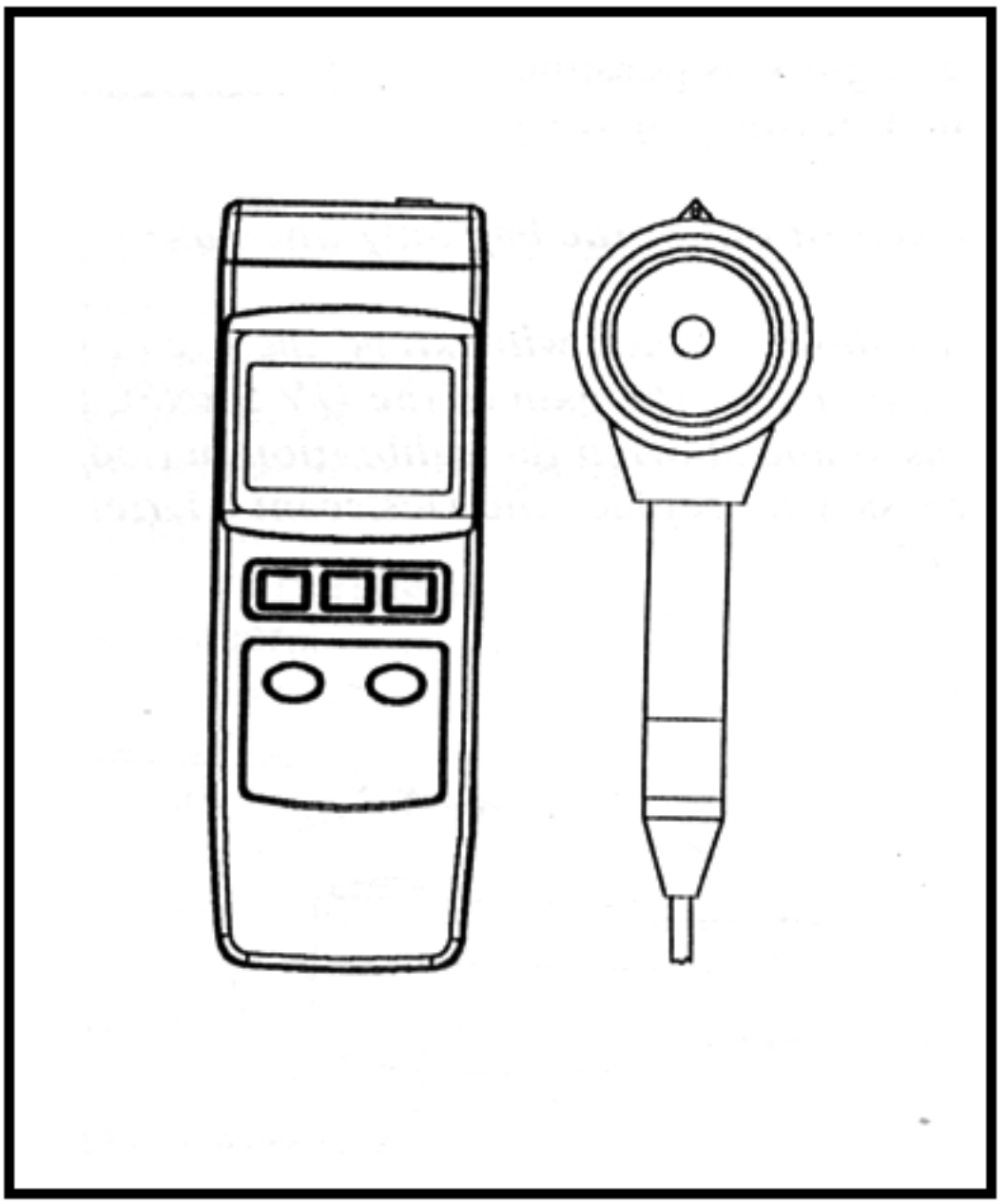
UV LIGHT METER

UVA and UVB measurement

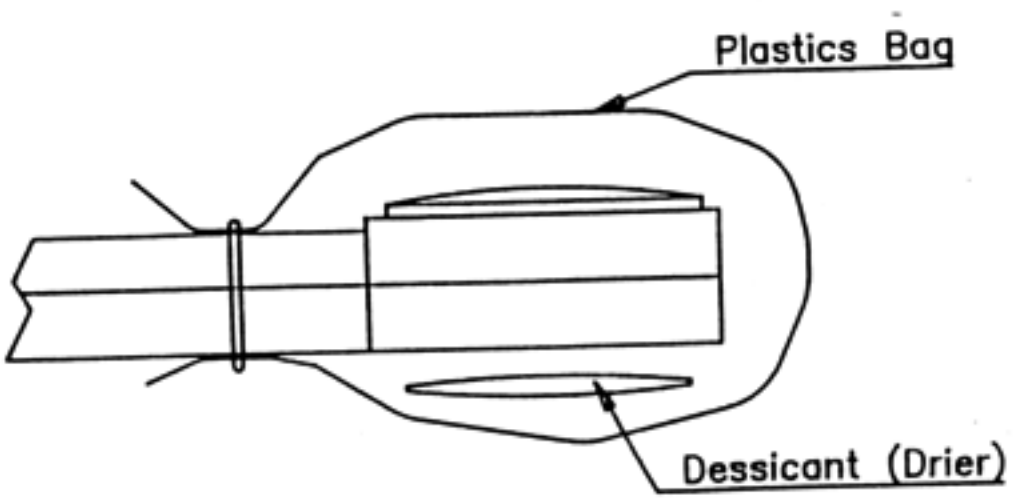


Storage for the " UV sensor "

UV sensor is with extremely precise structure. Once don't use it , be sure to store it in the dry environment. For example, put the whole sensor including Desiccant (Drier) into to the Plastic bag and seal the bag as tightly as possible (refer the following figure).

Take the sensor out of the bag only when use it.

Comply to above method will extend the life of UV sensor. Otherwise, the gain of the UV SENSOR may be decreased and shorten the calibration period. It is also necessary to replace the Desiccant (Drier) periodically.



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1. FEATURES

* Professional, high quality UV meter.
* Ultra–violet irradiance measurement for UVA & UVB.
* UV detector spectrum from 290 nm to 390 nm.
* Two ranges : 1.999 mW/cm^2, 19.99 mW/cm^2.
* Exclusive UV sensor structure.
* LSI circuit provides high reliability and durability.
* Separate UV LIGHT probe allows user to measure the UV light at an optimum position.
* Large LCD display, easy readout.
* Heavy duty & compact housing case.
* DC 9V battery power supply.

2. APPLICATIONS

Industrial:

* Monitoring blue light radiation hazards in welding.
* UV sterilization
* Graphic arts.
* Photochemical matching.
* UV EPROM erasure.
* Photoresist exposure.
* Curing of inks, adhesives and coatings. Laboratory:

Laboratory :

* Weathering " degradation studies."
* UV sterilization
* Virology.
* Microbial genetics.
* DNA research. * Biologic hoods.
* General laboratory use.

3. SPECIFICATIONS

Display	LCD, 21.5 mm digit height. Maximum indication 1999.
Measurement ranges & resolution	*Range 1 : 2 mW/cm² :* 1.999 mW/cm² x 0.001 mW/cm²
	Range 2 : 20 mW/cm² : 19.99 mW/cm² x 0.01 mW/cm²
UV sensor spectrum	Band pass 290 nm – 390 nm.
Accuracy	± (4 % FS + 2 dgt) FS : full scale * *Calibration is executed under the UVA light & and compare with the standard UVA light meter.* * *Spec. tested under the environment RF Field Strength less than 3 V/M & frequency less than the 30 MHz only.*
Sensor structure	The exclusive UV photo diode & UV color correction filter.
Sample Time	Approx. 0.4 sec.
Over Range indication	Indication of "1".
Weight	300 g / 0.66 LB (including battery)
Operating Temp. and Humidity	0 °C to 50 °C(32 °F to 122 °F), Max. 80% RH.
Power Supply	DC 9V battery, 006P , MN 1604 (PP3) or equivalent.
Power Consumption	Approx. DC 3 mA.
	Main instrument : 200x68x30 mm (7.9x2.7x1.2 inch). *Sensor probe head :* 68x60x27 mm (2.7x2.4x1.1 inch). *Sensor probe handle :* 98 x 20 mm dia. (3.9 x 0.8 inch).
Accessories Included	Instruction manual..... 1 PC. UV sensor probe..... 1 PC.

4. FRONT PANEL DESCRIPTION

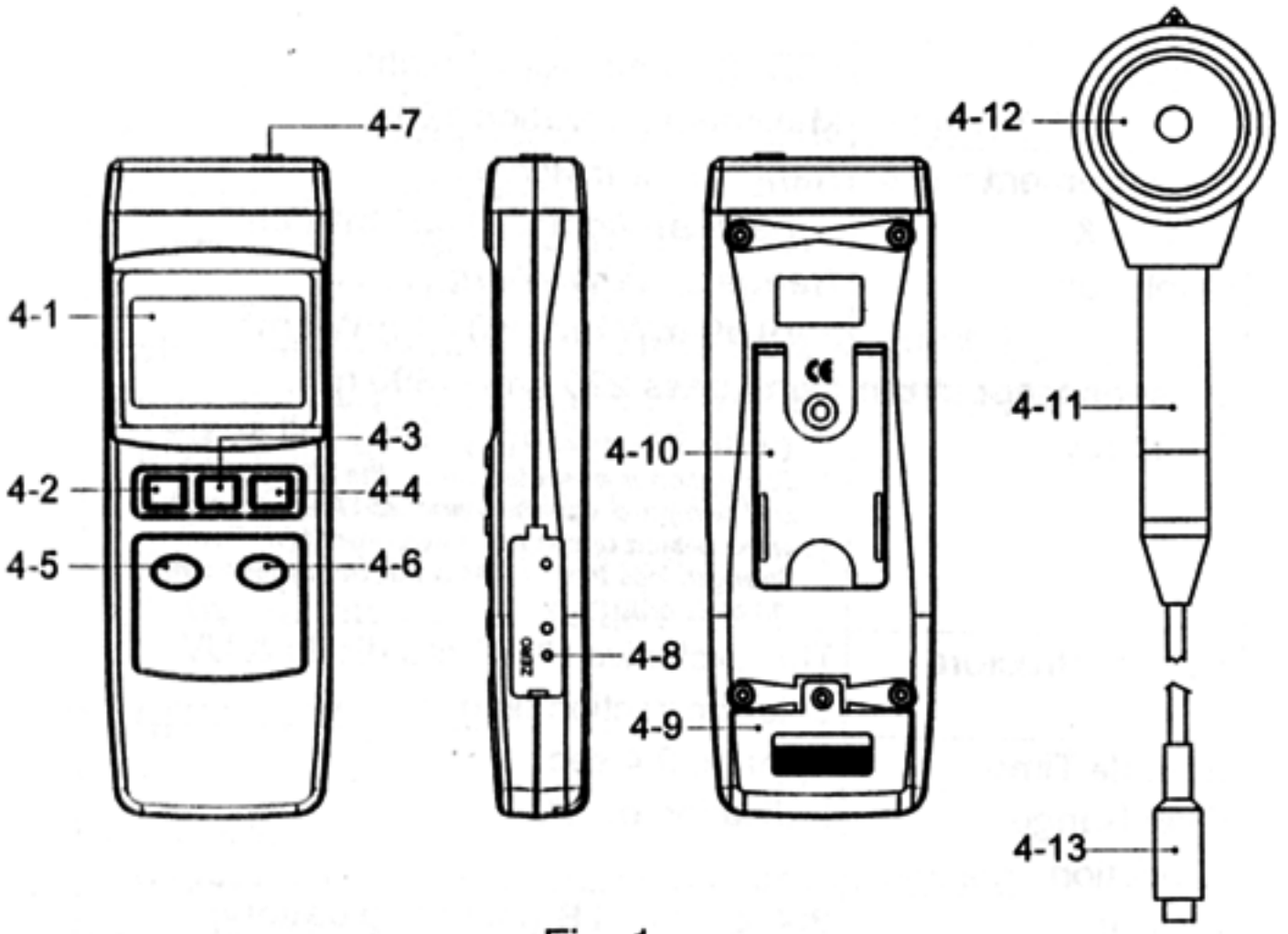


Fig. 1

4–1 Display
4–2 On Button
4–3 Off Button
4–4 Hold Button
4–5 2 mW/cm^2 Button
4–6 20 mW/cm^2 Button
4–7 Probe input socket
4–8 Zero Adjust VR
4–9 Battery Compartment/Cover
4–10 Stand
4–11 UV Probe Handle
4–12 UV Sensor
4–13 Probe Plug

5. MEASURING PROCEDURE

1) Connect the " Probe Plug " (4−13, Fig. 1) to the " Input Socket " (4−7, Fig. 1)
2) Power on by pushing the " Power On Button " (4−2, Fig. 1).
3) Range selection
   a. Select the " 2 mW/cm^2 " range by pushing the " 2 mW/cm^2 Button " (4−5, Fig. 1)
   b. Select the " 20 mW/cm^2 " range by pushing the " 20 mW/cm^2 Button " (4−6, Fig. 1)
4) Use the hand to hold the " UV Probe Handle " (4−11, Fig. 1) and face the " UV Sensor " (4−12, Fig. 1) to the measuring UV light opposite. then the Display (4−1, Fig. 1) will show light values directly.

5) Data Hold
   During the measurement, pressing the " Hold Button " (4−4, Fig. 1) will freeze the display value, at the same time the LCD will show the " HOLD " indicator.
   To release the Data Hold function, just pressing the " Hold Button " again, then the " HOLD " indicator will be disappeared and cancel the Data Hold function.

6) Power Off
   Push the " Power Off Button " (4−3, Fig. 1) will power off the meter.

6. MEASURING CONSIDERATION

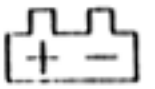
1) The " 20 mW/cm^2 " range is designed & to measure the UV light values more than 1.999 mW/cm^2 If the measured UV light values less than 2 mW/cm^2 should select the " Range Button " to the " Range 1 " to get high resolution A precision.

2) **Storage for the " UV sensor "**
UV sensor is with extremely precise structure.
Once don't use it , be sure to store it in the dry environment. For example, put the whole sensor including Desiccant (Drier) into to the Plastic bag and seal the bag as tightly as possible. Take the sensor out of the bag only when use it. Comply to above method will extend the life of UV sensor. Otherwise, the gain of the UV SENSOR may be decreased and shorten the calibration period. It is also necessary to replace the Desiccant (Drier) periodically.

2) **Zero adjustment**
Due to drift of environment temperature value, battery power change or, meter used for a long time or other reasons... The display value may exist not zero value (few digits) after blanking the " UV Sensor " (4−12, Fig. 1). General speaking those not zero value will not effect the measurement typically. However if intend to make the precision measurement, the following zero adjustment procedures should be executed as :

a. Select the " 2 mW/cm^2 " range by pushing the " 2 mW/cm^2 Button " (4−5, Fig. 1)
b. Blank the " uv Sensor " (4−12, Fig. 1). Use a convenient screw driver to adjust " Zero adjust VR " (4−8, Fig. 1) until the display reach the " Zero " value.

7. REPLACEMENT OF BATTERY

1) When the LCD display show the "  " indicator, it is necessary to replace the battery. However, in−spec measurement may still be made for several hours after low battery indicator appears before the instrument become inaccurate.
2) Open the " Battery Cover " (4−9, Fig. 1) away from the instrument and remove the battery.
3) Replace with 9V battery and reinstate the cover .
4) Make sure the battery cover is secured after change the battery.