

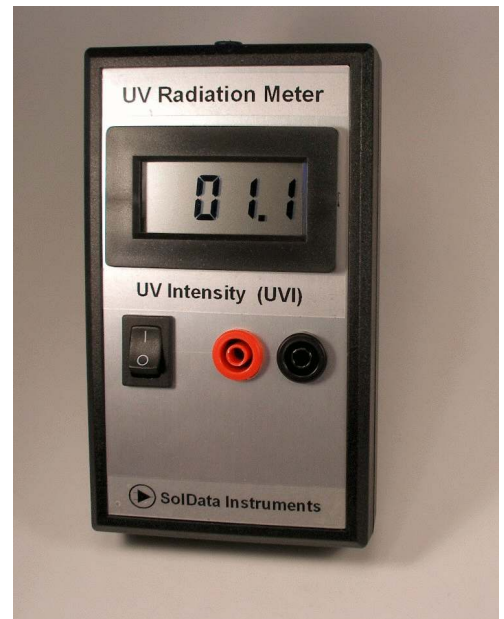
# Ultraviolet Light Meter Specifications

## PURPOSE

The instrument is designed to measure ultraviolet light in the range from 200 to 400 nanometers. The readout displays a reading in ultraviolet intensity units (UVI). A pushbutton permits the user to increase sensitivity 20 times for measuring weak UV sources. UVI units are commonly used by weather services to describe the severity of ultraviolet irradiance in the summer season.

## DESCRIPTION

Figure 1 shows the hand held instrument. It can measure two ranges: low sensitivity reads out in UVI when pointed directly at the sun; high sensitivity allows measurements from halogen lamps and other weaker UV sources. An output signal is provided for use with datalogging or with a large classroom display. The detector is of the SiC (silicon-carbide) type sensitive only in the UV. This solar blind detector type obviates the need for expensive UV-filters. The spectral response is shown in Figure 2.



UV Meter type 105UVM

## APPLICATIONS

The UV Light Meter is intended for use by students to make quantitative measurements of ultraviolet radiation. Here are some typical experiments and demonstrations:

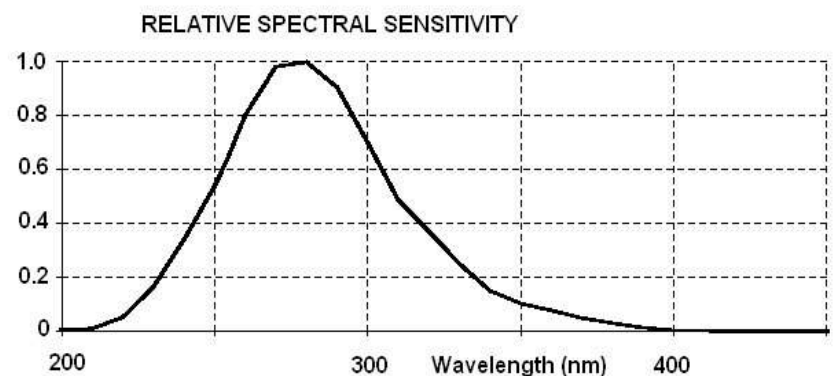
1) Measure the UV intensity from the sun on a bright day.

2) Show that UV is also present in diffuse light from clouds and in shadows.

3) Show how parts of the UV spectrum (under 400 nm) are stopped by UV film while other parts of the spectrum (under 300 nm) are stopped by glass.

4) Learn about the UV-stopping power of different types of sun screen and to measure UV absorption by liquids (e.g. water).

5) Check for UV-emission from halogen lamps and solaria.



Relative spectral sensitivity.

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UV Meter data.wpd