

# WATERPROOF PAR METER

## User Manual



- To ensure safety, please read this manual carefully before installation and follow the instructions herein.
- Store this manual in a secure place for future reference
- WARNING: CHOKING HAZARD** - Accessories contain small parts
- Printed by color ink, water will smudge

### SCAN THE QR CODE



to download the  
**USER MANUAL**  
in different languages  
and **SOFTWARE**



**TUTORIAL VIDEO ON HOW TO USE**

**Need more help? CONTACT US.**

[www.cd50.net/414](http://www.cd50.net/414)

## KEY FEATURES

- Easy operation with a clear display and compact design
- Records up to 100 measurements
- HOLD function
- Zero point calibration
- Reset to factory settings
- IP68 waterproof sensor

## SPECIFICATION

Typical test conditions, unless otherwise specified:  
Ambient Temp: 23±3°C, RH: 50%~70%, Altitude: 0~100 meter

Measurement	Specifications
Operating Temperature	32°F to 122°F (0°C to 50°C)
Storage Temperature	-4°F to 140°F (-20°C to 60°C)
Operating & Storage RH	0~95%, non-condensing
<b>PPFD Measurement</b>	
Repeatability	±1 μmol/m2/sec
Measurement Range	0~4000 μmol/m2/sec
Display Resolution	0.1 μmol/m2/sec (0~999) 1 μmol/m2/sec (1000~4000)
Cut-On Wavelength	400±10nm
Cut-Off Wavelength	700±10nm
Power Requirements	2 x AAA batteries
Waterproof Level of the Sensor	IP68
Dimension	Main Unit: 115 x 60 x 24mm / 4.5 x 2.4 x 0.9inches Sensor Unit: Φ30 x 40mm / 1.18 x 1.57inches
Weight	173g/0.38pounds (without batteries and Extension Rod)

## GETTING STARTED

Hello there! Thank you for your purchase! Our products are packaged and shipped with the utmost care. In the unlikely event that your item is incorrect, incomplete, or unsatisfactory, please contact us, and we will promptly rectify the situation.

The Quantum meter is designed to measure PAR (Photosynthetically Active Radiation) flux in wavelengths ranging from 400 to 700nm. There is a proportional relationship between the number of photons absorbed in 400 to 700nm band and the rate of photosynthesis in plants, which is important for horticultural studies and monitoring plant physiology.

## PACKAGE CONTENTS



PAR Meter Main Unit



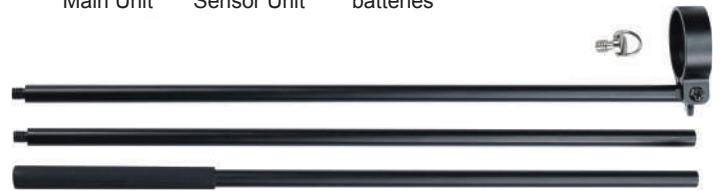
PAR Meter Sensor Unit



2x AAA batteries



User Manual



Extension Rod include 1/4" screw

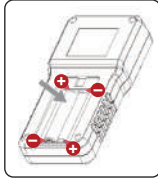
## DEVICE INTRODUCTION



# OPERATING INSTRUCTIONS

## 1. Battery Installation:

Open the battery cover and insert two AAA batteries.

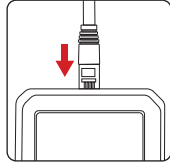


- 1). Open the battery cover
- 2). Insert two AAA batteries into the battery compartment.
- 3). Close the battery cover

**NOTE:** If the battery is installed backwards, the device won't power on.

## 2. Connect Sensor Cable

- 1). Align the cable end with the sensor port.
- 2). Gently insert the connector into the port until it clicks into place.



## 3. Extension Pole & Sensor Installation

- 1). Extension pole installation

Type 1: **TWO SECTIONS** (61.3cm / 24.1 inches)

Type 2: **THREE SECTIONS** (92cm / 36.2 inches)

- 2). Sensor Installation



- 3). Adjust the sensor to your preferred angle.
  - a. Loosen the following screw
  - b. Adjust the sensor to your preferred angle
  - c. Tighten the screw again



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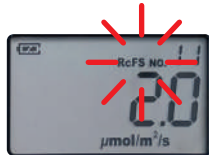
## 7. View Record Data

- 1). Press the **MODE** twice, then symbol "LOG" is blinking on the screen
- 2). Press the **HOLD**, then index "00" will blink at the top of the screen.
- 3). Press the **UP** and **LOG** buttons to view the data log. The blinking index and the corresponding measurement will be shown in the center of the display. If no measurement exists at the current index, will display "----"
- 4). Press the **MODE** or **HOLD** button to exit this mode.



## 8. RCFS (Clearing Logged Measurements)

- 1). Press the **MODE** three times, then symbol "RcFS" is blinking on the screen
- 2). Press the **HOLD** to enter RES mode, symbol "no" will display
- 3). Press either the **UP** or **LOG** to select "YES"
- 4). While "YES" is blinking, press and hold the **HOLD** button for 3 seconds to clear the logged data and reset the device
- 5). While "no" is blinking, press the **MODE** to exit this mode.



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## 4. Power ON/OFF

Press the **POWER** to turn on the device. Press and hold the **POWER** for 3 seconds to turn off the device. The device will shut down automatically if there is no operation within 3 minutes.

## 5. Three Types of Measurements

### 1). Real-time Measurement:

The reading will change dynamically per second when the sensor at different positions, until you press the **HOLD**.



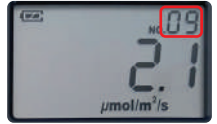
### 2). HOLD Measurement:

Press the **HOLD** to capture the reading of last dynamic measurement. Press the **HOLD** again to resume real-time measurements.



### 3). REC (Record Measurement):

Press the **LOG** to manually store the data. The last logged measurement index is shown next to "NO" at the top of the screen, initially is "00" updates to "01" after the first measurement, up to 100 measurements.



## 6. CALI (Zero Point Calibration)

- 1). Press the **MODE** once, then symbol "CALI" is blinking on the screen
- 2). Press the **HOLD** to enter CAL mode, symbol "CALI" will stop blinking
- 3). Cover the light sensor to block all light, then press and hold the **HOLD** for 3 seconds to start calibration. "PASS" will display upon successful calibration.
- 4). Press either the **MODE** or **HOLD** to return to normal measurement mode.



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# TROUBLESHOOTING

Symptom	Cause	Remedy
	Power is not turned on	Press the power button
	The battery is drained	Exchange the battery
	The battery has been installed in reverse.	Please examine the batteries to confirm they are aligned correctly with the appropriate polarity
The LCD screen displays "----"	The sensor unit is malfunctioning	Please check the cable and reconnect it
	Connection error with cable	Please check the cable and reconnect it
	Foreign object in RJ11 port	Please inspect the RJ11 port and clean it if there is any foreign object present
LCD not displaying, only battery icon flashing	The battery is drained	Exchange the battery

### WARRANTY CLAIM

- Our company is not responsible for any profits or losses arising from the use of this product.

### WARRANTY PERIOD

- A one-year limited warranty is provided from the date of purchase.

### WARRANTY SCOPE

- The supplier will be responsible for replacing or repairing the faulty parts of the equipment if the failure occurs within the above warranty period and is caused by the supplier. However, the following conditions are not covered under this warranty.
    - ① Improper handling or use by the user.
    - ② Failure or damage caused by collision, dropping during transportation or movement after purchase.
    - ③ Failure caused by reasons other than the product itself.
    - ④ Failure or damage caused by earthquakes, fires, floods, or other natural disasters.
    - ⑤ Failure or damage caused by operating of the instrument outside of its specified operating range.
    - ⑥ Improper or unauthorized repair by individuals other than our company.
- We have final say on product warranty claims.  
Please note that the warranty here refers to the warranty for the product itself, and we apologize for any damage caused by product failure.

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