

# Solar Power Meter

## User Manual



**Part Number: MP780966**

## 1. Introduction

Solar power meter is a device used to measure solar power (sunlight). The MP780966 has the advantages of high precision, good stability and fast response.

Measurement unit:  $\text{w/m}^2$  or  $\text{BTU}/(\text{ft}^2\cdot\text{h})$ .

## 2. Safety Precautions and regulations

This meter is in compliance with safety standard EN 61010-1 related to electronic measuring instruments. For your own safety and to avoid damaging the instrument follow the procedures described in this instruction manual and read carefully before operation

## 3. Meter Description

### 3.1 Features

1. Sunlight measurement up to  $1999\text{w/m}^2$  or  $634\text{BTU}/(\text{ft}^2\cdot\text{h})$
2. High accuracy and rapid response
3. Data HOLD function to hold measurement values
4. Unit and sign display for easy reading
5. Measuring unit selection between  $\text{w/m}^2$  and  $\text{BTU}/(\text{ft}^2\cdot\text{h})$
6. Manual range selection
7. Direct reading
8. Maximum and minimum value measurement
9. Low battery indication

### 3.2 Instrument Description

1. Photo Detector
2. The photo detector connection port
3. Zero adjustment
4. LCD display (data, min/max, hold,  $\text{w/m}^2$  or  $\text{BTU}/(\text{ft}^2\cdot\text{h})$ , low battery indication)
5. ON/OFF button
6. Unit conversion button ( $\text{w/m}^2$  or  $\text{BTU}/(\text{ft}^2\cdot\text{h})$ )
7. Range button
8. HOLD button
9. MIN/MAX button
10. Backlight button



### 3.3 Description of function buttons

- ON/OFF button:  
Press the 'ON/OFF' button to turn ON/OFF the power
- W/B button:  
Press the 'W/B' button to switch from BTU/(ft²·h) to W/m². To select a different unit press this button once again.
- R button (Range switching button):  
Press the "R" button to convert range / measurement value
- HOLD button:  
Press the 'HOLD' button to go into hold mode. 'HOLD' appears on the screen to hold the data.  
Press the "HOLD" button again to exit Hold mode.
- MIN/MAX button:  
When measuring the photometric values, press the 'MIN/MAX' button to display the min/max value. Long press the "HOLD" button for 1 second, the min/max value released.
- Backlight key:  
Press the 'Backlight' button turn on or off backlight.

### 4. Electrical Specification

Operating temperature and Relative Humidity:	5°C to 40°C, below 80%RH.
Storage temperature and relative humidity:	-10°C to 60°C, below 70%.
Display:	3-1/2 digits LCD with maximum reading 1999.
Sampling time:	Approx 0.25 second
Resolution:	1W/m²; 1BTU/(ft² × h)
Accuracy:	Typically within ±10W/m² [±3BTU/(ft² × h)] or ±5%; ±0.38W/m²°C per temperature changes.
Overload:	Display shows 'OL'
Range:	1999W/m², 634BTU/(ft² × h).
Size:	162(L) × 63(W) × 28(H)

Weight (including battery):

About 250g

## 5. Operating instructions

- Press the power button  to turn on the meter.
- Press the 'W/B' button to select measurement range W/m<sup>2</sup> or BTU/(ft<sup>2</sup> × h).
- Remove the protection cap of the photo detector and expose it to the light source in horizontal position. Read the photometer value from the LCD display.
- After the luminosity value has stabilized. Press 'HOLD' button to hold the testing data (NOTE: If display shows 'OL', it means that the input signal is too strong and a higher range must be selected.)
- After the measurement is completed, cover the protective cover, the LCD display should be displayed at '000', if not please press "zero" adjust before turn off.

## 6. Accessories

- User manual.
- 4.5V (1.5V AAA × 3) alkaline battery
- carrying case

## 7. Safety and maintenance

- Operating altitude: below 2000m.
- Operating environment: for indoor use, Pollution level II.
- Do not place the meter in direct sunlight or store the meter where temperature or humidity is excessively high.
- Remember to turn OFF the power after use. If the meter is not to be used for a long time, removed battery.
- Clean the meter with a dry soft cloth, wet cloths, liquid and water are prohibited.

## 8. Battery replacement

- When the symbol  is display, batteries need replacement. Turn off the meter and disconnect the photo detector from the meter.
- Unscrew the battery compartment and remove the battery, insert a new battery of the same type (1.5V AAA × 3 alkaline battery), re-screw the battery compartment

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