

PHOTOPIC DETECTOR PMA2130

SENSORS
INDUSTRIAL LIGHT
MEASUREMENT
LABORATORY LIGHT
MEASUREMENT

Delivery on all products is
Stock to 2 weeks.

Every product is
calibrated to NIST
traceable standards
before shipment.



The Photopic Detector PMA2130 is a portable light detector (Lux detector) with spectral response following the CIE photopic action spectrum.

This light detector is designed to have a spectral response like that of the human eye's visual response in the photopic region.

The power-like unit of brightness of light is Lumen [lm]. The relationship between effective Watts and Lumens has changed several times and it is now assumed to be 683 lm/W. For example, 555-nm monochromatic radiation flux of 1W would carry the luminous flux of 1 lm.

The Photopic detector PMA2130 has a Teflon diffuser assuring an angular response close to the cosine function (Lambertian response). It is of particular importance when measuring radiation flux from extended sources or from sources positioned at an angle to the axis of the detector.

Uses

The PMA2130 measures the light intensity in the visible region of the spectrum.

Alternate Views



Applications

Environmental monitoring
Photometry

Industrial and laboratory safety
Industrial and residential lighting
Art and museum maintenance

Photography and film studios
Clinical studies

Features

High sensitivity
Wide Dynamic range

Excellent long term stability
Cosine corrected

NIST traceable calibration
Selectable Units

Specifications

Spectral response:

Follows CIE photopic spectral luminous efficiency curve (400-700nm) Figure 1

Angular response:

5% for angles <60°

Range:

PMA2130 - 150,000 Lux, 220 W/m², 14,000 ft-cd
PMA2130L - 1,500 Lux, 2.2 W/m², 140 ft-cd
PMA2130H - 1,500,000 Lux, 2200 W/m², 140,000 ft-cd
PMA2130D - 200 Lux, 19 ft-cd

Display resolution:

PMA2130 - 1 Lux, 0.001 W/m², 0.1 ft-cd
PMA2130L - 0.01 Lux, 0.00001 W/m², 0.001ft-cd
PMA2130H - 10 Lux, 0.01 W/m², 1 ft-cd
PMA2130D - 0.001 Lux, 0.001 ft-cd

Operating environment:

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

Cable:

5ft (1.5m)

Diameter:

1.6" (40.6 mm)

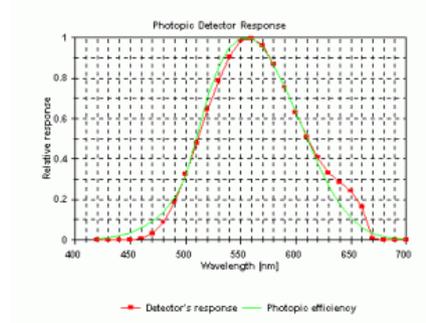
Height:

1.8" (45.8 mm)

Weight:

7.1 oz. (200 grams)

PMA2130 Photopic Visible Light Detector Spectral Response
Figure 1



The illumination (illuminance) is measured in luminous flux per unit area. The following units are commonly used:

1 lumen/cm² = 1 phot (ph)

1 lumen/ft² = 1 foot-candle (ft-cd)

1 lumen/m² = 1 lux (lx)

with ft-cd and lux dominating in the field.