

Pyrheliometer



- ▶ Pyrhiometer instrument for measurement of direct beam solar irradiance so called "Direct radiation"
- ▶ "First Class" classification according to ISO9060
- ▶ Integrated anti-condensation heated optic
- ▶ Fast response time
- ▶ Mountable on solar trackers
- ▶ μV output, RS485-RTU and 4...20 mA output using external modules

Research grade normal incidence direct solar irradiance sensor (DNI), also known as pyrhiometer for short wave direct solar radiation. It complies with 'First Class' classification, from ISO9060 and WMO standards.

A unique product feature is the heated window, eliminating the formation of dew on the sensor window, making early morning measurements more accurate.

DPA259 is the first pyrhiometer to include a fast detector, making it ideal for high grade research or CPV applications.

Technical Specifications

Order numb.	DPA259	
Direct radiation	ISO classification	ISO9060 First Class
	Spectral range	200...4000 nm
	Irradiance range	0...2000 W/m ²
	Sensitivity	7...15 $\mu\text{V}/\text{W}/\text{m}^2$
	Full opening view angle	5°
	Response time (95%)	1 s
	Non stability (drift)	< 1% per year
	Temperature dependence	< $\pm 1\%$ (over 50 K range)
General Information	Cable length	5 m
	Calibration traceability	WRR (World Radiometric Reference)
	Temperature range	-40...80°C
	Window heating	0.5 W (12Vdc)
	Data logger compatibility	M-Log (ELO008) R-Log (ELR515) E-Log A-Log (using ALIEM module)

Accessories

	DPA271.1	Sun tracker with integrated GPS system Single arm, only one Pyrheliometer mount, GPS receiver, 3 m RS232 cable, 10 m power cable. The 2-axis tracker automatically adjusts to the sun's position by the sun sensor closed-loop control system, even if the tracker is not oriented or leveled properly. • Motor: stepping motor • Pointing accuracy: <0.01° (solar elevation 0-87°) • Angle resolution: 0.009° • Rotation angles: -15°...+95° elevation, 0°...360° azimuth angle • Torque: 12 Nm • Payload: 7Kg • GPS accuracy: 15 m • LED indicators: Power and GPS status • Communication for setup: RS232 • Environmental protection: IP65 • Temperature range: -40...50°C • Power supply: 100...240 Vac (50/60 Hz), 20 W consumption. Optional: 21...32 Vdc, 10W consumption • Dimensions: 430(W)x380(D)x440(H) mm • Weight: 14.5 Kg (with tripod)
	DPA271	Sun tracker with integrated GPS system Same features as DPA271.1, but double arms, one Pyrheliometer mount and following different characteristics: • Torque: 24 Nm • Payload: 15Kg • Weight: 15.5 Kg (with tripod)
	DPA271.2	shading assembly for pyranometer installation (for diffuse radiation). It can receive DPA271.3/4 accessories depending on the number of pyranometers used.
	DPA271.3	Mounting narrow plate assembly for one pyranometer (diffuse or global radiation) on DPA271.
	DPA271.4	Large mounting plate assembly for two pyranometers on DPA271.