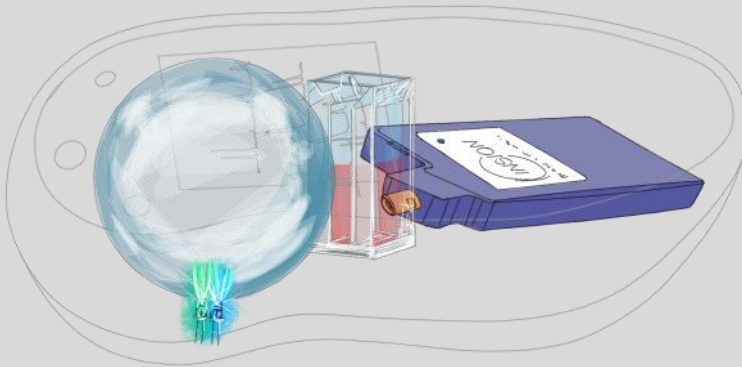




Mobile Spectral Engines

Monolithic Microspectrometers covering the entire optical signal path

Based on the new INSION aMSM series we develop innovative variety of analytical spectral devices from light source to sampling path and analysis sensors with our customers.



- » Complete optical path solutions
- » Miniaturized optical sampling systems
- » Customizable LED light sources
- » Proprietary software, DLL interface

Light source

Various combinations of LEDs and small tungsten lamps achieve a range of 280 - 1900 nm



Optical sampling system

Sample centred optical signal path entirely integrated, optics accessories



Spectral analysis

Optional aMSM series spectrometers from UV VIS to NIR wavelength range

INSION Microspectrometers are designed for battery powered handheld devices for in line process sensors as well as for benchtop devices . They are used in biological and medical diagnostics, instrumental analysis, process control, environmental monitoring, analysis of agricultural and nutrition products, metrology and gemmology. The highly sensitive spectrometer excels in fluorescence detection and SERS detection.



Fluorescence and R emission combinational spectroscopy

The miniature light source and sampling head are integrated in one component, the wide detection range from 300 to 1900nm allows for very accurate identification and qualification.

Components: aMSM UV VIS SENS & aMSM NIR 1.9 256 NT, UV to NNIR light sources, up to 8 fluorescence excitation paths and diffuse reflectance probe

Applications: Food inspection, field testing of agricultural products, material identification and quantification, anti counterfeiting and material traceability applications.



BASKit

Mobile system for suggested transmission measurements in the 280-1000nm range, NIR optional.

Components: aMSM UV VIS SENS HR, UV/VIS and NNIR LEDs Light source, integrating sphere, cuvette holder and flexible measurement distance

Applications: Transmission measurement, e.g. blood gas parameters analysis.



Diffuse reflectance spectroscopy (top)

Spatially resolved diffuse reflectance spectroscopy (down)

The healthcare monitors are lightweight, wearable.

Components: aMSM UV VIS SENS, customizable LED light sources, contact reflection probe and micro optical accessories, optional: embedded μ C- system, battery powered, Bluetooth connectivity

Applications: Transcutaneous measurement of tissue moisture and blood parameters, cosmetics; material testing, food inspection.

aMSM UV VIS SENS

aMSM NIR NT 256

Application range	Medical diagnosis, Biophotonics, Colorimetry, Water analysis	Food inspection, Agriculture, Process control, Recycling
Detector array	SENS version: S-CMOS 512 pixels HR version: S-CMOS 1024 pixels	InGaAs, 256 pixels
Spectral range	280 – 1050 nm	1.7 version: 950 — 1750 nm 1.9 version: 1050 — 1850 nm
Spectral resolution	SENS version: 8 nm _{FWHM} HR version: typ. 3 - 4 nm _{FWHM}	Typ. 10 nm _{FWHM}
Sensitivity	SENS version: 19 E 15 cts*nm / Ws HR version: 2.5 E 15 cts*nm / Ws	> 150 E12 cts x nm/Ws @1500 nm
Fiber and connector	300/330 μ m, NA = 0.22; SMA905, IS-02, CM-01 ferrule with aperture front end or customized	
Electronics (optional)	16 bit; connector: USB, SPI and UARI	16 bit; connector: USB, SPI and UARI
Dimensions, weight	60 x 41 x 7.7 mm, 14g/ 0.03lb 2.36" x 1.61" x 0.30" in	60 x 36 x 13.3 mm, 23g/ 0.05lb 2.36" x 1.42" x 0.52" in