



PAR Light Sensor

PRODUCT MANUAL

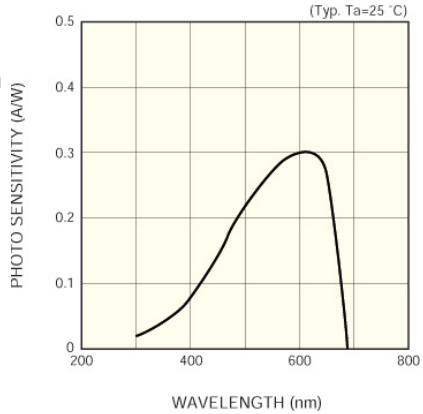
Item # 36681



Spectrum[®]
Technologies, Inc.

Thank you for purchasing a PAR Light Quantum Sensor to use with your WatchDog Data Logger. The sensor approximates the radiation between 400 and 700 nanometers, the most influential wavelengths for optimum plant growth.

This manual will aid you in placement and mounting of the sensor. Read it thoroughly to insure proper and effective use.



USE WITH A FIELD SCOUT LIGHT SENSOR READER

You may wish to remove the mounting bracket when using the PAR sensor with a Field Scout Light Sensor Reader. If so, loosen the thumbscrews, and save the parts for reassembly.

Just plug the sensor into the reader, and SET the reader to "PAR SUN" or "PAR ELEC". For more details, see the Field Scout Sensor Reader Manual.

USE WITH A WATCHDOG STATION OR LOGGER

The PAR Light Sensor includes a 6 foot data cable; which is plugged into an available external port on a WatchDog weather station or data logger. Once the sensor is in a representative "micro-climate", insert the data cable plug into the WatchDog external channel to log PAR Light data.

Use **SpecWare** software to program the WatchDog to log PAR Light on the desired port. Refer to the **SpecWare Instruction Manual** for detailed launch and/or readout instructions. PAR Light Hours and Daily Light Integral can be calculated in SpecWare Software under “Reports”.

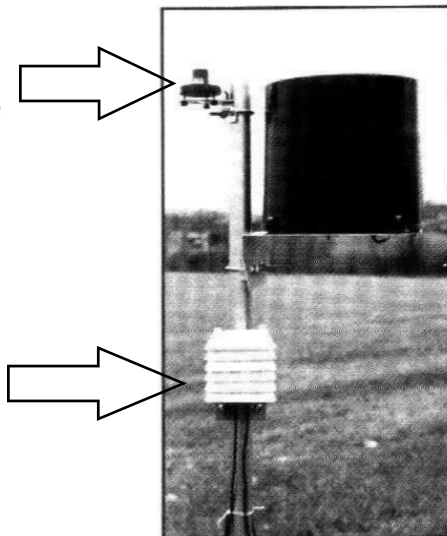
The sensor can be placed above or within plant canopies, as well as in growth rooms and greenhouses. Install the sensor so that it is level. Once the sensor is mounted, use the adjustment screws to level the sensor so that the bubble is centered on the level indicator. Mount the sensor on a 1” to 1¼” mast or pipe using the u-bolt provided.

Position the sensor in an appropriate area that monitors the plant conditions. Make sure the PAR sensor is not being shadowed or blocked by another external sensor. Contact your cooperative extension agricultural agent for further suggestions on field placement.

Inspect the sensors frequently to make certain the sensors are still level and clear of obstructions.

Place PAR Light sensor in a position that it will mimic the sunlight the plant is getting, while being within reach of external WatchDog data port.

WatchDog Data
Logger inside
mini-radiation



NOTE: When using the PAR Light Sensor (Item #3668I) and measuring under fluorescent lights values may vary because fluorescent lights flicker on and off 100 or 120 times per second. The sensor value depends on the precise instant when the reading is taken. Because the values are averaged, the variation is usually apparent only when 1 minute (and to a lesser extent, 5 minute) intervals are selected. When recording longer intervals or when using the FieldScout External Light Sensor Meter (Item #3415FX) the effect is generally not noticeable.

Specifications

Range	0-2500 $\mu\text{Mol}/\text{m}^2\text{s}$, $\pm 5\%$
Excitation Voltage	3.0-5.0VDC
Sensor Output	0-2.5V
	Linear: $\mu\text{Mol}/\text{m}^2\text{s} = V * 1000$

WARRANTY

This product is warranted to be free from defects in material or workmanship for one year from the date of purchase. During the warranty period Spectrum will, at its option, either repair or replace products that prove to be defective. This warranty does not cover damage due to improper installation or use, lightning, negligence, accident, or unauthorized modifications, or to incidental or consequential damages beyond the Spectrum product. Before returning a failed unit, you must obtain a Returned Materials Authorization (RMA) from Spectrum. Spectrum is not responsible for any package that is returned without a valid RMA number or for the loss of the package by any shipping company.

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