LIGHTSCOUT®

Light Sensor Reader

PRODUCT MANUAL

Item # 3415FX

Spectrum®
Technologies, Inc.

Using Your Meter

Thank you for purchasing a Field Scout™ Light Sensor Reader. This manual will familiarize you with the features and operation of your new meter. Please read this manual thoroughly before using your instrument.

Using the Meter

1. Connect a Spectrum Technologies light sensor to your meter by plugging it into the jack on the top end.
2. Press the ON/OFF button to turn the meter on or off. When first turned on, the display will show the current battery level.
3. Press the SET button until your sensor type is shown on the second line of the display.
4. The display will be updated every half-second. Hold the sensor vertical for accurate readings.
5. Turn the meter off after use to conserve battery power.

Changing the Battery

The Field Scout Light Sensor Reader uses a standard 9V battery. To change the battery:

1. Slide open the door on the back of the meter.
2. Remove the old battery from the compartment, and insert the new battery. Be sure to orient the battery to match the image on the bottom of the compartment.
3. Place the battery cover on the case and slide it closed.

Light Sensors

The Field Scout Light Sensor Reader can use any of the Spectrum Technologies light sensors listed on the facing page (sensors sold separately). Because the sensors can also be used with WatchDog weather stations and data loggers, a mounting bracket may be attached to the sensor. Loosen the thumbscrews to remove the bracket, and save the parts for future reassembly.

3668i Quantum Light Sensor
3668i3 Quantum Light 3 Sensor Bar
3668i6 Quantum Light 6 Sensor Bar
Display Setting: PAR SUN or PAR ELEC

The quantum sensors measure radiation between 400 and 700 nanometers, which is referred to as Photosynthetically Active Radiation, or PAR light. It is measured in units of µmol m^{-2} s^{-1} (the number of photons in units of micromoles, striking an area one meter square each second), which is abbreviated on the display as "uM". The meter displays in the range 0-2500 µmol m^{-2} s^{-1}, with ±5% accuracy.

Use the PAR ELEC setting for Fluorescent lights. Use the PAR SUN setting for all other light sources. Sunlight and High Pressure Sodium can be read directly, while the displayed reading must be multiplied by 0.94 for Metal Halide lighting.

3670i Silicon Pyranometer Sensor
Display Setting: SOLR RAD

The silicon Pyranometer sensor measures solar radiation between 300 and 1100 nanometers. It is measured in units of Watts/m^2, indicated on the display as "W/m". The meter displays in the range 0-1250 W/m^2, with ±5% accuracy.

3676i UV Light Sensor
Display Setting: UV A&B

A quantum is the amount of energy possessed by a photon. The UV light sensor measures the intensity of ultraviolet light between 250 and 400 nanometers in units of µmol m^{-2} s^{-1} (the number of photons in units of micromoles, striking an area one meter square each second), which is abbreviated on the display as "uM". The meter displays in the range 0-200.0 µmol m^{-2} s^{-1}, with ±5% accuracy.

Cosine correction on all sensors is accurate to ±3% at 45°, and ±7% at 80°.

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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