

ML-02 Pyranometer

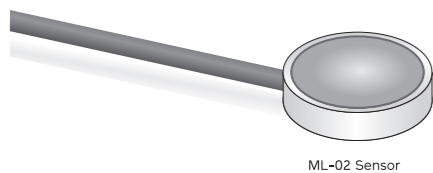
Thank you for purchasing this EKO product.

The Quick Start Guide provides basic instructions to help you set up and get started. Please see the **Instruction Manual** for more detailed information about this product.

Product Warranty

For warranty terms and conditions, please consult the **Instruction Manual**, EKO Instruments, or your distributor for further information.

Please Note: All of our products are tested to ensure that they meet their published specifications. The warranty included in the conditions of delivery is valid only if the product has been installed and used in accordance with the instructions provided in the Instruction Manual.



1 In the Box

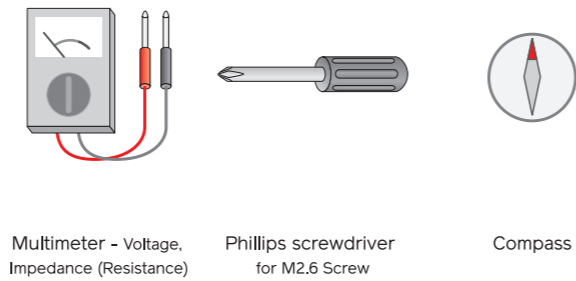
First, please check the package contents. If any part is missing or damaged, please contact EKO or your EKO distributor.

- Silicon Pyranometer (with Signal Cable)
- Screws (M2.6 x 8mm) x 2
- Calibration Certificate
- Warranty (Japanese specifications only)
- Quick Start Guide (This document)

The Instruction Manual can be downloaded from the EKO website.

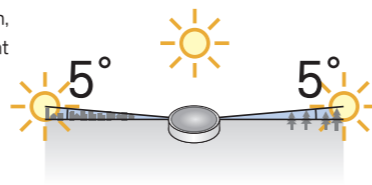
2 Preparing to Install

1 Required Tools Please prepare your own.

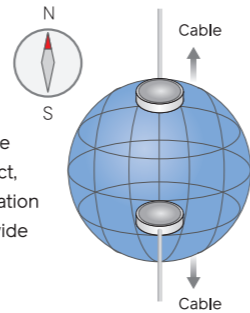


2 Location & Setup Conditions

- Select a location with free horizon, without any obstructions and light reflections throughout the day

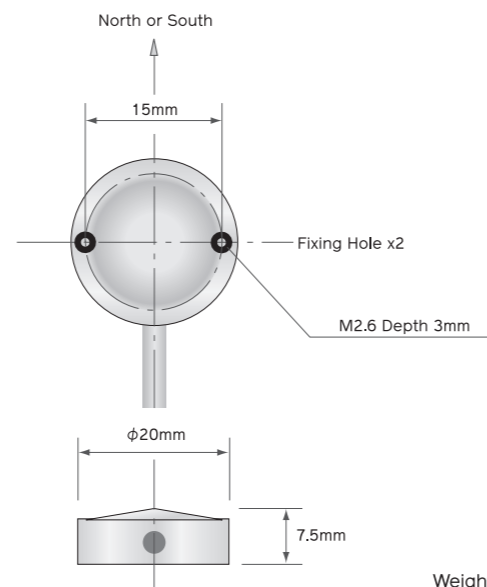


- Place the pyranometer with the cable facing the nearest pole.



When fixing the unit to the installation base using the screws supplied with the product, make sure that the thickness of the installation base side is 5mm to 6mm. Otherwise, provide suitable screws or spacers. For more information, see installation 3-1 on the right-hand side of the paper.

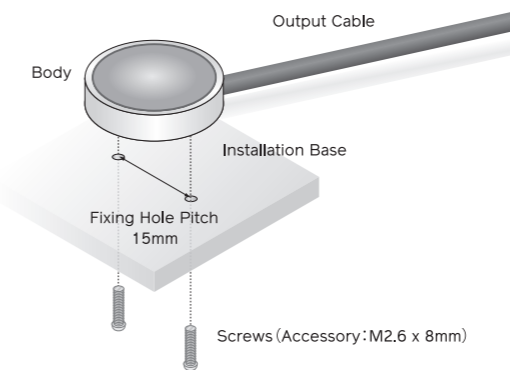
- Fix Holes on the Installation Base



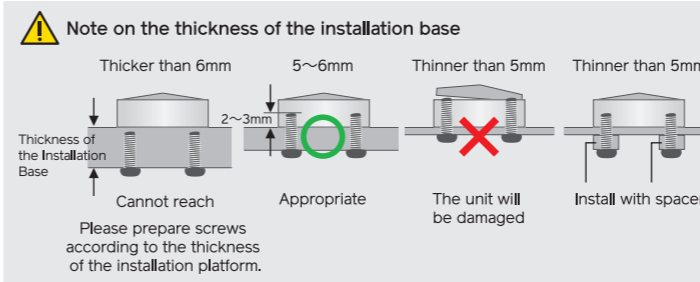
Weight: Body : 10g

3 Installation

1 Fasten the pyranometer to the installation base

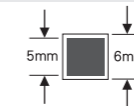


- Fasten the main unit to the installation base with two M2.6 screws.
- The thread depth of the body is 3mm. Note that if the screw penetrates more than 3mm deep into the body, the sensor will be damaged.
- The screws supplied with the product are 8mm long, which is the optimal length for an installation base 5mm to 6mm thick.
- If the installation base is thinner than 5mm, use spacers to adjust so that the screws do not protrude into the main unit more than 3mm, as shown in the diagram below.
- If the installation base is thicker than 6mm, please prepare longer screws that are appropriate for your base separately.



The square on the right is to-scale and can be used as a reference to determine the thickness of your installation base.

* The square is only to-scale when using the original ML-02 Quick Start Guide provided with your sensor, or when printing on A3-sized paper.



4 Measurement & Maintenance

Measurement Range

Set measurement range on the measuring instrument according to the below output range.

Output Range	[mV]	0 ~ 100
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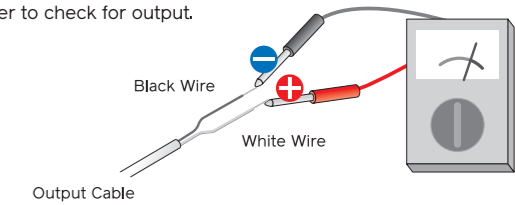
Calculate Solar Irradiance

$$I [W/m^2] = \frac{E [\mu V]}{S [\mu V/W \cdot m^2]}$$

I : Solar Irradiance [W/m²]
E : Pyranometer Output Voltage [μV]
S : Sensitivity [μV/W·m²]

2 Checking the Output Voltage

After connecting the pyranometer and output cable, use a voltmeter to check for output.



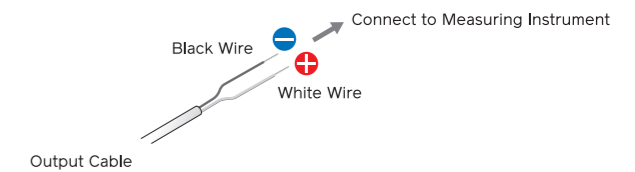
Approximate Output Values When Sensitivity is 50μV/W·m⁻²

Sky Condition	Overcast	Partly Cloudy	Clear
Solar Irradiance [W/m ²]	< 300	> 300	> 700
Output Voltage [mV]	< 15	> 15	> 35

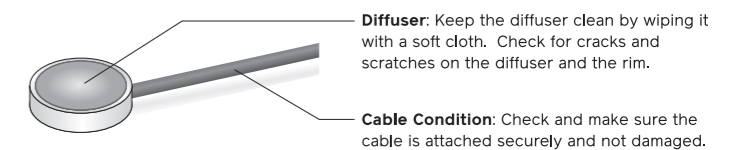
When there is no Output:

Measure the impedance of the output cable (+/-) and check if the impedance is in the range between 43~53Ω, when using a standard 5m cable. Please contact EKO if the impedance is outside of this range.

3 Wiring



Periodic Maintenance



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