User Manual R2.0
Santacary Technology Co. Ltd.
XAR-U06 UVA and UVB Light Meter

INTRODUCTION

Congratulations on your purchase of this Santacary XAR-U06 UVA and UVB Light Meter. XAR-U06 is a precise meter that measures ultraviolet UVA and UVB radiation.

UVA wavelength is 320-400nm, and the center value is 365nm. UVA light is usually used in industrial glue curing, tungsten ore identification, fluorescence detection, biopolymerization, oil pollution detection, ore exploration, criminal detective, textile industry, archaeology, medical treatment, stage, nightclub, theater and signal lighting.

UVB wavelength is 275-320nm, also known as medium wave erythema effect ultraviolet, which is mainly used in medical treatment, aging test, spectral analysis, etc.. UVB light has erythema effect on human body, can promote mineral metabolism in vivo and the formation of vitamin D. Reptile pets, such as tortoises, green iguanas, chameleons also need to take UVB.

Most of the natural UV light people encounter comes from the sun. Of the solar UV energy that reaches the equator, 95 percent is UVA and 5 percent is UVB.

FEATURES

- ✧ Gallium Nitride Based Material Photovoltaic Mode
- ✧ High-precision detection, rapid response and operation
- ✧ Good Visible Blindness
- ✧ Display UVI, and UV (UVA, UVB, UVA+UVB) radiation intensity simultaneously
- ✧ Trend chart display showing the past readings for UVA+UVB intensity
- ✧ Only two buttons and easy to operate
- ✧ Four AA Alkaline Batteries

APPLICATION

For UVA:

- ✧ Monitoring xeroderma pigmentosum UV exposure
- ✧ Testing window film / tint transmission
- ✧ Monitoring low level UV from household lamps
- ✧ Testing ground level UV from stadium lighting
- ✧ Testing ground level UV from stage, nightclub and theater lighting
- ✧ Monitoring artwork UV exposure
- ✧ Monitoring archaeological UV exposure
- ✧ Measuring outdoor UV Including shady area UV
- ✧ Monitoring UVA lamp intensity and aging
- ✧ Monitoring UV LED (< 360nm)
- ✧ Monitoring PUVA therapy lamp intensity and aging
- ✧ Testing UVA in industrial glue curing, tungsten ore identification, fluorescence detection, biopolymerization, oil pollution detection, ore exploration, criminal detective, and textile industry.

For UVB:

- ✧ Monitoring UVB phototherapy lamp intensity & aging
- ✧ Testing general UV health lamp
- ✧ Testing plant growth UV lights
- ✧ Testing eyewear UVB blocking capabilities
- ✧ Measuring outdoor UVB including shady area UVB
- ✧ Testing window film / tin transmission
- ✧ Testing acrylic shield transmission
- ✧ Testing UVB for aging and spectral analysis

DEVICE

1. UVA and UVB sensors
2. LCD display
3. Power button

4. Function button
5. Battery compartment back cover

OPERATION

Note:

- LCD backlight will turn off automatically after 2 minutes of inactivity.
- When LCD backlight is off, press any button to turn on the backlight.

1. Power button 

1.1 Turn On/Turn Off Meter

1) When the meter is turned off, press power button  to turn on the unit.

2) When the meter is turned on, press power button  for 2 seconds to turn off the unit.

When the unit is first turned on, it performs 1 second countdown for meter warm up, then enters normal display with current UVI, and UV (UVA, UVB, UVA+UVB) radiation intensity readings displayed. The meter starts taking measurements when power on and updates readings every 2 seconds. The UV radiation Units are **μW /cm2**.

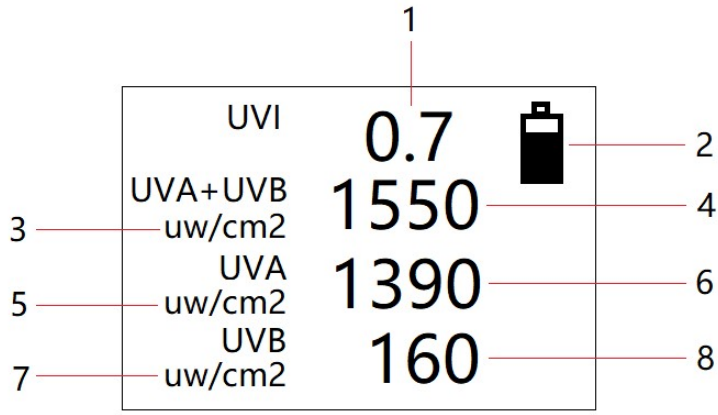
2. Function Button 

Press function button  shortly to switch Normal Display, Trend Chart Display and Log Display.

2.1 Normal Display

1. UVI (Ultraviolet Index)
2. Battery gauge
3. UVA+UVB Radiation intensity unit
4. UVA+UVB radiation intensity
5. UVA Radiation intensity unit
6. UVA radiation intensity
7. UVB Radiation intensity unit

8. UVB radiation intensity



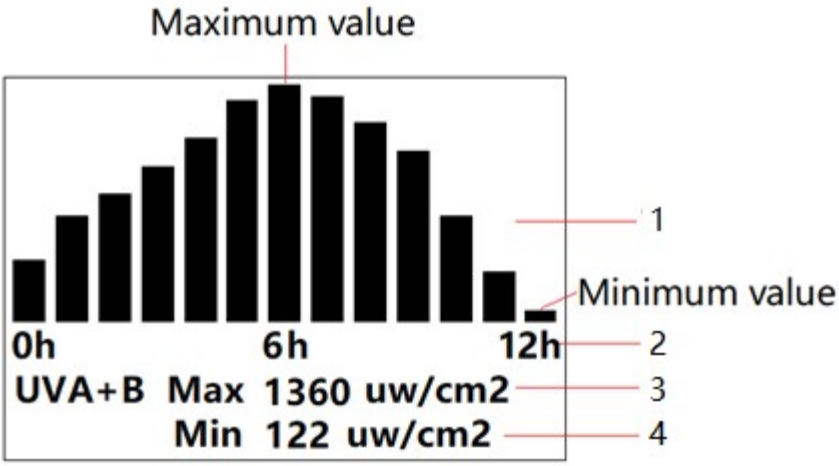
Note：If the UVs radiation intensity exceeds 9,999uw/cm2, the units will switch to mw/cm2. 1mw/cm2=1000uw/cm.

2.2 Trend Chart Display

XAR-U06 has a data log function that provides up to 12 hours history of UVA+UVB intensity.

The trend chart displays the past readings for UVA+UVB intensity. The time per division (indicates the chart's time per unit division) is 60 min / div. Trend chart contains a maximum of 13 recorded data at one time. The time span is 12 hours. After the chart is full the data is FIFO (first-in, first-out). Below is the example of Trend Chart Display.

1. Vertical bar of UVA+UVB intensity (The higher the bar, the greater the value)
2. Time scale (farther to the right, longer time in the past)
3. Maximum value on the chart of UVA+UVB intensity
4. Minimum value on the chart of UVA+UVB intensity

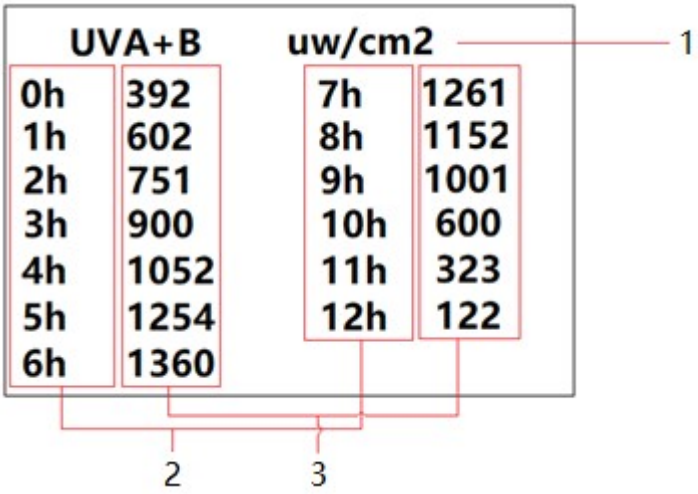


At the bottom of the chart, there are two numerical indicators: Max and Min. The Max and Min values will reflect the maximum and minimum values on the chart of UVA+UVB intensity.

2.3 Log Display

This display lists the 13 recorded data in the trend chart with time stamples.

1. UVA+UVB intensity unit
2. Time stamples in past (h--hour)
3. UVA+UVB intensity

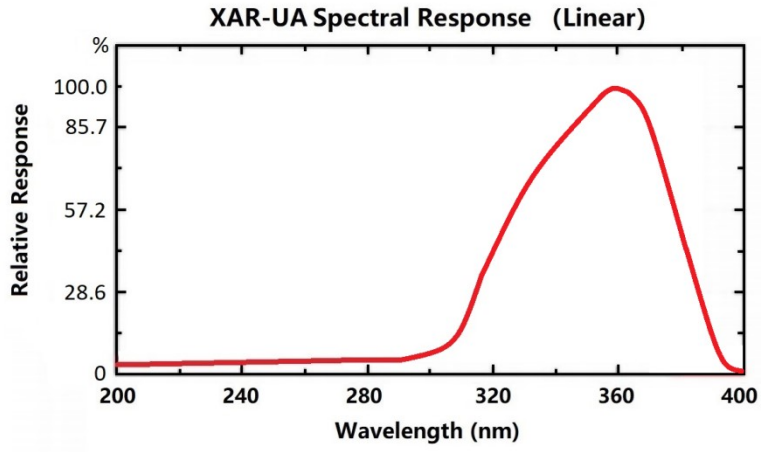


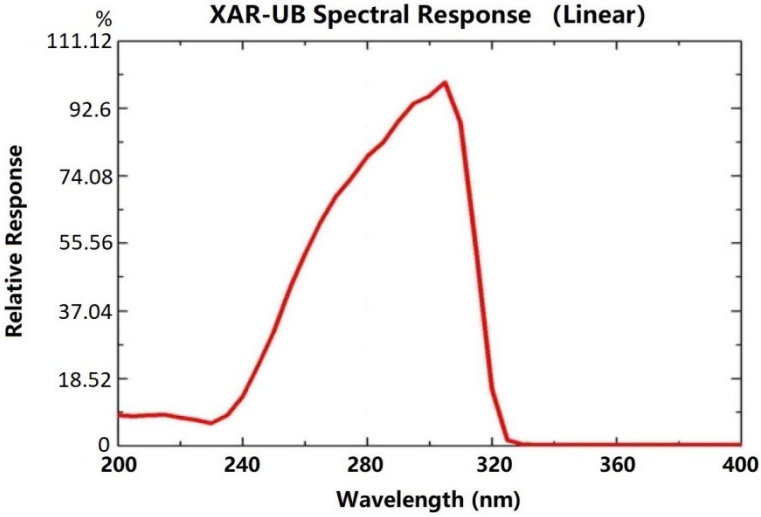
ULTRAVIOLET INDEX (UVI)

This meter displays the Ultraviolet Index (UVI) in Normal Display.

UVI	0-2.9	3.0-5.9	6.0~7.9	8.0~10.9	11+
Description	Low danger from the sun's UV rays for the average person	Moderate risk of harm from unprotected sun exposure	High risk of harm from unprotected sun exposure	Very high risk of harm from unprotected sun exposure	Extreme risk of harm from unprotected sun exposure

SPECTRAL RESPONSE





SPECIFICATIONS

UV Specification

UVA+UVB Measurement Range	0 to 50,000 µW/cm2 (50 mW/cm2)
UVI Measurement Range	0 to 130
Spectral Detection Range	240 to 395 nm

Peak point	360nm
Measurement accuracy	±4% or ±1 digits
Resolution	1.0 μW/cm2
Temperature Range	-10 to 50°C (14 to 122°F)
Humidity Range	0 to 90%RH

UVA Specification

UVA Measurement Range	0 to 50,000 μW/cm2 (50 mW/cm2)
Spectral Detection Range	320 to 395 nm
Peak point	360 nm
Measurement accuracy	±4% or ±1 digits
Resolution	1.0 μW/cm2
Temperature Range	-10 to 50°C (14 to 122°F)
Humidity Range	0 to 90%RH

UVB Specification

UVB Measurement Range	0 to 25,000 μW/cm2 (0 to 25 mW/cm2)
Spectral Detection Range	240 to 320 nm
Peak point of Spectrum	305 nm
Measurement accuracy	±4% or ±1 digits
Resolution	1.0 μW/cm2
Temperature Range	-10 to 50°C (14 to 122°F)
Humidity Range	0 to 90%RH

General

Operating	-10°C to 50°C (14°F to 122°F), 0~90% RH non-condensing
Storage	-10°C to 60°C (14°F to 140°F), <99% RH non-condensing

Power Supply	Four AA Alkaline Batteries
Dimensions	75x165x25 mm (2.95x6.49x0.98”)
Weight	121 grams (4.27 oz.) without batteries

BATTERIES REPLACEMENT

1. When the batteries power is low, the low voltage symbol  appears on the display. It indicates that the batteries need to be replaced. If they are not replaced in time, the accuracy of measurement will be affected.
2. Open the battery compartment cover and take out the batteries.
3. Install 4 new AA batteries correctly according to the diagram of positive and negative poles in the battery compartment.
4. If the meter is not used for a long time, please take out the batteries to prevent the batteries from leaking and damaging the meter.

MATERIALS SUPPLIED

- ✧ Santacary XAR-U06 UVA and UVB Light Meter
- ✧ Carry case
- ✧ English User Manual

CLEANING AND STORAGE

The front panel and case can be cleaned carefully with a soft wet cloth. Allow drying completely before using. Do not use aromatic hydrocarbons or chlorinated solvents for cleaning.

WARRANTY

The XAR-U06 is warranted to be free from defects in material and workmanship for a period of two year from the date of purchase. This warranty covers normal operation and does not cover misuse, abuse,

alteration, neglect, improper maintenance.

CONTACT US

Santacary Technology Co., Ltd.
Zhaobei Building B, the 7th Industrial Road 75#,
Shekou, Shenzhen, 518067,
Guangdong, China
Email: info@santacary.com

www.santacary.com