



## Infrared (IR) and Ultraviolet (UV) Radiometer System

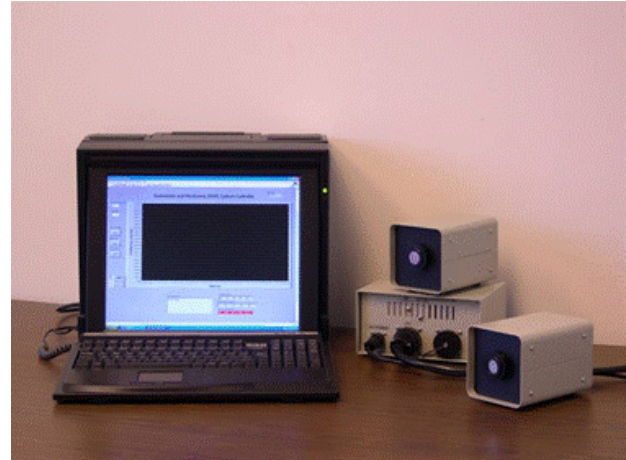
Technology Service Corporation (TSC) has developed a modular infrared (IR) and ultraviolet (UV) radiometer system for radiometric measurement and monitoring of IR/UV sources and simulations. Radiometer signals are digitized in the radiometer heads allowing cable lengths of up to 200 feet to the Data Acquisition Unit (DAU). The system has the following features:

- Simultaneous data collection for up to five separate IR/UV radiometer heads
- 30 kHz data-sampling rate (10 kHz electronics bandwidth)
- Real-time data display, data averaging, and FFT processing
- Intuitive LabVIEW Operator Interface for radiometer configuration and control
- Outdoor operational capability for ambient temperatures up to 100 °F
- Low-Voltage Differential Signaling (LVDS) of radiometer digital data to DAU
- External DAU TTL start-trigger
- GPS/IRIG option for data time stamping

The radiometer system consists of a portable PC-based Data Acquisition Unit, a Power/Data Interface Unit, up to five radiometer heads, and related cabling. The radiometer heads contain the detectors and digitizing electronics. The detectors are DC coupled (a chopper is not required) and have low 1/f noise, making them ideal for low-frequency signal monitoring, while the 30 kHz sampling rate and 10 kHz electronics bandwidth allow high-frequency signal components, e.g., spikes to be observed (> 1 msec time resolution). The DAU acquires, stores, and graphically displays the radiometer data; data averaging and FFT processing are readily performed.

Radiometer	IR	UV
Detector	HgCdTe	Si photodiode
Wavelength Band	1 – 5 μm*	200 – 300 nm*
Sensitivity	$4 \times 10^{-8} \text{ W/cm}^2$	$3 \times 10^{-9} \text{ W/cm}^2$
Dynamic Range	> 30 dB	> 30 dB
Field of View (FOV)	40 deg	40 deg
Sampling Rate	30 kHz	30 kHz

\*can be tailored with external bandpass filter



INFRARED/ULTRAVIOLET RADIOMETER SYSTEM

### ABOUT TSC

TSC has over 20 years of experience in developing IR/UV simulators, sources (including laser-based), and radiometers for Open-Air Range and Installed System Test Facility applications. We can customize radiometer systems to meet your specific requirements.

### CONTACT INFORMATION

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