

## LS123 UV Power Meter

### Instruction V6.2

LS123 UV power meter is an UV power measuring instrument, which is used for measuring the UV radiation luminance. Its unit is micro Watt per square centimeter ( $\mu\text{W}/\text{m}^2$ ). The instrument is also used for the UV rejection measurement.

## I. The Structure and Parameters of LS123

1. Irradiance measuring range: 0 --- 40000  $\mu\text{W}/\text{cm}^2$
2. Accuracy:  $\pm 10\%$
3. UV rejection rate: -999 ---100%
4. Spectral range: 260-400nm;  $\lambda_p = 365 \text{ nm}$
5. Detector Diameter:  $\phi 10\text{mm}$
6. Dimensions: 125mm  $\times$  69mm  $\times$  24.5mm (L  $\times$  W  $\times$  H)
7. Weight: around 140 grams (including battery)
8. Operating temperature: -20 °C --- + 70 °C
9. Power supply: 4 pieces of AAA alkaline batteries



## II. Operation of Buttons

### 1. Power On / Off

Short press “

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 UV rejection value to 0%.

Measurement for UV rejection rate

After the relative positions of UV lamp and LS123 are confirmed and when there is no test material between the UV lamp and LS123, measure the irradiance of UV lamp and press “0%” button to set the UV rejection value to 0%, and then put the test material between the UV lamp and LS123 (the positions of LS123 and the lamp shall not be changed), the UV rejection value of the material will display on the LCD.

## III. Operating Instructions of LS123

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

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

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

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



Figure1: Measuring the UV rejection rate of solar film

#### Step 1: Measuring the irradiance of the UV light source

Sunlight and UV lamp can be selected as the UV light sources. First measure the irradiance of the light source,  $W_{UV1}$ . Under this condition, press “0%” button and set the UV rejection rate as 0%.

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

Maintain the distance between the UV light source and the instrument, and put the solar film or insulating glass between the instrument and the UV light source. Irradiance of the UV light source through solar film or insulated glass is  $W_{UV2}$ , and the UV rejection value of the material will display on the LCD. In Figure 1, the UV injection rate is 81.1%.

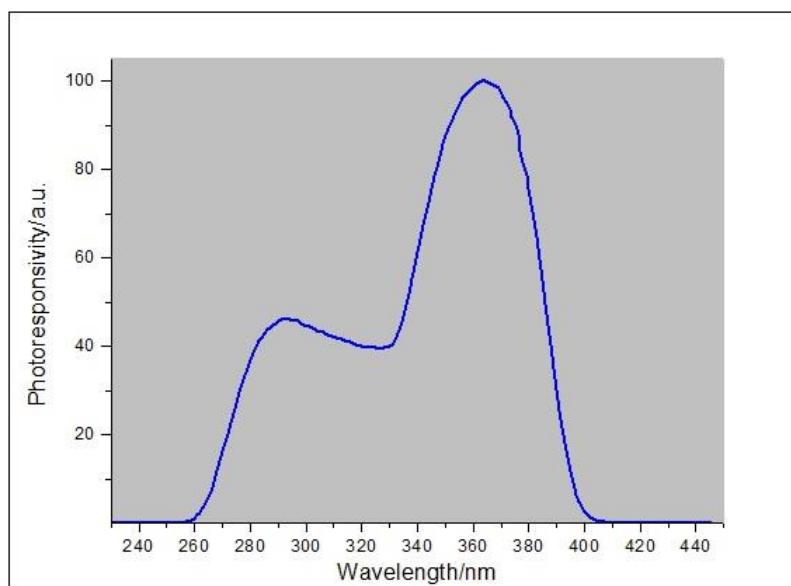
$$\text{UV transmittance} = \frac{W_{UV2}}{W_{UV1}} * 100\% = 2383/12636 * 100\% = 18.9\%$$

$$\text{UV rejection rate} = 100\% - \text{UV transmittance} = 81.1\%$$

#### IV. Note:

1. After the “0%” button is pressed, the light source and LS123 should not be moved in the subsequent measurements to ensure the accuracy of UV 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 from high temperature and humidity environment.
5. Spectral response curve of instrument.



## V: Standard packing list

No.	Description	Quantity	Unit
1	LS123 UV Power Meter	1	pcs
2	AAA battery	4	pcs
3	User Manual	1	pcs
4	Certificate / warranty card	1	pcs

## VI: 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.

Website: [www.linshangtech.com](http://www.linshangtech.com)

Service hotline: 086-755-86263411

Email: [sales21@linshangtech.com](mailto:sales21@linshangtech.com)