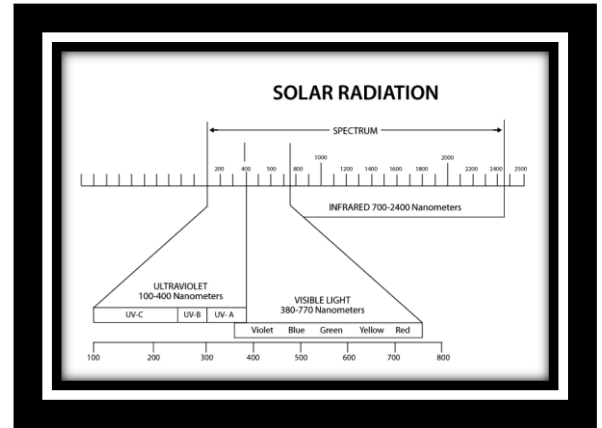


# Application Brief

## High SNR Multi-Wavelength Monitoring



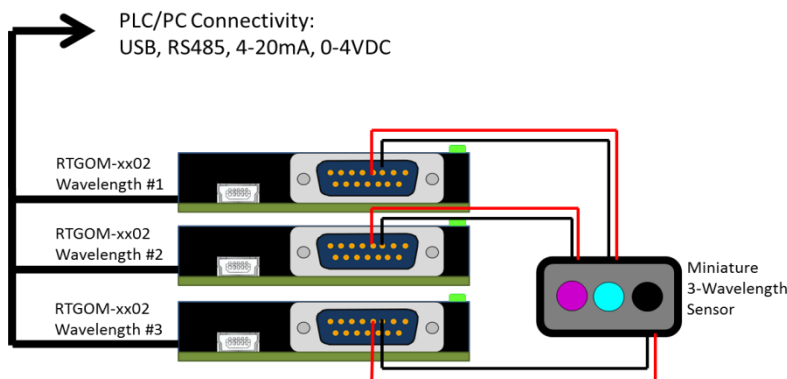
Many modern converting processes are required to produce complex optical properties. Solar Films, for example, create a combination of visible light transmission combined with a level of ultraviolet (UV) and/or infrared (IR) blocking. More exotic, and usually proprietary, coatings require specific optical properties throughout the UV, visible, and IR spectrums. In practice, measuring these optical properties is difficult to achieve during the actual coating process. Advances and miniaturization of spectrometer technology has allowed continuous spectral monitoring, but sacrifices signal-to-noise (SNR) ratios and often requires multiple, expensive spectrometer heads to cover all the wavelengths, or wavelength ranges, of interest.



From: [www.wincosir.com](http://www.wincosir.com)

	Multiple-Diodes/ RTGOM-02's	Spectrometer Head
Effective Dynamic Range	6+ Decades	2 Decades
SNR (Noise Immunity)	High	Low
Continuous Spectral Monitoring	No	Yes
Cost	\$1,000s	\$10,000+

Enter the **RTGOM series of radiometers**, custom built for harsh converting environments. The RTGOM-01 allows the use of custom filters and diodes for 4+ decades of signal-to-noise ratio, and provides a USB interface to simplify system development. The RTGOM-02, depicted below, provides 7+ decades of signal-to-noise ratio while also giving the system developer multiple interfaces, in addition to USB, including RS485, DC voltage, and 4-20ma. The RTGOM-02 also allows an externally-connected diode to position multiple diodes, each measuring a unique spectral range, into a small form factor sensor, placed in-line with your process.



In the diagram at the left, three remote diodes each attach to a specific RTGOM-02 device. This allows the remote diodes to each have its own sensitivity to a unique spectral range (through a combination of diode material and optical filtering), as well as to fit quite nicely in-line within the converting process. The RTGOM-02's can be located nearby, within the harsh process environment if needed.