

PMA 2110 UVA SENSOR

SENSORS
INDUSTRIAL LIGHT
MEASUREMENT
LABORATORY LIGHT
MEASUREMENT
MATERIALS TESTING
SPF CLINICAL AND
LABORATORY RESEARCH

Delivery on all products is Stock to 2 weeks.

Every product is calibrated to NIST traceable standards before shipment.



The PMA 2110 UVA sensor provides fast and accurate irradiance measurement in the UVA region. Its spectral response covers the 320 to 400nm range.

The Teflon diffuser assures an angular response close to a cosine function (Lambertian response) making it suitable for measuring diffused radiation or radiation from extended sources.

When used with the PMA2100 or PMA2200 UV meters, the measured irradiance is displayed in mW/cm² or W/m² and the integrated dose is shown in Joules/cm² or kJoules/m². The PMA2110 has a resolution of 0.001 mW/cm² and a full scale of 200mW/cm² allowing measurement of very weak and very strong signals with the same detector. The effect of stray light is negligible. The unit can also be configured to measure the range 0-1000mJ/cm²

UVA is less biologically effective than UV-B (280-320nm), but it has much greater intensity in sunlight and many artificial sources, so UVA can have significant biological effect. The UVA radiation can also penetrate deeply into human living tissue through the skin. Commonly known effects of UVA include: photosensitization of various chemicals, pigmentation of the skin, induction of polymerization. The UVA can also cause erythema or DNA damage in humans or animals.

Uses

The PMA2110 detector is ideal for measuring mercury, xenon, metal halide or fluorescent lamps, commonly used for studies in the UVA region, as well as sunlight.

Alternate Views



Applications

Laboratory and industrial radiometry
 UV curing, printing and photolithography
 Skin and SPF testing

Clinical studies
 Phototherapy
 Environmental monitoring

Material testing
 UV-A transmission measurements

Features

High sensitivity
 Dynamic range
 2*10⁵
 Excellent long term stability

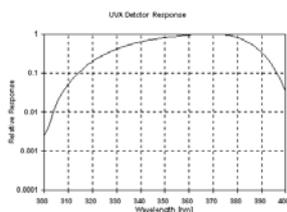
Cosine corrected
 NIST traceable calibration

Radiometric units
 320nm to 400nm spectral range

Specifications

Spectral response:

320-400nm, figure 1



Display resolution:

0.001 [mw/cm²], 0.01[W/m²]

Operating environment:

32 to 120 °F (0 to +50 °C) no precipitation

Temperature coefficient:

<0.1%/°C

Cable:

5ft (1.5m)

Angular response:

5% for angles <60°

Diameter:

1.6" (40.6 mm)

Height:

1.8" (45.8 mm)

Weight:

7.1 oz. (200 grams)

Range:

200 [mW/cm²] or 2000 [W/m²] or 0 - 1000 [mJ/cm²]

Common Sources of UVA

Low pressure fluorescent lamps
 Cool white fluorescent
 High pressure mercury and metal halide lamps
 High pressure xenon lamps
 Sunlight

Specifications

Angular response:

5% for angles $<60^\circ$

Range:

PMA2110 - 200 mW/cm², 2000 W/m²

PMA2110A-UW – 20,000 μ W/cm², 200W/m²

PMA2110C – 2 mw/cm², 20 W/m², 2000 μ W/cm²

PMA2110L – 20mW/cm², 200 W/m², 20000 μ W/cm²

Display resolution:

PMA2110 - 0.001 mw/cm², 0.01W/m²

PMA2110A-UW – 0.1 μ W/cm², 0.001 W/m²

PMA2110C – 0.001mW/cm², 0.001 W/m², 0.01 μ W/cm²

PMA2110L – 0.001mW/cm², 0.01 W.m², 0.1 μ W/cm²