

User Manual R1.0
Santacary Technology Co. Ltd.
HL-UC Desktop UVC Light Meter



INTRODUCTION

Congratulations on your purchase of this Santacary HL-UC UVC Light Meter. HL-UC is a precise meter that measures ultraviolet UVC radiation.

UVC wavelength is 200-275nm, also known as short wave sterilization ultraviolet. UVC light applications are used for odor control, sterilization, and elimination of VOCs and industrial exhausts containing solvents. The use of UVC in odor control has many applications, including wastewater plants, farms, HVAC (Heating, Ventilation and Air Conditioning), and food processing plants.

FEATURES

- ✧ Gallium Nitride Based Material Photovoltaic Mode
- ✧ Desktop/wall-mountable
- ✧ Display the UVC radiation intensity and UVC dose for all-time
- ✧ Only one buttons and easy to operate
- ✧ Visual alarm indicates UVC reception

APPLICATION:

- ✧ Monitoring UVC Lamp Intensity & Aging
- ✧ Measuring the radiation dose of UVC Lamp
- ✧ Testing Eyewear UVC Blocking Capabilities
- ✧ Measuring UVC Lamp Fixture Leakage

DEVICE

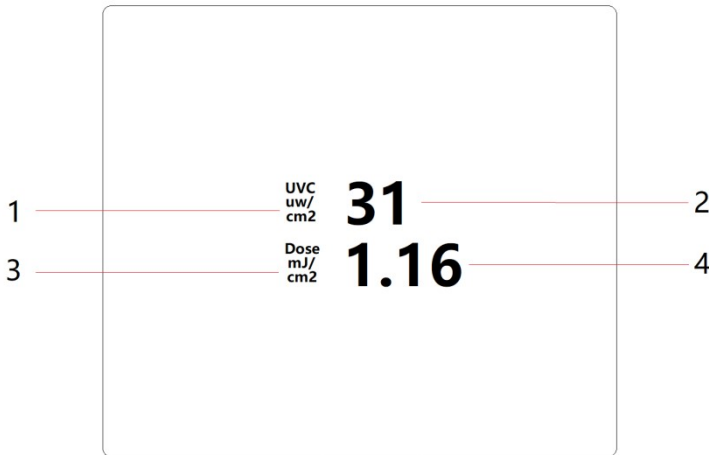
1. Power button
2. UVC sensor

3. 5VDC Power socket
4. Display panel



DISPLAY

1. Radiation intensity unit
2. UVC radiation intensity
3. Radiation dose unit
4. UVC radiation dose



OPERATION

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 display with current UVC intensity and UVC dose. The meter starts taking measurements when power on and updates readings every 2 seconds. The UVC radiation intensity unit is $\mu\text{W} / \text{cm}^2$. The UVC dose unit is $\mu\text{J} / \text{cm}^2$ or mJ / cm^2 or J / cm^2 or kJ / cm^2 .

2. UVC Dosage

UVC dosage, also called “exposure dosage”, is a way to measure how much total UVC energy has radiated a particular surface. This is the most crucial element in UVC system design, because UVC dosage is the

primary determinant in whether or not the UVC radiation have successfully achieved pathogen inactivation. This meter calculates the dose in real time and displays it in the screen.

UVC Dose formula:

$\text{UVC Dose (J/cm}^2\text{)} = \text{UVC Intensity (W/cm}^2\text{)} \times \text{Exposure time (seconds)}$

Or

$\text{UVC Dose (}\mu\text{J/cm}^2\text{)} = \text{UVC Intensity (}\mu\text{W/cm}^2\text{)} \times \text{Exposure time (seconds)}$

The dose units' conversions are as follows:

$1 \text{ kJ/cm}^2 = 1000 \text{ J/cm}^2$

$1 \text{ J/cm}^2 = 1000 \text{ mJ/cm}^2$

$1 \text{ mJ/cm}^2 = 1000 \mu\text{J/cm}^2$

3 Reset UVC Dose

Press Power button shortly to reset the UVC dose value. This operation occurs before the next measurement is retargeted.

4. Zero the Sensor Offset

If the meter has been used for a long time, there may have zero point drift in the reading. This offset can be adjusted to 0 in the absence of UVC radiation

By pressing the Power button shortly for 6 times, the meter enters into zero operation. The prompt sentence "Zero the sensor offset" will be shown in the screen.

This function should be operated within 6 seconds. Otherwise, the meter will cancel operation and return to normal display.

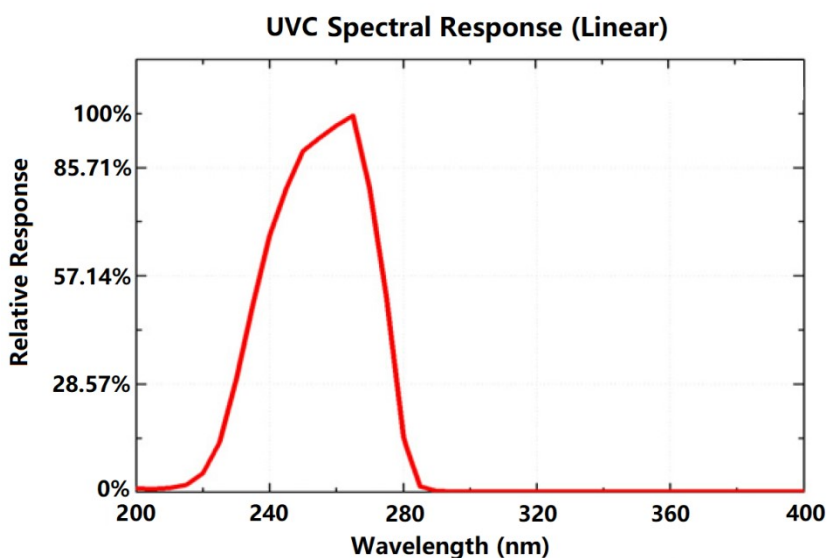
ALARM

When the meter detects UVC radiation, if the radiation intensity exceeds $10 \mu\text{W/cm}^2$, the meter will flash a red light alarm every 2 seconds. It prompts the user that there is now UVC radiation detected.

PLACEMENT

HL-UC can be placed on the desktop; it also can be pasted onto the wall by using double-sided adhesive to stick the back of the meter.

SPECTRAL RESPONSE



The peak point of spectral response is at 265 nm.

SPECIFICATIONS

UVC Specification

UVC intensity measurement range	0 to 3500 $\mu\text{W}/\text{cm}^2$ (0 to 3.5mW/cm2)
Spectral detection range	220 to 280 nm
Peak point of spectrum	265 nm

Measurement accuracy	±4% or ±1 digits
Resolution	1.0 μW/cm ²
UVC dose measurement range	0 to 999.99 kJ/cm ²

General Specification

Operating	-10°C to 50°C (14°F to 122°F), 5~95% RH non-condensing
Storage	-10°C to 60°C (14°F to 140°F), <99% RH non-condensing
Power supply	5.0VDC 1.0A
Dimensions	77x77x33mm (3.03x3.03x1.3")
Weight	85grams (3.0oz.) without adapter

MATERIALS SUPPLIED

- HL-UC desktop UVC Light Meter
- DC 5V 1.0A adapter
- 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 HL-UC 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

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