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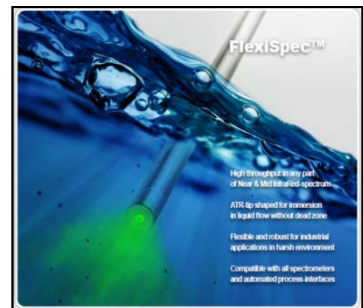
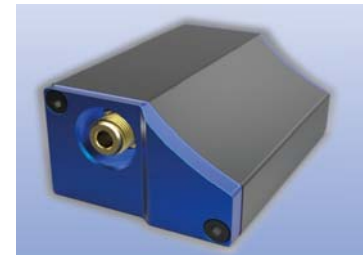
broad spectra fiber solutions

IR-Fiber Sensor based on synergy of MEMS Tunable Filter with Fiber Probe

FlexiSens® Powered by *Spectral Engines*

FlexiSens® is based on MEMS-IR-Sensors using innovative tunable Fabry-Perot filters and coupled with IR-fiber probes to enable process control at selected wavelengths in 1.3-10.5µm spectral range

Wavelength ranges	1.3 - 1.7 µm 1.6 - 2.0 µm 1.7 - 2.2 µm	3.0-3.7 µm 3.7-4.5 µm 8.0-10.5 µm
Resolution	0.7-1.4 % of wavelength	
Detectors	InGaAs	PbSe, DTGS
Wavelength Settling	< 0.8 ms	
SNR (typical)	3000	1000
Power consumption	< 1 W	
Optical interface	SMA 905	Open space
Wavelength stability	< 0.1 nm /°C	
Dynamic range	> 15 bits	
Electrical interface	USB2.0 (Others possible)	
Size	50 x 35 x 20 mm ³	
Weight	< 50 g	
Temperature range	+10..+35°C	



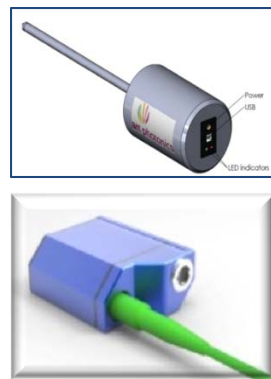
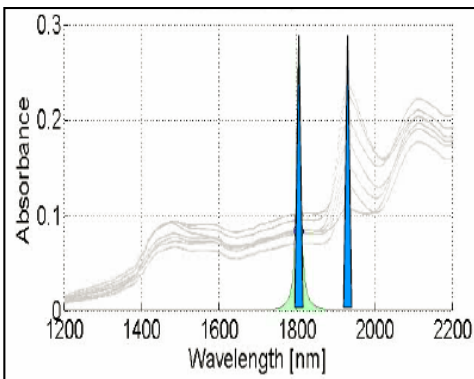
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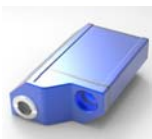
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- FlexiSens MEMS-Sensors are:**
- Compact and lightweight
 - Cost effective
 - Fast with high throughput
 - Dynamic spectral sampling
 - Low power consumption
 - Flexible & robust fiber probes enable industrial applications

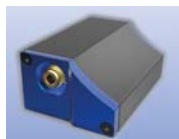


SWNIR



0.85-1.1

NIR



1.3-1.7 1.5-2.0 1.7-2.2

MIR



3.0-3.7 3.7-4.5

LWMIR



6.0-8.0 8.0-10.5



Fat,
Protein,
Moisture,...

Moisture,
Polymers, API
Ethanol,...

Hydrocarbons,
CO₂,...

Ethanol, Glucose,
Glutamine, org. Acids
Ammonium,...

ATR-Probe tip	ZrO	ZrO	Si / Diamond
Transmission	1.7-2.2μm	3.0-3.7μm	8-10.5μm
IR-Fiber type	NIR-Silica	CIR-fiber	PIR-fiber
Temperature °C	-100°/+140°	-40°/+90°	-100°/+140°
Pressure (max)	100 Bar	100 Bar	200 Bar



FlexiSens®