



## PYRANOMETER, ISO FIRST CLASS

### FEATURES:

- **ISO and WMO Compliance**
- **Good Cosine/Directional Response**
- **Excellent Long-Term Stability**
- **Good Linearity Performance**
- **Fast Response**
- **Moderate Cost**

The P/N 102771 Pyranometer is a thermopile-type sensor that meets WMO, ISO-9060 First Class, and the EPA's SRDT specifications. The pyranometer measures global (direct and diffuse) solar radiation. Its directional response, spectral selectivity, and built-in temperature compensation, assure accurate and reliable measurement under normal environmental conditions.

The 102771 Pyranometer is an instrument for measuring the solar irradiance. The thermopile sensor construction measures the solar energy that is received from the total solar spectrum and the whole hemisphere (180 degrees field of view). The output is expressed in Watts per square meter. The 102771 Pyranometer is designed for continuous indoor and outdoor use.

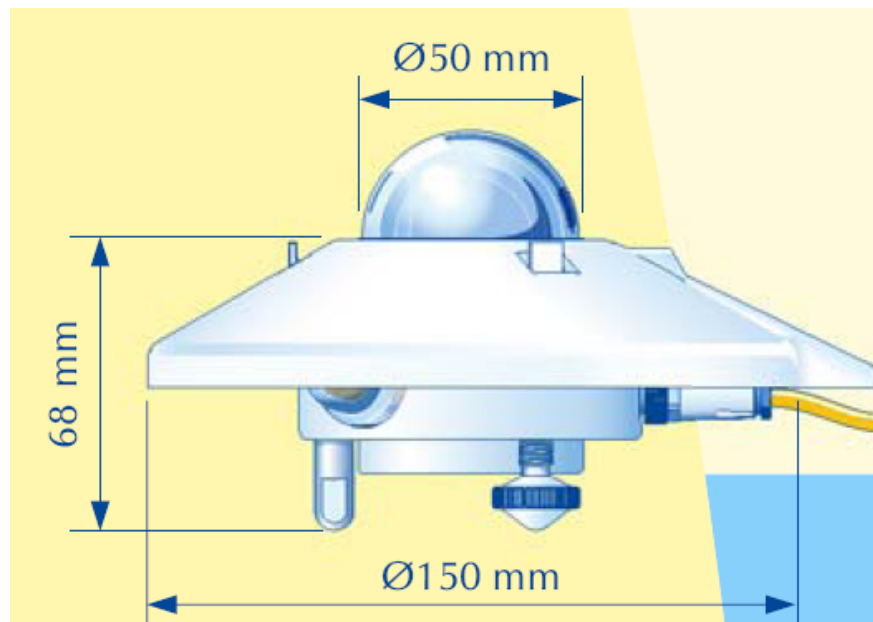
The 102771 Pyranometer (ISO First Class) is intended for shortwave global solar radiation measurements in the spectral range from 310 to 2800 nm. The thermopile detector measures irradiance up to 2000 W/m<sup>2</sup> with response time <18 seconds and typical sensitivity 10  $\mu$ V/W/m<sup>2</sup> that varies <4% from -10° to +40°C. Operating temperature range is -40° to +80°C and the stability is better than 1% per year.

The 102771 Pyranometer features a snap-on white sun shield, integrated leveling and a weatherproof connector which is supplied pre-wired with 10 m of signal cable for simple installation. An optional mounting rod and longer cable lengths are available. Two 102771's can easily be mounted back-to-back to make a low-cost Albedometer, using a separate mounting fixture. Two versions of the Pyranometer are available, 102771-10 and 102771-25, where the suffix indicates the length of cable provided with the sensor in meters.



## SPECIFICATIONS

ISO Class	First Class
Spectral range (10% points) (50% points)	285-2800 nm 310-2800 nm
Sensitivity	5-20 $\mu\text{V}/\text{Wm}^{-2}$
Response time	<18 sec (95%) <6 sec (63%)
Non-linearity (1000 W/m <sup>2</sup> )	$\pm 1.0\%$
Operating temperature	-40° to +80°C
Field of View	180°
Irradiance	2000 W/m <sup>2</sup>
Temperature dependence of sensitivity	$\pm 4\%$ (-10° to +40°C)
Non-stability (change per year)	$\pm 1\%$
Cable length	10 or 25m (30 or 80ft)
Signal Output	0 – 15 mV
Housing Material	Anodized Aluminum
Weight	300 gm (600 gm with 10 m cable)



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