

## **INFRARED SPECTRAL RADIOMETER MODEL RSA2010**



**The EOI Model RSA2010 -Linear Variable Filter** is a state of the art IR radiometer designed for use in either laboratory or field environments. It is a complete system combining a high resolution, broadband Spectral Radiometer, a field portable computer, and EOI's easy to use software. EOI's award winning controller electronics and multi point internal calibration ensure even the most sensitive signals are accurately captured and analyzed.

### **Functions**

The EOI RSA2010 Spectral Radiometer performs a variety of functions including:

- ◆ Measuring Spectral Radiance, Irradiance, Radiant Intensity and Emissivity
- ◆ Flexible Data Reduction & Analysis by computer
- ◆ Built in DVD-Writer for Data Storage
- ◆ Atmospheric Transmission Corrections/MODTRAN (Requires Software - See Specifications)

### **The Infrared Spectral Radiometer Features:**

- *High Resolution Spectral Analysis*
- *Test Any Where, Any Time, Any Orientation*
- *Dual Detectors Cover 1.3 to 5.0 $\mu$ m; HgCdTe (5.0 to 14.0 $\mu$ m)*
- *Long Life Cryo Cooler*
- *CCD Sighting Camera – Visible Record of Test*
- *8" Diameter Reflective Optics – Superb Sensitivity*
- *Field Portable PC – Get Immediate Test Results*
- *EOI Spectral Analysis Software*
- *1 Year Warranty*



The RSA2010 incorporates a custom designed color corrected cassegrain telescope.

The telescope optics are focused at infinity. Controller is 25 feet from Optics Head.

Cooling of the detectors is provided by high reliability Sterling Cycle Cryocooler.

The RSA2010 optical head is mounted in a rigid 12 inch diameter by 32 inch long cylindrical optical housing. The optical head is designed to be tripod mounted. An optional pan and tilt allows fully automated remote operation.

Detectors are: InSb (1.3 to 5.0 $\mu$ m); HgCdTe (7.0 to 14.0 $\mu$ m) layered structure. The control and display electronics package can be located up to 40 feet from the optical head.

**Power Requirements**  
100-240 VAC. 50/60 Hz

**Warranty**  
EOI Instrumentation is warranted for a period of one Year. See warranty for complete details.

### Specifications

Spectral Response	1.3 to 5 microns- 7.0 to 14.0 $\mu$ m Scan Range
Spectral Resolution	0.02 $\mu$ m @ 2.0 $\mu$ m 0.05 $\mu$ m @ 5.0 $\mu$ m 0.1 $\mu$ m @ 10.0 $\mu$ m
Sensitivity- Irradiance at Aperture	6 x 10 W/cm @ 5 $\mu$ m
Spectrum Scan Rate	0 to 5 Scans per Second - Stop at Lambda or scan. 1.3 to 14.0 $\mu$ m's in .2 Second, up to 10 Seconds.
Optics	8" Cassegrain Telescope, 32" Focal Length
Field-of-View	2.0 mrad All Reflective
Optical Head Mount	Rugged Tripod Mount
Computer	Laptop, Windows
Software - Labview Based	EOI Spectral Analysis Software, Links for MODTRAN / HITRAN
Chopper Open / Close Indicator	5 VDC TTL
Chopper Frequency	2500 Hz
Sighting	CCD Camera Non-Parallax View for Test Recording
Optics Head Dimension	12" diameter, 32" length + Tripod
Controller Dimension	9" H x 19" W x 20" D
Power Requirements	100 -240 VAC, 50/60 Hz
Field Use Temperature	0 to 40°C
Humidity	0 to 90%, Non-Condensing
Storage Temperature	-15 to 60°C