How is solar irradiance measured?

Solar irradiance meters that assess PV modules must have a spectral response close to that of a PV module in order to measure ‘true irradiance’ as a PV system would.

There are two irradiance measurement methods defined and accepted by international standards covering the performance measurement of PV systems:

1. Pyranometer
High precision, high cost instruments using thermal sensors in a glass dome.

2. PV Reference Cell
Effectively a small scale version of a PV module, having the same response to solar energy.

Temperature compensation ensures accuracy is not affected by heat. Devices such as light meters, lux meters or devices using photo diode sensors do not have the same spectral response as a PV module, they do not compensate for temperature and are likely to introduce significant measurement errors if used for solar PV applications. They are not suitable for use on PV systems

If you require more help, please contact us at https://www.seaward.com/us/enquire/.