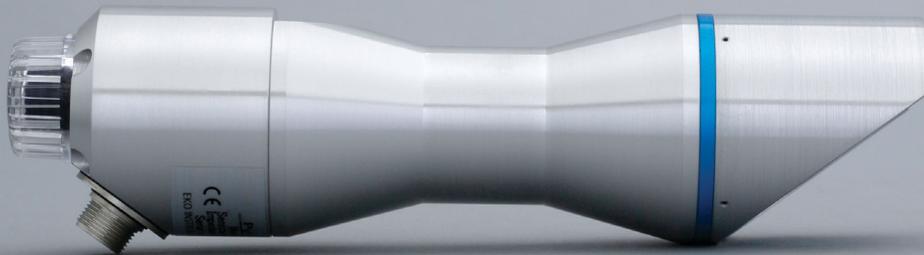


# MS-57 Pyrheliometer

Class A, Spectrally Flat & Fast Response



## Overview

Ultra-fast and incredibly accurate, with competition-beating long-term stability and exceptional reliability; the ISO 9060:2018 Class A MS-57 Pyrheliometer is a unique, second-to-none, direct normal incidence (DNI) solar irradiance sensor fully traceable to the World Radiometric Reference. Designed for solar energy research, monitoring, and meteorological

applications and built to weather extreme conditions, the MS-57 features an operating temperature range from  $-40^{\circ}\text{C}$  to  $+80^{\circ}\text{C}$  and comes with an integrated low power heater to prevent dew and frost deposition on the outside window. Made in Japan, our design and commitment to quality ensure that the MS-57 is best in class, and for every application.

## Features



<0.2s Ultra-fast response for always accurate measurements



Unique <0.5% non-stability change of 5-years



Integrated anti-frost & dew window heater



5 Year Warranty & Recommended Recalibration Interval



Operating temperature range from  $-40$  to  $+80^{\circ}\text{C}$



Efficient, low power consumption

## Related Products



### STR-21G Sun Tracker

With integrated GPS, sun position sensor, and Harmonic Drive® mechanical gear system, the STR-21G Sun Tracker is built to deliver unparalleled precision, optimal positioning, and reliability, whatever the weather.

Easy to set up, the STR-21G automatically adjusts to the sun's position, even if the tracker is not oriented or levelled correctly, and can support a range of Global, Diffuse and Direct Radiation measurement sensors for custom configurations.

The single configurable arm of the STR-21G can mount the MS-57 Class A Pyrheliometer for DNI readings and the optional MD-81-10 shading disk assembly, shielding any top-mounted pyranometer for diffuse solar radiation measurements.



### MS-80S Class A Pyranometer

Designed for scientific research, industrial applications, and photovoltaic system performance monitoring, the MS-80S is best-in-class for accuracy, speed, reliability, and one of the only top tier 'fast-response' and 'spectrally flat' Class A pyranometers available.

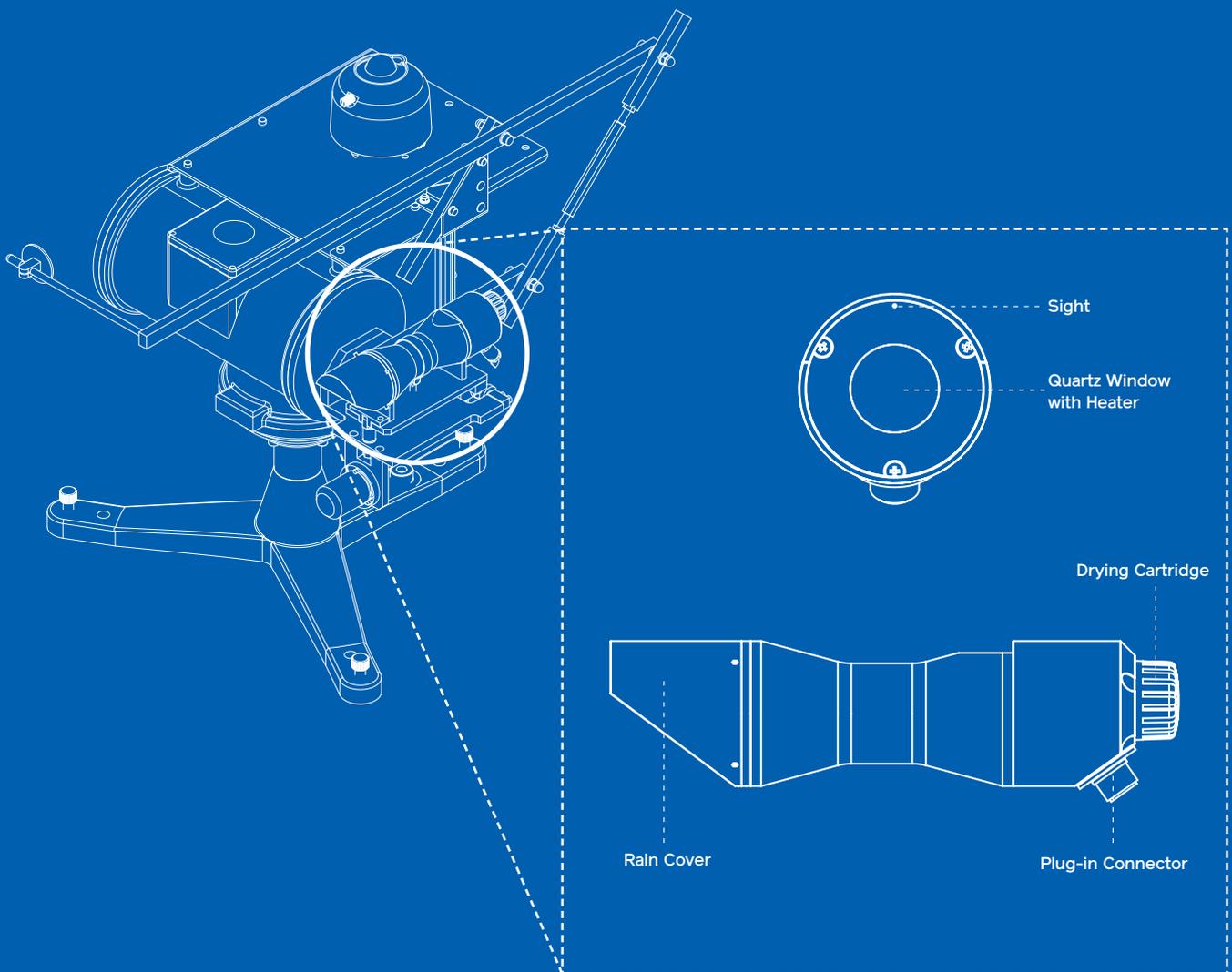
The best value Class A sensor available, the MS-80S, features a state-of-the-art thermopile detector and Quartz diffusor technology, new internal diagnostics, a unique 4-channel interface, and Level A EMI/EMC electronic surge filter protection. IEC 61724-1 compliant with a 5-year warranty and unique 5-year recalibration interval, the MS-80S is an ideal solution for complex networks, hard to reach locations and monitoring stations with restricted access.

## Technical Features

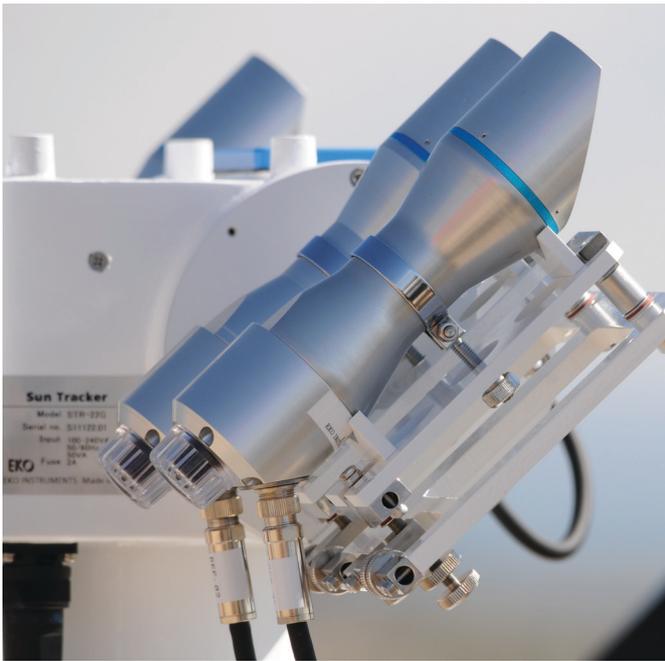
Wavelength Range (nm)	200 - 4000 (50% points)
Irradiance range (W/m <sup>2</sup> )	0 to 4000
Sensitivity (µV/W/m <sup>2</sup> )	Approx. 7
Signal Output	Analog
Impedance (Ω)	< 15000
Operating temperature	-40 to 80°C
Ingress Protection	IP 67
Standard Cable Length	10m (Optional lengths 20m, 30m)
Window Heater Power Requirement	DC 12V / 0.5W
Temperature Sensors	PT-100 Class A, Thermistor 44031 10kΩ

Response time 95%	<0.2s
Zero offset A - Thermal Radiation (200W/m <sup>2</sup> )	0 W/m <sup>2</sup>
Zero offset B - Temperature change (5K/hr)	< 1W/m <sup>2</sup>
Zero offset C - Total zero off-set	< 1W/m <sup>2</sup>
Non-stability (change/5 years)	< 0.5%
Non-linearity (at 1000W/m <sup>2</sup> )	± 0.2%
Spectral Error	± 0.2%
Temperature Response (-20°C to 50°C)	± 0.5%
Tilt Response (0-90°   1000W/m <sup>2</sup> )	< 0.2%

Feature Diagram



## Applications



The MS-57 Pyrheliometer is an essential instrument, often used for solar assessment, research, concentrated photovoltaic applications and solar monitoring. Mounted on a sun tracker, the MS-57 with its ultra-fast <math><0.2\text{s}</math> response, unique characteristics and superior design, ensure best in class accuracy, speed, and reliability whatever your application.

### QR

Use the QR code to visit our website, contact our team, or to find out more about the **MS-57 Pyrheliometer**, other related products, and the full range of industry-leading EKO sensors and instruments.



## Explore EKO

Made in Japan for over 90 years, EKO solar energy sensors and environmental instruments are built on a legacy of innovation, an uncompromising commitment to quality, and industry-leading accuracy.

With a range of products and services to suit every project or application requirement, explore EKO now, or get in touch to find out how EKO Instruments can help you.



Albedometers



Pyranometers



UV Sensors



Spectro-Radiometers



Sky Imagers



DNI Sensors



Pyrgeometers



IV Measurement



Solar Monitoring Stations



Sun Trackers



Sensor Signal Converters



Temperature Sensors



Sky Scanners



Thermal Cond. Testers



Heat Flux



Handheld Spectrometers

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