 0mm /- 20 mm / 17.7“ + 0“/- 0.79“ in	280 mm; + 0mm /- 20 mm / 11“ + 0“/- 0.79“ in
Fiber finishing	SMA 905**	SMA 905**
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, RS-232	USB Full Speed, RS-232
Connectors	USB Typ B, Sub-D 9 pol., Power Plug 3 pol.	USB Typ B, Sub-D 9 pol., Power Plug 3 pol.
Accessories	Test Report, Product Manual, SPECview spectroscopy software, Interface DLL	Power Supply, Test Report, Product Manual, SPECview spectroscopy software , Interface DLL
Options		
Power requirements	5 V (+0,2 V/-0 V; Ripple <50 mV	Egston Power Supply 6V/2A (included)
Power consumption	7.5 W	9 W

* Depending on calibration
** Customizing on request

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