
USER MANUAL

CATALOG # 3412



RED / FAR RED METER



Spectrum
Technologies, Inc.

Thank you for purchasing a Field Scout™ Red / Far Red Meter. This manual describes its features and operation.

Using the Meter

1. Press the ON/OFF button to turn the meter on or off. When first turned on, the display will show the current battery level.
2. Press the READ button to take a light reading. The meter will measure the incident light for 0.3 seconds and display the mean.
3. Press the MODE button to switch between displaying the Red / Far Red Ratio, and the Red and Far Red readings.
4. The sensor assembly can be rotated to provide accurate readings while maintaining visibility of the display screen.
5. Turn the meter off after use to conserve battery power.

Changing the Battery

The Field Scout Red / Far Red Meter 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.

Accuracy

The Field Scout Red / Far Red Meter is accurate to $\pm 5\%$.

Red light is measured at 660nm, 40nm FWHM ($\pm 20\text{nm}$).

Far Red light is measured at 730nm, 30nm FWHM ($\pm 15\text{nm}$).

For support, or to place an order, call:
Spectrum Technologies, Inc
12360 S. Industrial Dr. East
Plainfield, IL 60585
(800)248-8873 or (815) 436-4440 between 7:30 am and 5:00 p.m. CST
e-mail: info@specmeters.com.
www.specmeters.com

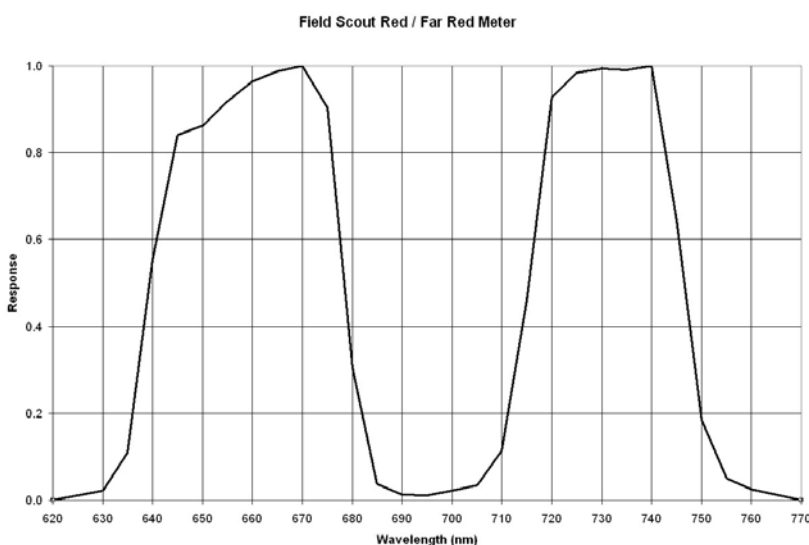
Red and Far Red Light

Plants sense the amount of light in the ranges around 660 nanometers (red) and 730 nanometers (far red), and use the ratio between the two to direct growth. Though plants differ in the details of their reaction, in general a low Red / Far Red ratio results in elongation and lower leaf area compared to a higher ratio.

The Field Scout Red / Far Red Meter measures the light in these two ranges, and displays the values in units of $\mu\text{mol m}^{-2} \text{s}^{-1}$ (the number of photons in units of micromoles, striking an area one meter square each second).

In addition, the meter displays the Red / Far Red Ratio, eliminating the need for computation.

The chart below displays the spectral response of the Field Scout Red / Far Red Meter.



WARRANTY

The Field Scout™ Red / Far Red Meter is warranted to be free from defects in materials and workmanship for a period of 1 year from the date of original purchase. During the warranty period, Spectrum will, at its option, either repair or replace products that prove to be defective. This warranty is void if the product has been damaged by customer error or negligence, or if there has been an unauthorized modification.

Returning Products to Spectrum

Before returning a failed unit, you must obtain a Returned Goods Authorization (RGA) number from Spectrum. You must ship the product(s), properly packaged against further damage, back to Spectrum (at your expense) with the RGA number marked clearly on the outside of the package. Spectrum is not responsible for any package that is returned without a valid RGA number or for the loss of the package by any shipping company.

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