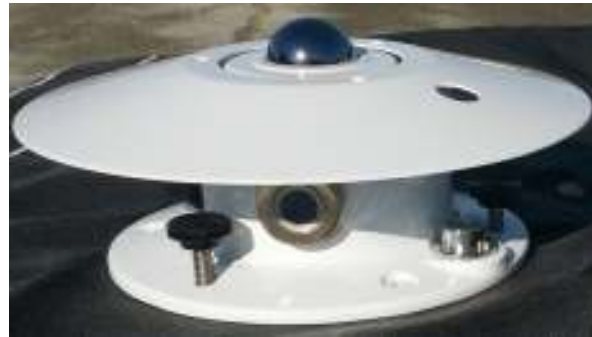




# THE EPPLEY LABORATORY, INC.

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## PRECISION INFRARED RADIOMETER MODEL PIR



The Precision Infrared Radiometer (Pyrgometer) 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 pyrgometers 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.

### MODEL PIR SPECIFICATIONS

<b>Application</b>	<b>Working Standard or Network Measurements</b>
<b>Traceability</b>	<b>World Infrared Standard Group (WISG) &amp; International Practical Temperature Scale (IPTS)</b>
<b>Field of View</b>	<b>180° (2π sr)</b>
<b>Spectral Range</b>	<b>approx. 4-50 microns</b>
<b>Sensitivity</b>	<b>approx. 3 μV / Wm<sup>-2</sup></b>
<b>Impedance</b>	<b>approx. 700 Ω</b>
<b>Operating Humidity Range</b>	<b>0 to 100% RH</b>
<b>Operating Temperature Range</b>	<b>-50 to +80 °C</b>
<b>Temperature Response</b>	<b>0.5% (-30 to +50°C)</b>
<b>95% Response Time</b>	<b>5 seconds</b>
<b>Linearity</b>	<b>0.5%</b>
<b>Stability</b>	<b>1% per year</b>
<b>Zero Offset</b>	<b>2 Wm<sup>-2</sup></b>
<b>Uncertainty:</b>	<b>5 Wm<sup>-2</sup></b>

Since the dawn of time, man has studied the sun...

...and Eppley has been providing the best instruments since 1917!