

Outdoor Pyranometer Calibration

Why Pyranometer Calibration Is Essential for Accurate Solar Measurements

Pyranometers are critical for measuring solar radiation in various industries such as solar energy, agriculture, environmental monitoring, and meteorology. However, even the most precise instruments can drift over time due to environmental conditions, aging, or mechanical wear. To maintain accuracy, regular calibration is necessary.

We offer **Outdoor Factory & Onsite Pyranometer Calibration Services** to ensure that your equipment provides reliable data. This method is highly effective and offers several advantages compared to traditional indoor calibration.



What is Indoor Calibration?

Indoor calibration typically uses a controlled artificial light source within a lab or calibration chamber. While this method can test the basic functionality of a pyranometer, it cannot replicate the outdoor environmental conditions that affect the sensor's performance in the field.

Outdoor Calibration Benefits:

- **Real-World Accuracy:** Outdoor calibration takes place under natural sunlight conditions, ensuring the pyranometer is tested under the exact conditions it will be used in. This provides highly accurate calibration results.
- **Environmental Simulation:** Pyranometers are exposed to real-time changes in atmospheric conditions, temperature, and light intensity during outdoor calibration, factors that are impossible to mimic in a lab setting.
- **Validation of Performance:** Outdoor calibration validates the instrument's ability to handle real-world scenarios, providing confidence that your data will be accurate when deployed in the field.

Advantages of Outdoor & Onsite Calibration

- 1. Minimized Downtime:**
Calibration is done on-site, which means your pyranometer remains in place and operational. No need for shipping instruments or waiting for return your system continues to function with minimal interruption.
- 2. Faster Turnaround:**
We calibrate on-site, which reduces transportation time, ensuring that your instruments are back in service quickly.
- 3. Outdoor Testing:**
Outdoor calibration provides direct validation in the field under actual environmental conditions, ensuring that the pyranometer is performing optimally for your specific application.
- 4. Cost-Effective:**
Onsite calibration eliminates the costs of shipping and reduces downtime, saving your business time and money while maintaining accurate solar measurements.
- 5. Industry Expertise:**
Our technicians are trained experts in solar radiation measurements and calibrations, ensuring your instruments meet the highest industry standards.

Our Calibration Process:

- 1. Initial Inspection:**
We begin with a thorough inspection of your pyranometer to check for any signs of physical wear, dirt, or environmental damage that could affect performance.
- 2. Real-Time Comparison:**
Your pyranometer is calibrated against a high-precision reference pyranometer with identical or higher specifications under actual sunlight conditions.
- 3. Adjustment & Optimization:**
If discrepancies are detected, we adjust your instrument to match the reference pyranometer, ensuring accurate readings under natural conditions.
- 4. Performance Validation:**
The pyranometer's response is validated against the sun's radiation levels to confirm that it is correctly measuring solar radiation.
- 5. Final Report & Certification:**
Upon completion, we provide a comprehensive calibration report detailing the performance, calibration data, and uncertainty levels, as well as a certificate of compliance.



Why Choose Us?

- **Mobile Calibration Service:**
We come to your factory, solar farm, or any outdoor location for a seamless, on-site calibration experience.
- **Proven Track Record:**
With years of experience calibrating pyranometers for industries worldwide, our technicians are experts in delivering reliable, precise service.
- **Cost and Time Efficient:**
Avoid the costs and delays associated with transporting equipment to a lab, our mobile service brings the calibration directly to you, minimizing downtime.

Contact Us for More Information or to Schedule Your Calibration: