

UVA and UVB Sensor

UVA 315 to 400 nm

UVB 280 to 315 nm

Product Number: ENUVAB063



Overview

The UVA / UVB Sensor measures the intensity of incident UVA and UVB radiation at three different ranges and allows for a wide variety of experiments and environment investigations.

The UV sensor can be connected to all types of *einstein™* Tablets, *einstein™* LabMate™, and *einstein™* LabMate™+. It can be used for various experiments in Physics.

Typical experiments



Physics

- UV protection of clothing
- Investigating the UV variations along a fluorescent tube
- Investigating the invisible light from different sources
- Testing suntan creams and sunglasses
- Investigating the effect of cloud cover on UV measurements
- Compare ultraviolet transmission of various plastics and glasses
- Fluorescent rocks and dyes

Sensor specification

Range UVA:	320nm to 400nm 1 W/m ² 10 W/m ² 200 W/m ²
Range UVB:	280nm to 320nm 100mW/m ² 1 W/m ² 10 W/m ²

Note: sensor cables sold separately

Technical Note

The UVA/B sensor was designed only for educational purposes and shouldn't be used for industrial, medical, or research applications.

Calibration

The UVA/B sensor requires no calibration.

Data logging and analysis




MiLAB™


NOTE: If using a Fourier Einstein Tablet, a LabMate is not required. The sensor can be plugged directly into the Einstein Tablet sensor ports

NOTE: When using an iOS or Android Tablet, a LabMate is required.

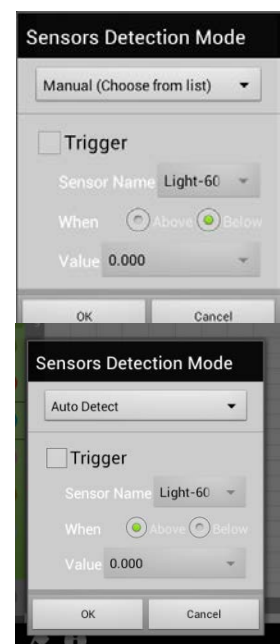
1. Pair the LabMate with the Einstein Tablet, Android device or iOS device
2. Insert the sensor cable into one of the sensor ports
3. Launch the MiLAB app
4. The sensor will automatically be detected and show in the Launcher View as UVA - 320-400nm
5. Check the box next to the sensor to enable it for logging

Choosing the range

1. When you tap the Setup icon , the Sensors Detection Mode window will appear.
2. Tap the  dropdown menu next to Auto Detect.
3. Tap the radio button  to select **Manual (Choose from list)**
4. Tap OK to exit saving changes

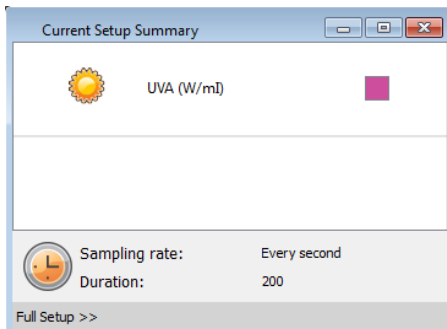
On the Main Screen, Tap the  dropdown to manually select one of the following ranges:

- UVA - 320nm - 400nm
- UVA - 1 W/m²
- UVA - 10 W/m²
- UVA - 200 W/m²
- UVB - 280nm - 320nm
- UVB - 100mW/m²
- UVB - 1 W/m²
- UVB - 10 W/m²

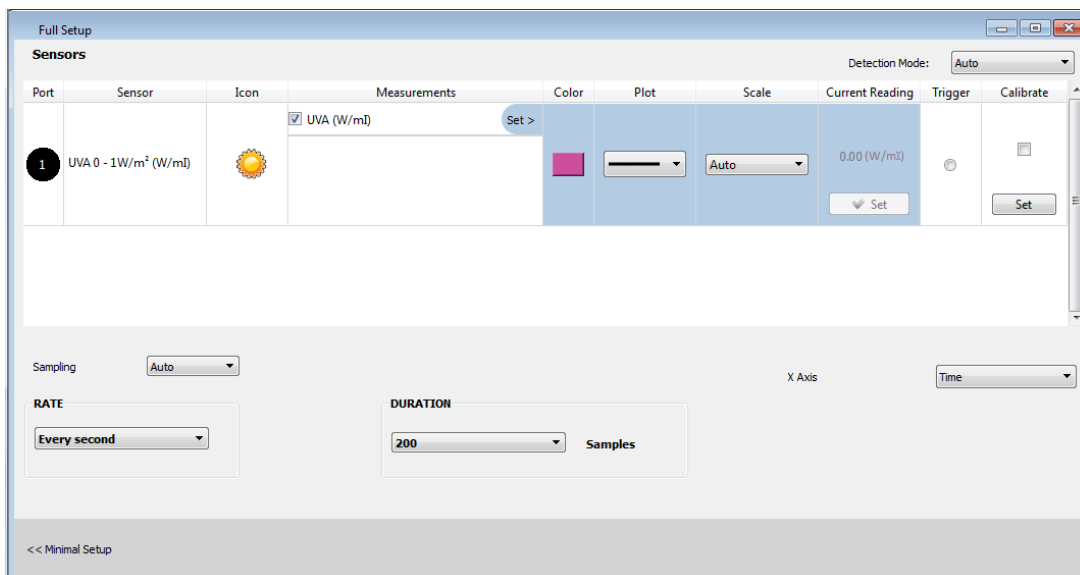


Multilab4™

1. Pair the LabMate with the PC, MAC, or Linux machine or connect it via the usb cable (found in the LabMate box).
2. Insert the sensor cable into one of the sensor ports
3. Launch the Multilab4 software
4. The sensor will automatically be detected and will be shown in the **Current Setup Summary** window



Click **Full Setup >>** in the **Current Setup Summary** window to program the data logger's sample rate, number of samples, units of measurement, and other options



5. Click the Run Button on the main toolbar to start logging

An example of using the UV Sensor

Test Your Sunglasses

Test to see how effective your sunglasses are in protecting against dangerous UV rays.

1. Connect the UV sensor to your einstein™ device.
2. Select the UV sensor
3. Point the sensor at the sun and then press the Run button for thirty seconds
4. Place your sunglasses over the sensor for thirty seconds then press Stop.
5. Note the difference between the two measurements.

Troubleshooting

If the UV sensor isn't automatically recognized by MultiLab4/ MiLAB, please contact Fourier Education's technical support.

Technical support

For technical support, you can contact the Fourier Education's technical support team at:

Web: www.einsteinworld.com/support

Email: support@fourieredu.com

Phone (in the US): (877) 266-4066

Copyright and Warranty

All standard Fourier Systems sensors carry a one (1) year warranty, which states that for a period of twelve months after the date of delivery to you, it will be substantially free from significant defects in materials and workmanship.

This warranty does not cover breakage of the product caused by misuse or abuse.

This warranty does not cover Fourier Systems consumables such as electrodes, batteries, EKG stickers, cuvettes and storage solutions or buffers.

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