

# THE EPPLEY LABORATORY, INC.

## PRECISION SPECTRAL PYRANOMETER

### Model PSP Specifications



There are two generally accepted Classification Systems used for Pyranometers. ISO classifies pyranometers as a "Secondary Standards", "First Class" or "Second Class" while WMO uses "High Quality", "Good Quality" and "Moderate Quality".

The Precision Spectral Pyranometer, Model PSP is classified as a ISO Secondary Standard or WMO High Quality Pyranometer.

- Classification: ISO Secondary Standard Pyranometer / WMO High Class
- Response Time (95%): 10-15 seconds
- Zero Offset to  $200 \text{ Wm}^{-2}$  net radiant loss to sky:  $4-6 \text{ Wm}^{-2}$
- Zero Offset to  $5^\circ \text{ C/hr}$  change in ambient temperature:  $1-2 \text{ Wm}^{-2}$
- Resolution:  $< 1 \text{ Wm}^{-2}$
- Non-Stability:  $< 0.5\% / \text{yr}$  (typical)
- Non-Linearity:  $\pm 0.5\%$
- Directional Response:  $< 10 \text{ Wm}^{-2}$
- Spectral Selectivity: 1%
- Temperature Response:  $\pm 1\%$
- Temperature Response:  $< 0.15\% \text{ per } ^\circ\text{C}$  (from  $-20$  to  $+40^\circ\text{C}$ )
- Linearity:  $0-3000 \text{ W/m}^2$ ,  $\pm 1\%$
- deviation:  $< \pm 2\%$
- RH: 0 to 100%
- Oper. Temp.:  $-40$  to  $65^\circ\text{C}$  (temp comp may be more than 1% )
- Tilt Response:  $< 0.5\%$
- Achievable Uncertainty (Hourly): 1-2 %
- Achievable Uncertainty (Daily): 1-2 %
- Suitable Application: Working Standard or Network Measurements