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# 0132-UV199
# UV LIGHT METER
## OPERATION MANUAL

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VIDEO



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## PRODUCT INTRODUCTION

This instrument can support 9 kindsof UV probes according to different ultraviolet spectrum,measuring range, test hole diameter and application industry:

| Probe Model | Spectral response | Test Hole Diameter | Application Industry |
|---|---|---|---|
| **0132-UVA1**(标配) | 315nm-400nm | Ø10mm | General low power UVA intensity andenergy measurement |
| **0132-UVC0**(选配) | 230nm-280nm | Ø10mm | Intensity and energy measurement of 254nm UV sterilization mercury lamp |
| **0132-UVCWP1**(选配) | 230nm-280nm | Ø10mm | Intensity and energy measurement of 254nm UV sterilization mercury lamp, waterproof |
| **0132-UVCLED0**(选配) | 230nm-315nm | Ø10mm | Intensity and energy of 260nm-285nm UV LED sterilization lamp |
| **0132-UVB0(选配)** | 280nm-315nm | Ø10mm | General UVB intensity and energy measurement |
| **0132-UVA0**(选配) | 315nm-400nm | Ø10mm | Intensity and energy measurement of light source of high pressure mercury lamp in UV curing industry |
| **0132-UVALED0**(选配) | 340nm-420nm | Ø10mm | Intensity and energy measurement of area light source of UV LED in UV curing industry |
| **0132-UVALED1**(选配) | 340nm-420nm | Ø1mm | Intensity and energy measurement of point light source of UV LED in UV curing industry |
| **0132-UVALED3**(选配) | 340nm-420nm | Ø10mm | General UVA+UVV LED intensity and energy measurement, low power measuring range |

## PROBE TECHNICAL PARAMETERS

1.0132-UVA1 probe（标配）
1).Spectral response: 315nm-400nm, λp = 365nm
2).Power measuring range: 0 - 200000μW/cm$^2$
3).Resolution: 0.1μW/cm$^2$
4).Energy measuring range: 0-9999999μJ/cm$^2$
5).Record time: 0-99999s
6).Measuring accuracy: ±10%
7).Sampling speed: 6 times/second
8).Optional unit:μW/cm$^2$ (default), mW/cm$^2$, W/m$^2$
9).Test Hole Diameter: ∅=10mm
10).Probe size: length 39mm * width 32mm * thickness 15mm





2. 0132-UVC0 probe（选配）
1).Spectral response: 230nm-280nm, λp = 254nm
2).Power measuring range: 0 - 200000μW/cm$^2$
3).Resolution: 0.1μW/cm$^2$
4).Energy measuring range: 0-9999999μJ/cm$^2$
5).Record time: 0-99999s
6).Measuring accuracy: ±10%
7).Sampling speed: 6 times/second
8).Optional unit:μW/cm$^2$ (default), mW/cm$^2$, W/m$^2$
9).Test Hole Diameter: Ø=10mm
10).Probe size: diameter 39mm * thickness 15mm

3. 0132-UVCWP1 probe（选配）
1).Spectral response: 230nm-280nm, λp = 254nm
2).Power measuring range: 0 - 200000μW/cm$^2$
3).Resolution: 0.1μW/cm$^2$
4).Energy measuring range: 0-9999999μJ/cm$^2$
5).Record time: 0-99999s
6).Measuring accuracy: ±10%
7).Sampling speed: 6 times/second
8).Optional unit:μW/cm$^2$ (default), mW/cm$^2$, W/m$^2$
9).Test Hole Diameter: Ø=10mm
10).Probe size: diameter 50mm * thickness 20mm
11).Waterproof depth: 1m

4. 0132-UVCLED0探头（选配）
1).Spectral response: 230nm-315nm, suitable for testing 260nm -285nm sterilization UV LED (wide spectral response range, avoid using in strong ambient light)
2).Power measuring range: 0 - 200000μW/cm$^2$
3).Resolution: 0.1μW/cm$^2$
4).Energy measuring range: 0-9999999μJ/cm$^2$
5).Record time: 0-99999s
6).Measuring accuracy: ±10%
7).Sampling speed: 6 times/second
8).Optional unit:μW/cm$^2$ (default), mW/cm$^2$, W/m$^2$
9).Test Hole Diameter: Ø=10mm
10).Probe size: diameter 39mm * thickness 15mm

5. 0132-UVB0 probe （选配）
1).Spectral response: 280nm-315nm, λp = 310nm, suitable for measuring UVB light source that peak wavelength at 297nm, 308nm, 313nm etc.
2).Power measuring range: 0 - 200000μW/cm$^2$
3).Resolution: 0.1μW/cm$^2$
4).Energy measuring range: 0-9999999μJ/cm$^2$
5).Record time: 0-99999s
6).Measuring accuracy: ±10%
7).Sampling speed: 6 times/second
8).Optional unit:μW/cm$^2$ (default), mW/cm2, W/m$^2$
9).Test Hole Diameter: Ø=10mm
10).Probe size: diameter 39mm * thickness 15mm

6. 0132-UVA0 probe （选配）
1).Spectral response: 315nm-400nm, λp = 365nm
2).Power measuring range: 0 - 2000mW/cm$^2$
3).Resolution: 0.1mW/cm$^2$
4).Energy measuring range: 0-9999999mJ/cm$^2$
5).Record time: 0-99999s
6).Measuring accuracy: ±10%
7).Sampling speed: 2048 times/second
8).Optional unit: mW/cm$^2$ (default), W/m$^2$
9).Test Hole Diameter: Ø=10mm
10).Probe size: length 39mm * width 32mm * thickness 15mm

7. 0132-UVALED0 probe （选配）
1).Spectral response: 340nm-420nm, calibrated with 395nm UV LED
2).Power measuring range: 0 - 20000mW/cm$^2$
3).Resolution: 1mW/cm$^2$
4).Energy measuring range: 0-9999999mJ/cm$^2$
5).Record time: 0-99999s
6).Measuring accuracy: ±10%
7).Sampling speed: 2048 times/second
8).Optional unit: mW/cm$^2$ (default), W/cm$^2$, W/m$^2$
9).Test Hole Diameter: Ø=10mm
10).Probe size: length 39mm * width 32mm * thickness 15mm





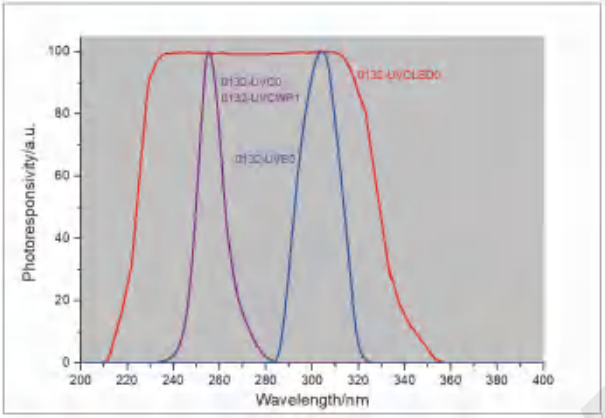
8. 0132-UVALED1 probe （选配）
1).Spectral response: 340nm-420nm, calibrated with 395nm UV LED
2).Power measuring range: 0 - 20000mW/cm$^2$
3).Resolution: 1mW/cm$^2$
4).Energy measuring range: 0-9999999mJ/cm$^2$
5).Record time: 0-99999s
6).Measuring accuracy: ±10%
7).Sampling speed: 2048 times/second
8).Optional unit: mW/cm$^2$ (default), W/cm$^2$, W/m$^2$
9).Test Hole Diameter: Ø=1mm
10).Probe size: length 39mm * width 32mm * thickness 15mm

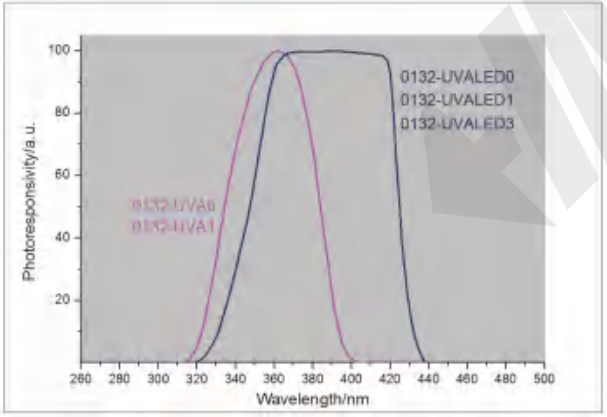
9. 0132-UVALED3 probe （选配）
1).Spectral response: 340nm-420nm, calibrated with 395nm UV LED
2). Power measuring range: 0 - 200000μW/cm$^2$
3). Resolution: 0.1μW/cm$^2$
4). Energy measuring range: 0-9999999μJ/cm$^2$
5). Record time: 0-99999s
6). Measuring accuracy: ±10%
7). Sampling speed: 6 times/second
8). Optional unit: μW/cm$^2$ (default), mW/cm$^2$, W/m$^2$
9). Test Hole Diameter: Ø=10mm
10). Probe size: length 39mm * width 32mm * thickness 15mm

## HOST PARAMETERS

1.Host weight: about 194g
2.Host size:148mm * 76mm * 26mm (L*W*H)
3.Display: 240*160 dot matrix LCD
4.Power supply: 4 AAA alkaline battery
5.Probe connection: push pull (Snap-in style)，Aviation socket.

## THE SPECTRAL RESPONSE CURVES OF PROBES







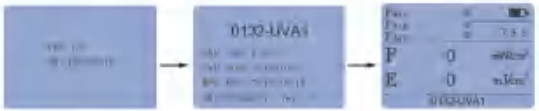

## PRODUCT FEATURES

1.Replaceable probe design, support 9 UV probes.
2.Advanced digital probe technology, it has high precision and good anti - jamming ability.
3.Instrument intelligent recognize probe type and adjust the display interface intelligently.
4.A variety of spectral range, measuring range, test hole size of the probe to adapt to different application industries.
5.For LED point light source, 1mm test hole can make it more convenient to measure.
6.Statistical functions, real-time value, maximum value, minimum value, average value, time, energy values are displayed at the same time.

## OPERATIONS

**1.Power on/off**

- **Power on**: Press “⏻” to power on the instrument. After poweringon, the instrument displays the instrument parameters and probe parameters, and enter the measuring interface, as shown below:




- **Power off:** Long press the “⏻” button to power off; or the instrument will automatically power off in 10mins after no operation when Auto Off set ON.

- The data recorded before shutdown will be automatically saved to the history record during automatic shutdown. (No. 1, the latest record).

**2.Parameter settings mode**

In the off state, long press the " " button 3s to enter the parameter setting mode.
In the setting mode, " " and " " are Select buttons, and " " is the Confirm button.


**A.**Select whether to automatically power off (Auto Off: ON/OFF)
Short press the " " or " " button to select ON/OFF

Selecting ON indicates that the instrument automatically powers off in 10mins after no operation.
Selecting OFF indicates that the user has to manually turn the instrument off, and the instrument will not automatically power off.
Short press " " button to complete the setting and enter the next Set option.

**B.**Whether to display the energy value (Energy display: NO/YES)
Short press the " " or " " button to select NO/YES

Short press " " button to complete the setting and enter the next Set option.

**C.**Smooth (OFF/50HZ/60HZ, only probes with high sampling speed have this option)
If UV light source powered by alternating current (AC) power supply, the AC frequency affects the power measurement, so that the smoothing process becomes necessary for those probes with high sampling speed (2048 times/second),enter the smooth setting mode, short press the " " or " " button to select.





**OFF**: Select this option, if UV light is DC powered and does not need smoothing.
**50HZ**: Select this option for 50HZ AC.
**60HZ**: Select this option for 60HZ AC.
Short press " " button to complete the setting and enter the next Set option.

**D.**Select the unit (Units: μW/cm2 , mW/cm2 , W/cm2 , W/m2)
Short press the " " or " " button to select the unit required

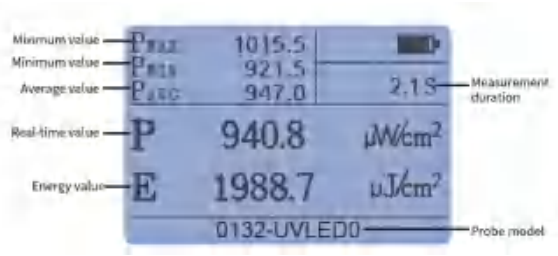
(Different probes have different options).

Short press " " button to complete the setting. When the probe model is 0132-UVALED0, 0132-UVALED1 and 0132-UVALED3, the meter enter the next setting item. If not, the meter enter the measurement mode.

## MEASUREMENT MODE

- In the measurement mode. The system displays the real-time value, maximum value, minimum value, average value, measurement duration, energy value (energy display = YES)
- In the measurement mode, if the backlight is off, press the " " button to light thebacklight; if the backlight is already lit, short press the " " button, and the "HOLD" icon will be displayed in the lower left corner of the interface. All data will be kept on the LCD, and the current data willbe saved to the history record
- In the "HOLD" state, if the backlight is off, short press the " " button to light the backlight; if the backlight is already lit, short press the " " button to cancel the HOLD state and start a new measurement.
- In the measurement mode, if the backlight is off, short press the " " button to light the backlight; if the backlight is already lit, press the " " button to clear up the current data and start a new measurement.

● In the measurement mode, short press "▲" or "▼" to enter the record data query mode.




## RECORD DATA QUERY MODE

● Short press "▲" or "▼" to scroll up or down a record data.

No.1 is the latest recorded data (up to 9 records can be stored,and the oldest record will be deleted automatically when exceed 9 recorded data).

● Long press the "UNIT" button 3Second to clear all recorded data.

● Short press the "MODE" button to enter the measurement mode.

## AVIATION PLUG CONNECTION

When plugging out the probe, make sure not to violently rotate and pull the connector, but plug out the plug by the way as shown in the following diagram.






## PRECAUTIONS

1.When not in use, please long press the "MODE" to power off the instrument.
2.Avoid contacting with corrosive materials and keep away from high humidity.
3.After shutdown, store it in a special packing box and keep it in a safe place. Protect the photosensitive part of the probe from polluting.
4.The recommended period of calibration is one year.
5.Because the UV probe is sensitive to humidity changes, the environment in which it is stored is important. When not in use for a long time, be sure to store the instrument in a low humidity environment.
6.When the instrument displays low battery, replace the battery.

## Introduction of UV LightMeter software

UVLightMeter is the support software of UV light meter. It can read all the recorded data in the device, display curves, export data in EXCEL format, and print reports, etc. The device is equipped with a USB communication interface. Connect the device with the computer with the USB cable, and start UV LightMeter, you can read the data from the device.

Particularly, the software has functions of report generation and printing. The software can automatically generate and print reports of measurement data. If a PDF printer is installed on your computer, you can print an electronic version of the report in PDF format. It is convenient to record and store measurement data.

You don't have to manually install the USB driver. Just connect the device with the computer, and you can realize data reading (when you connect the device with the computer for the first time, an alert will ask you to restart the computer to automatically load the driver). Currently the software supports Windows. Computer hardware configuration recommended 6th Generation Intel® Core™ i3 Processors, RAM greater than 4G.

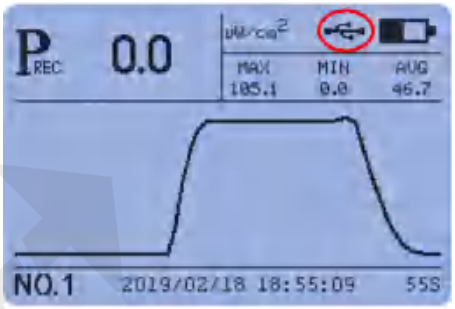
## Hardware Connection

The cable connects with the USB interface of the computer on one end, and with that of the device on the other end.

After connection, the USB icon appears at the upper right corner of the device display.








## Software Interface

USB Connection Status Indicator
Normal device connection: "Green".
Abnormal or no device connection: "Dark Red".
● Device Information
It includes the SN and Firmware Version.
● Setup Parameter
A. Set whether the device automatically shuts down.
Select Auto Off ON: the device will automatically shut down if there are no operations within the set time.
Select Auto Off OFF: the device needs to be shut down manually, and it will not shut down automatically.
B. Set the automatic Shutdown time: 1 minute to 10 minutes can be set.
C. Set Storage Interval: The data storage interval of the device can be set as 1s/10s/60s.
Note: The historical data of the device will be cleared after resetting the parameters.
● Setup Date/Time
The Setup Date/Time display box shows the computer's system time.
Click "Setup" in this display box, you can set the time into the device.
Click "Read" in this display box, the date/time of the device will be read back to this display box. After displaying for 10s, the time of the display box will automatically switch to the system time.
● Function Buttons
"Chinese": The interface switches to Chinese.
"English": The interface switches to English.
"Setup" button in the “Setup Parameter” display box: Set parameters of Auto Off ON/OFF, Shutdown time, and Storage Interval to the device.
"Read" button in the “Setup Parameter” display box: Read parameters of Auto Off ON/OFF, Shutdown time, and Storage Interval of the device back to the software “Setup Parameter” display box.
"Get Data": Read all historical data of the device.





"Clear ": Clear the data in the data display area.
"EXCEL": Save data of the corresponding group in the EXCEL format.
"Curve": Display the curve of the data of the corresponding group.
"Report": Generate the test report, and click "Report" in the report interface to print it.
● Data display area
displays the Start Time, Duration(S), Power (REC) (for the corresponding device), Power (MAX), Power (MIN), and Power (AVG) of the power data.
3. Software Operation
▲Connect the device with the computer, start UVLightMeter, and the software will automatically obtain the basic information of the device.
▲Click "Read Data" to read the historical data of the device.
▲To print the report, click "Report" to generate the report as follows:


The statistical information includes Power (REC), Power (MAX), Power (MIN), and Power (AVG).

▲Header information input: Click "Information" to enter the header information, and then click "Print" to print the report. The operation is shown in the figure below: