



MODEL GEO-NIP Normal Incidence Pyrheliometer

The **Normal Incidence Pyrheliometer** is a ISO 9060 First Class Pyrheliometer designed, as its name implies, for the measurement of solar radiation at normal incidence.

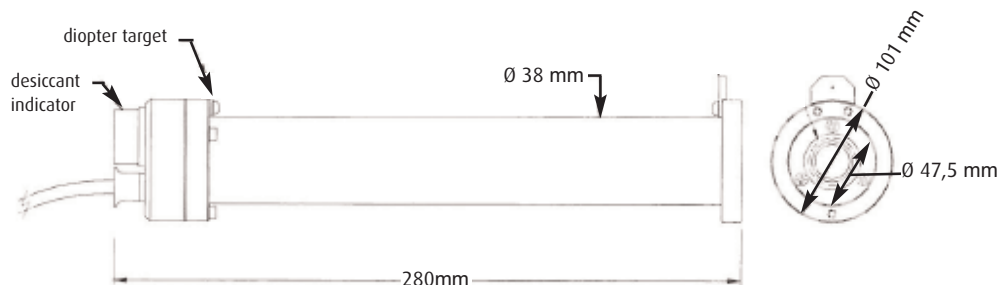
The NIP incorporates a wire-wound thermopile at the base of a tube, the aperture of which bears a ratio to its length of 1 to 10, subtending an angle of $5^{\circ}43'30''$. The inside of this brass tube is blackened and suitably diaphragmed. The tube is filled with dry air at atmospheric pressure and sealed at the viewing end by an insert carrying a 1 mm thick, Infrasil II window. Two flanges, one at each end of the tube, are provided with a sighting arrangement for aiming the pyrheliometer directly at the sun. A manually rotatable wheel (not shown) which can accommodate three filters, while leaving one aperture free, is provided.



The pyrheliometer is mounted on a power-driven equatorial mount for continuous readings. Please see Sun Tracker 3000 brochure.

A calibration certificate traceable to the World Radiation Reference and a temperature compensation curve are included.

DIMENSIONS



SPECIFICATIONS

Classification: First Class Pyrheliometer

Response Time (95%): <1 second

Zero Offset to 5° C/hr change in ambient temperature: $1-2 \text{ Wm}^{-2}$

Resolution: $< 1 \text{ Wm}^{-2}$

Non-Stability: $<0.5\%$ / yr (typical)

Non-Linearity: $\pm 0.5\%$

Directional Response: $< 10 \text{ Wm}^{-2}$

Spectral Selectivity: 1%

Temperature Response: $\pm 1\%$

Tilt Response: $< 0.5\%$

Achievable Uncertainty (Hourly): 1-2 %

Achievable Uncertainty (Daily): 1-2 %

Suitable Application: Working Standard or Network Measurements