NEULOG UVA LOGGER SENSOR GUIDE

NeuLog UVA logger sensor
NUL-232

The NeuLog UVA sensor can be used for any science experiment which utilizes accurate UVA readings such as in the fields of: Environmental Science, Biology, Physiology, Chemistry, Weather Science, etc.

The sensor comes pre-calibrated so you can start experimentation right out of the box using this guide.
UVA (Ultraviolet A) rays are a type of electromagnetic radiation which has a wavelength shorter than visible light in the range between 315 and 400 nanometers. About 95% of UV rays that reach the Earth's surface are UVA and they are responsible of skin aging and damage.

Among hundreds of possible experimental subjects that can be studied with the NUL-232 sensor are: UVA levels in different weather conditions, UVA levels at different altitudes, weather patterns, plant growth studies, small animal behavior experiments, electromagnetic radiation spectrum studies, light emitting chemical reactions, and many more.

The UVA sensor's measurement units are:
Milli Watt per square meter (mW/m^2): A measurement of power density; the amount of watts per square meter.

Included with the sensor:

- NeuLog General Guide

Sensor's specifications	
Range and operation modes	0 to 65,000 mW/m^2
ADC resolution	15 bit
Resolution	5 mW/m^2
Max sample rate (S/sec)	100

Experiment Duration: 1 second to 31 days.

Sensor's features:

- Fully digital data
- Rugged plastic ergonomic case
- Push button switch for Start/Stop experiments in off line mode
- LED indicator of experiment status (blinks while collecting data)
- Pre-calibrated sensing equipment
  Note: NeuLog products are intended for educational use.

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Videos and experiment examples:

- Videos, literature and other probes can be found at www.NeuLog.com.
- In order to access the UVA sensor's page, choose "Products" on the main menu and then "UVA logger sensor".
- In order In order to access the UVA sensor's experiments, choose "Example Labs":
    - Rayleigh Scattering (E-6)

Technical background:

The philosophy behind NeuLog's plug and play technology is based on each sensor's ability to store its own data due to an internal flash memory chip and micro-controller in each plastic NeuLog body. This technology allows the sensor to collect and then store the digital data in the correct scientific units (°C, °F, Lux, %, ppm, for example).

The sensor is pre-calibrated at the factory. The built-in software in the logger can be upgraded for free at any time using the provided firmware update.

The UVA sensor uses a special photodiode which reacts with electromagnetic radiation in the UV spectrum. An internal selective filter limits the range down to specifically the UVA range (315 to 400 nm) so only the UVA rays may pass through.

UVA rays which strike the photodiode release free electrons which generate a voltage that can be measured easily and accurately.

Voltage is converted into UVA density easily because it is directly proportional to the known surface area which is being measured.

Maintenance and storage:

- Never submerge the NeuLog plastic body in any liquid.
- Do not allow liquid into the UVA sensor's body.
- After use, gently wipe away any foreign material from the UVA sensor.
- Store in a box at room temperature out of direct sunlight.

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Warranty:

We promise to deliver our sensor free of defects in materials and workmanship. The warranty is for a period of 3 years from the date of purchase and does not cover damage of the product caused by improper use, abuse, or incorrect storage. Sensors with a shelf life such as ion selective probes have a warranty of 1 year. Should you need to act upon the warranty, please contact your distributor. Your sensor will be repaired or replaced.

Thank you for using NeuLog!

NeuLog

Flexible, simple, fast, forward thinking.

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