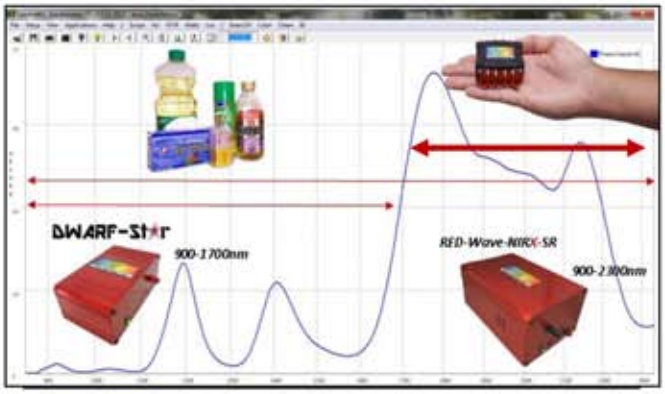
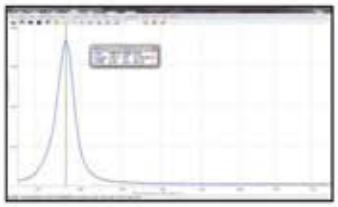
RED-Wave-Micro Spectrometer for OEM & NIR Sensing Applications

The RED-Wave-Micro spectrometer is designed for OEM and sensing applications in the near-infrared spectral region. This miniature MEMS spectrometer covers spectral regions where InGaAs linear detector array technology lacks sensitivity and optical throughput. These micro NIR sensors are the perfect solutions for demanding NIR applications and light measurement >1700nm.

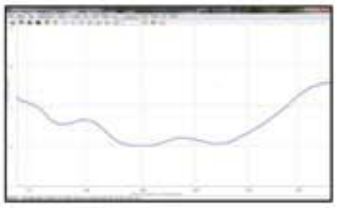


Spectral range comparison between StellarNet NIR spectrometers

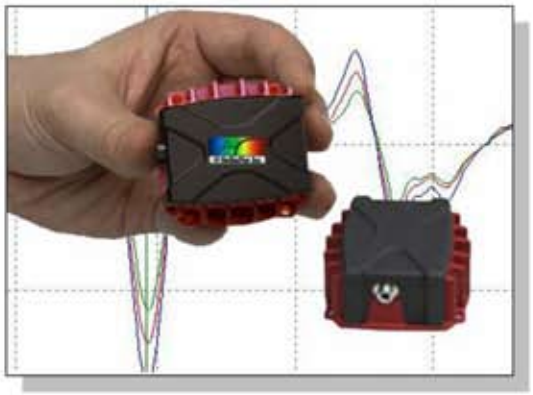
These RED-Wave-micro spectral sensors overcome the limitations of traditional linear array based spectrometers by utilizing innovative MEMS based Fabry-Pérot tunable filter technology. Due to their compact size and low cost, they are an ideal solution for advanced sensing application. These spectral sensors are designed for harsh industrial applications and they offer extreme ruggedness even in the most demanding environments.



Optical NIR Filter Measurements



Isopropyl Alcohol Absorbance



RED-Wave-Micro – Robust, compact, and affordable solution for NIR sensing applications

For OEM and NIR Spectral Sensing

- Compact just 1.5x1.5x1" and robust
- MEMs technology improved performance over InGaAs arrays
- Fully featured SpectraWiz Software Suite
- Low power consumption
- OEM high volume capabilities
- Full spectrum OR selectable wavelength options

Near-Infrared Applications

- Moisture
- Ethanol
- Polymers
- Hydrocarbons
- CO2
- Agriculture and Food composition
- Pharmaceuticals

Specifications	RED-Wave-MICRO		
Detector type:	Single element extended InGaAs	Signal/Noise:	5000
Spectrometer range:	1.75 - 2.15 µm (other ranges available)	Power consumption:	< 1.5 W
Spectral Resolution:	10nm	Size:	<0.25nm
Spectral element:	MEMS Fabry-Perot Interferometer	Weight:	< 125 g
Dynamic range:	10,000	Optical interface	SMA905
Integration time:	0.1ms-10ms	Interface:	USB2
Digitizer Resolution:	16bit	Software included:	SpectraWiz Suite

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