

# Instruction Manual

## MG-04

### (UV Radiometer)



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#### **! Precaution**

This manual contains important information on safety precautions and product handling to prevent an accident. Make sure to read this manual carefully before using this product.

Keep this manual in a safe place where you can find easily after reading this manual.

Seller will bear no responsibility over the loss or malfunction caused by unauthorized disassembly and reassembly.

## 1. Product features and application

### 1) Feature

GUVD-MG04 have 3 Channel input monitoring indicator

Absolute power can be verified by connecting the most suitable sensor probe for ultra violet ray of UVA, UVB, UVC and relative power can be verified by changing the setting as well. Also contact signal can be obtained when value is higher or lower than set value by using 2 relays.

Output : 4-20mA current output based on relative power.

GUVD-MG04 have 3 color led (Green ,Yellow , Red) this indicator LED operate based on Relative power.

### 2) Application

UV lamp monitoring / water sterilizer / air cleaner/ UV hardener / UV irradiator/ Measure transmittance.

## 2. Product specification and configuration

### 1) Display panel.

- a. Size : 96 × 96 × 111 mm<sup>3</sup> , Panel cutting size : 92 × 92 mm<sup>2</sup> ( -0, + 0.5 )
- b. Power supply : AC 80 ~ 265 V 50/60 Hz , Consumption : ≤ 5 W
- c. Operating Temperature: 0~50 °C, Operating Humidity: 35 ~ 85 % RH
- d. - Relay : 250AC 3A, Current Output : 4-20 mA 300 Ω Max.



LW5.0 Probe with Indicator

LW9 Probe with Indicator

LW10 Probe with Indicator

**Fig 1 UV radiometer 4.0**

### 2)Sensor probe

Model No.	Thread/Length for Mounting	Body (mm)	Window (mm)	Wrench size(mm)	Length (mm)	Weight (g)	Material
LW5.0	PT1/4 " / 12mm	21	7	19	63	67	316-L ( 1.4404 )
LW9	PT 3/4 " / 16mm	30	7	26	62	200	316-L ( 1.4404 )
LW10	PT 3/4 " / 16mm	23	12	30	4.15	200	316-L ( 1.4404 )

### 3) Connection cable

- We provide Sensor probe connection cable and display.

Power cable , relay output cables are not included.

### 3. Product installation

1) Please connect the terminal reference to Figure 2. (The number indicated on the back of the display unit)

2) Power Supply

- AC 85~265V , 50/60 Hz .

Please connect terminal #1 and #2

3) Division by channel

Terminal #13~20 is for CH1, Terminal #21~28 is for CH2, Terminal #3~10 is for CH3.

4) Connect Sensor probe.

- Each sensor probe have 3 color terminal , Red wire is Vcc(CH1 #19 , CH2 #22 , CH3 #9),

Green wire is Vin(CH1 #18, CH2 #23, CH3 #8), Black wire is GND (CH1 #20 , CH2 #21 , CH #10)

5) Using Relay contact

- Connect to COM and N/O(Normal open) in order to obtain a short(Contact signal) from low relative power alarm

ex) If you want to low Relative power alarm , Cut one of power cable and connect COM and N/O

When the relative power is lower than setting value , the relay will contact N/O.

COM and N/O , CH1 is #13 and #14 , CH2 is #28 and #27 , CH3 is #3 and #4

6) Using Current output

The Current output (4 -20mA) is Based on relative power.

CH1 is #16(+) #17(-), CH2 is #25(+) #24(-), CH3 is #6(+) #7(-)

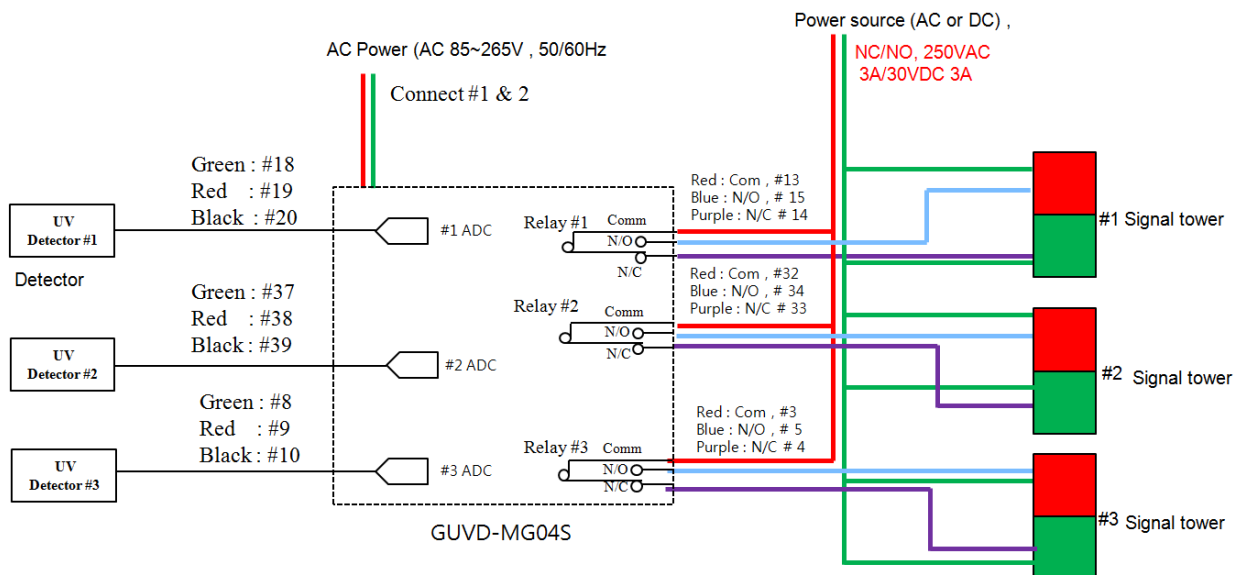


Fig. 2 Wiring diagram

## 4. Product function

1) Function setting can be change by Mode and setting button .

2)Display

a.GUVD-MG04 displays relative power(%), Accumulate time(Hours), Absolute power( $\text{mW}/\text{cm}^2$ )

It displays as below . When you want to change display mode, Push mode button.



**Fig 3. Display**

b. There are three color LED(Green ,Yellow , Red LED) below the each channel display.

Each 3 color LED will be operate based on Relative power alarm setting value.

When relative power(%) value  $>$  C-03 Value , then the Green LED will be on.

If  $C-04 <$  relative power(%)  $<$  C-03 then the yellow LED will be on.

When relative power(%)  $<$  C-04 then the yellow LED will be on.

3) Setting menu

a. Press the Set button over 3 seconds the indicator will enter the setup mode. When the indicator in setting mode you can change setting mode by push mode button , the setting mode will change

C-00  $\rightarrow$  C-01  $\rightarrow$  C-02  $\rightarrow$  C-03  $\rightarrow$  C-04  $\rightarrow$  C-05  $\rightarrow$  C-00 and the setting menu each is as follows

- C-00 : Relative power setting, Basic setting value is maximum intensity value.
- C-01 : Relative power alarm setting. When Relative power(%)  $<$  C-01, the relay will operate. (Default : 50)
- C-02 : Accumulate time alarm, When AT time  $>$  C-02 value the relay will operate. (Default : 5000)
- C-03 : Green LED Operation setting value, Relative power(%)  $>$  C-03 Value , The Green LED will be ON. (Default:70)
- C-04 : RED LED Operation value, Relative power(%)  $<$  C-04 Value , The Red LED will be ON. (Default:50)
- C-05 : Maximum intensity setting , Maximum display range is  $200.00 \text{ mW}/\text{cm}^2$ . Do not change this value.

b. Setting method.

- Push set button over 3 seconds and find the menu.
- Press the up arrow on the channel you want to change the right number of digits and displayed value is blinking.
- you can change the digit by push set button and the value can change by push  $\blacktriangle$  and  $\blacktriangledown$  button
- If you want to save the setting value , push setting button over 3 seconds. or you don't want to save push mode button

- Ex ) Relative power Setting

Display -> [Push set button over 3 seconds] -> C-00 -> Mode button -> C-01 (Fig 4-1)

With reference to Figure 4, and change the settings. After changing the settings, press the Set button for 3 seconds or more. The value is stored, the process returns to Figure 4-1. Press the Mode button to return to Figure 4-1 is not saved

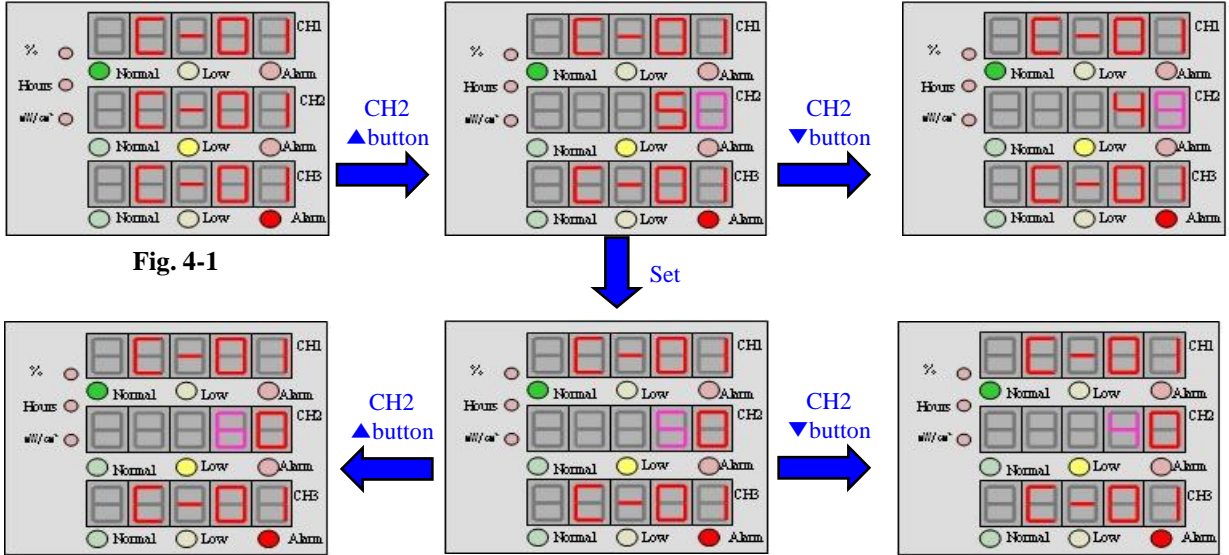


Fig. 4 Setting method

4) Relative time reset

- Push ▼ button over 3 seconds each channel at AT time display mode

## 5. Relative reaction curve of UV Sensor

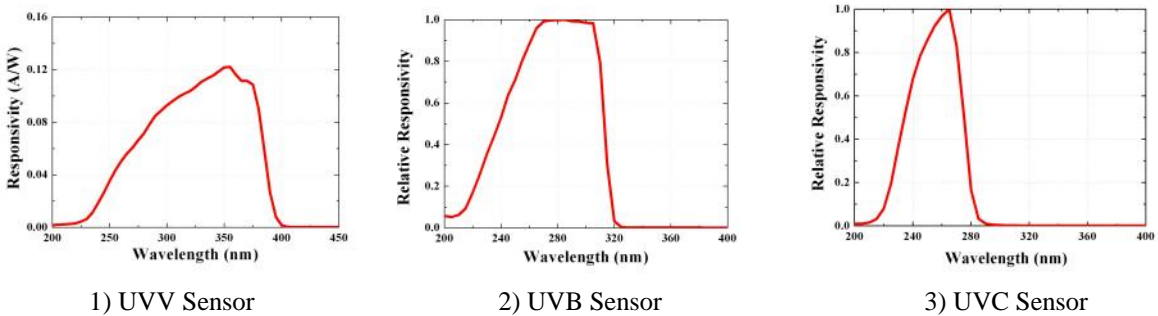


Fig 5. Relative responsivity curve of UV Sensors.

## 6. A/S Request in Case of Product Failure

- 1) Should any failure is found in product, please call the sales company or customer center for A/S.
- 2) Product warranty period is 1 year from the date of procurement with no charge.

However, failure which is caused by user's misuse or carelessness within warrant period or any failure after the warrant period shall be chargeable for it's A/S.

- 3) Product inquiry and on-line customer service

Tel : +82-42-862-3982, Fax : +82-42-862-2982

E-mail : [uvsensor@geni-uv.com](mailto:uvsensor@geni-uv.com)

Web site : <http://www.geni-uv.com>

## 7. Notes

### 1) CAUTION

TURN ALL POWER OFF. NEVER EXPOSE EYES OR SKIN TO UV LIGHT FROM ANY SOURCE  
WEAR GLOVES, FACE SHIELD/GLASSES(PER ANSI Z87.1)  
AND COVER ALL EXPOSED SKIN. DO NOT TOUCH LAMP GLASS WITHOUT GLOVES.

### 2) NOTE

Read this entire instruction sheet before starting the installation.