LS122
IR Power Meter

User Manual V7.0

Please read this manual carefully before using and reserve it for reference.

I. Product introduction

IR power meter is an infrared power measuring instrument, which is used for measuring the infrared radiation luminance. Its unit is Watt per square meter (W/m^2). The instrument is also used for the infrared rejection measurement.

II. Parameters

1. Irradiance measuring range: 0 ~ 40000 W / m2
2. Accuracy: ± 10%
3. IR rejection rate: -999 ~ 100%
4. Spectral range: 1000 ~ 1700 nm
5. Detector Diameter: ¢ 10mm
6. Dimensions: 125mm * 69mm * 24.5mm (L * W * H)
7. Weight: around 140 grams (including battery)
8. Operating temperature: -20 ° C ~ + 70 ° C
9. Power supply: 4 pieces of AAA alkaline batteries

III. Operation of Buttons

1. Power On / Off

Short press "" button to switch on / off the instrument.

Auto power off in 30 minutes without any operation

2. "HOLD" button

Under measurement conditions, short press "HOLD" button to hold the data on LCD, and the LCD displays "HOLD" symbol. Press the "HOLD" button again to cancel the state of holding and enter into measuring mode.

3. "0%" button

Under measurement conditions, press "0%" button to set the infrared rejection value to 0%.

Measurement for infrared rejection rate：

After the relative positions of the Infrared lamp and instrument are confirmed and when there is no test material between the Infrared lamp and instrument, measure the irradiance of the infrared lamp and press the "0%" button to set the infrared rejection value to 0%, and then put the test material between the

infrared lamp and instrument (*the positions of* instrument *and the lamp shall not be changed*). The infrared rejection value of the material will display on the LCD.

IV. Operating Instructions

1. Measuring the irradiance of infrared light sources (the sun, infrared lamp, etc.)

To measure the irradiance of light sources, turn on the instrument and put the detector against the light source. Then the infrared irradiance of the light source can be measured.

2. Measuring the infrared rejection rate of solar films or insulated glass, etc.

To measure the infrared rejection rate of solar films and insulated glass, etc, two steps shall be carried out:



Step1 Step2

Figure1: Measuring the infrared rejection rate of solar film

Step 1: Measuring the irradiance of the infrared light source

Sunlight and infrared lamp can be selected as the infrared light sources. First measure the irradiance of the light source, W_{IR1}. Under this condition, press “0%” button and set the infrared rejection rate as 0%.

Step 2: Measuring the irradiance through the solar film or insulated glass

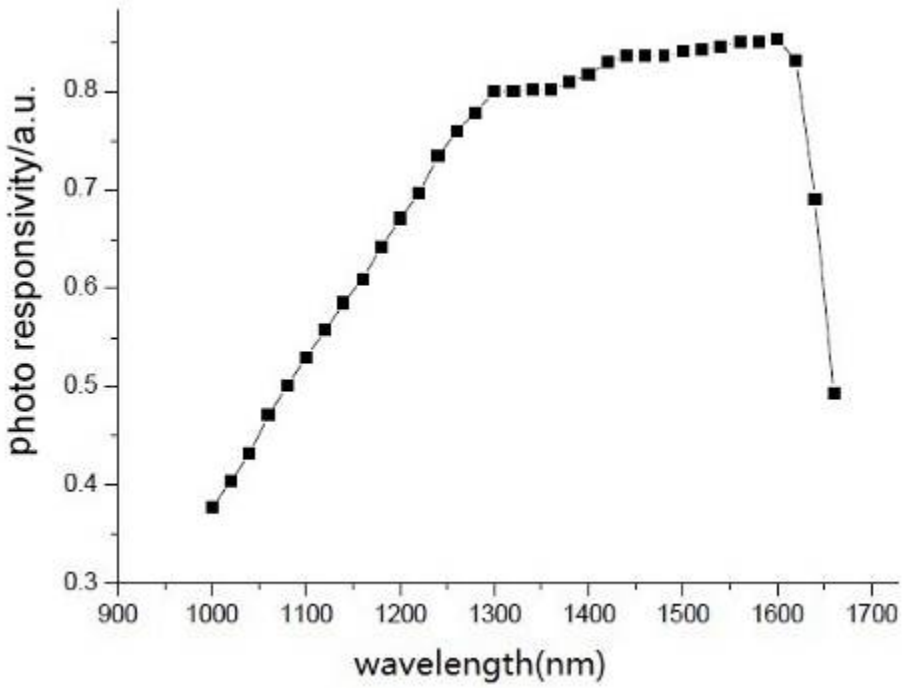
Maintain the distance between the infrared light source and the instrument, and put the solar film or insulating glass between the instrument and the infrared light source. Irradiance of the infrared light source through solar film or insulated glass is W_{IR2}, and the infrared rejection value of the material will display on the LCD. In Figure 1, the infrared injection rate is 53.5%.

Infrared transmittance = $W_{IR2}/W_{IR1} * 100\%$ *= 1511/3250*100% = 46.5%*

Infrared rejection rate ＝ *100% - infrared transmittance* *= 53.5%*

V. Note

1. After the “0%” button is pressed, the light source and instrument should not be moved in the subsequent measurements to ensure the accuracy of the data of infrared rejection rate.
2. Please turn off the instrument by pressing the power button when the instrument is not being used.
3. When the battery icon is displayed as empty and blinks, please replace the battery.
4. Avoid contact with corrosive agents and keep away from high temperature and humidity environment.
5. Spectral response curve of instrument.



VI. Packing list

No.	Description	Quantity	Unit
1	IR power meter	1	pcs

2	AAA battery	4	pcs
3	User Manual	1	pcs
4	Certificate / warranty card	1	pcs

VII. Service

1. The meter has one-year warranty. If the meter works abnormally, please send the whole meter to the company for maintenance.
2. Provide users with spare parts and lifelong maintenance services.
3. Provide the users with the meter inspection service for free.
4. Free technical support for long term.

Manufacturer: Shenzhen Linshang Technology Co.,Ltd.
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