

# UVB SENSOR PMA 2101 BIOLOGICALLY- WEIGHTED ERYTHEMA

**SENSORS**  
**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 UVB sensor PMA 2101 biologically-weighted erythema gives an accurate measurement of ultraviolet radiation from sunlight or artificial light sources, also called sunburning UV radiation (SUV). Its spectral response follows closely the erythema action spectrum. The detector has angular response very close to an ideal cosine function (Lambertian response) making it suitable for measurements of diffuse radiation or radiation generated by extended sources.

The sensor is based on a phosphor technology, used in Robertson-Berger UV meters, and proven to be extremely stable over long periods of time.

The biologic effectiveness of ultraviolet radiation is strongest for wavelengths between 280 to 320 nm, classified as UVB by the CIE organization.

Several biologic action spectra, functions relating wavelength of the radiation and its biologic effectiveness, are shown in Figure 3. The most commonly used, erythema action spectrum, also referred to as CIE 1987 action spectrum, represents the sensitivity of human skin to sunburn.

## Uses

The PMA1101 Sensor is used to measure the UVB radiation using the Erythema Action Spectrum.

## Alternate Views



## Applications

Laboratory and industrial  
radiometry Skin and SPF testing  
Clinical studies

Phototherapy Environmental  
monitoring

Material testing UVB transmission  
measurements

Agriculture

## Features

High sensitivity Dynamic range  
2\*105

Excellent long term stability Cosine  
corrected

NIST traceable calibration  
Radiometric and Biological units

## Specifications

### Spectral response

Angular response >h2> 5% for angles  
<60°

### Range

200 [MED/Hr], 1,160 [ $\mu$ W/cm2]

### Display resolution

0.001 [mw/cm2], 0.01[W/m2]

### Operating environment

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

### Temperature coefficient

1% /°C for solar radiation

### Cable

5ft (1.5m) Diameter 1.6" (40.6 mm)

### Height

1.8" (45.8 mm)

### Weight

7.1 oz. (200 grams)

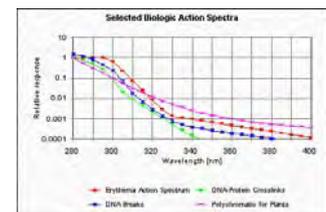
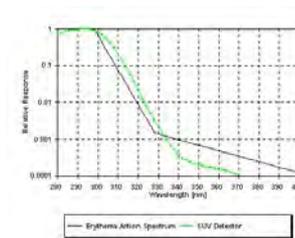


Fig. 3