

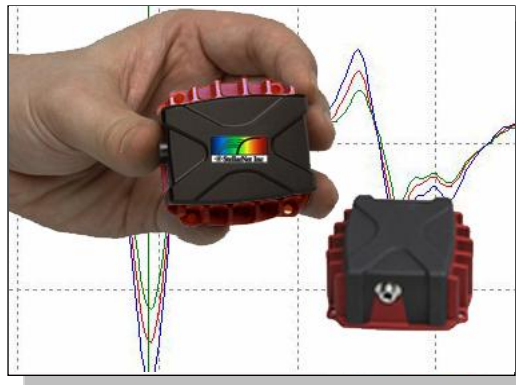


# Technical Specification Sheet MINI RUGGED SPECTROMETER SYSTEMS

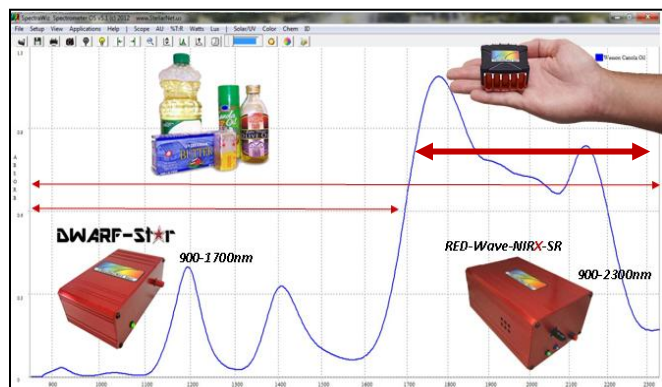
A Universe of Spectrometer Systems

## 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.

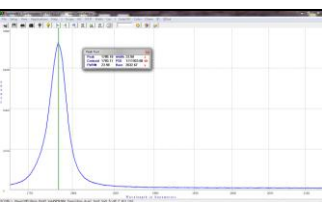


**RED-Wave-Micro** – Robust, compact, and affordable solution for NIR sensing applications

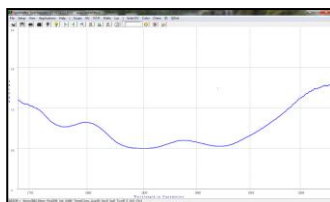


**Spectral range comparison between StellarNet NIR spectrometers**

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

### 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     |                  | \$8,699 |
|-----------------------|--|--------------------|------------------|---------|
| Detector type:        | Single element extended InGaAs                     | Signal/Noise:      | 5000             |         |
| Spectrometer range:   | 1.75 - 2.15 $\mu\text{m}$ (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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