

# Precision Infrared Pyranometer

MODEL

**PIR**

The Precision Infrared Radiometer (Pyrgeometer) is intended for measurement, separately, of downwelling or upwelling longwave irradiance. Unlike instruments that measure the shortwave (solar) irradiance, there is no official ISO/WMO classification of pyrgeometers which are designed to measure the longwave (infrared) irradiance from the sky. The PIR comprises the same wirewound thermopile detector and temperature compensation circuitry as found in the SPP pyranometers. This thermopile detector is used to measure the "net radiation" of the PIR and a case thermistor (YSI 44031) is used to determine the outgoing radiation from the case. A dome thermistor is included if one wishes to measure the dome temperature as compared to the case temperature to make any "corrections" to the final result.



## SPECIFICATIONS

Application	Working Standard or Network Measurements
Traceability	World Infrared Standard Group (WISG) & International Practical Temperature Scale (IPTS)
Field of View	180° ( $2\pi$ sr)
Spectral Range	approx. 4-50 microns
Sensitivity	approx. 3 $\mu$ V / $\text{W m}^{-2}$
Impedance	approx. 700 $\Omega$
Operating Temperature	-50 to +80 °C
Temperature Response	0.5% (-30 to +50°C)
95% Response Time	5 seconds
Stability	1% per year
Linearity	0.5%
Zero Offset	2 $\text{W m}^{-2}$
Uncertainty	5 $\text{W m}^{-2}$