SKU430 Ultraviolet B Sensor

Climatology, meteorology
UV effects on ecosystems
Marine biology, ecology, zoology
Studies of plant and animal responses to rising UV levels
To monitor exposure of test samples in natural and other UV sources

The offered sensors can measure light levels in the Ultraviolet A and Ultraviolet B wavebands. The wavelengths used in these sensors are according to DIN 5031 part 7. This leaflet describes the UVB sensor.

The dimensions and overall look of these sensors are similar to that of our other sensors. The housing is black aluminum and sealed to IP68 standards, making them suitable for underwater use.

The light collecting head utilises a UV stable polymer and is cosine corrected.

The sensors have been designed with an integral amplifier to give a voltage output for use with most datalogogers, computers, PLCs, etc.

All sensors are calibrated against a reference light source which is directly traceable to NPL.

SPECIFICATIONS

Dimensions	Weight	Construction	Cable	Sensor	Detector	Filters	Spectral response (1)
	200g.(with 3m cable)	Anodised black aluminum sealed to IP68 Submersible to 4m	Screened cable 7-1-4C military specification	Cosine corrected head Specially formulated diffuser	GaAsP photodiode	Glass & metal interference to military specification	280-315nm
Working range (2)	Output signal	Sensitivity	Thermal drift of output (-20 to +50° C)	Zero offset range (each sensor is individually calibrated)	Thermal dirft of zero offset (-20 to +50° C)	Output impedance	Power supply
0-5 W/m^2	0 - 1V	150 mV / W /m^2	0.075mV/° C max.	± 1 mV	typically 0.03 mV/° C	500ohms	5-15V
Linearity (0-1V with 9V power supply)	Absolute calibration error (3)	Cosine error (4)	Azimuth error (5)	Temperature coefficient	Longterm stability(6)	Response time (7)	Operating range
Better than 1%	typ. <3% 5% max.	3%	<1%	± 0.2% / ° C	± 2%	Better than 10ms	-30 to +60° C 0-100% RH

NOTES ON SPECIFICATIONS

(1) FWHM or 50% transmission.

(2) All sensors will work at levels of irradiance well above that found in terrestrial sunlight conditions, room or growth chamber lighting.

(3) Main source of this error is uncertainty of calibration of Reference Lamp. The calibration standards are directly traceable to N.P.L. standard references.

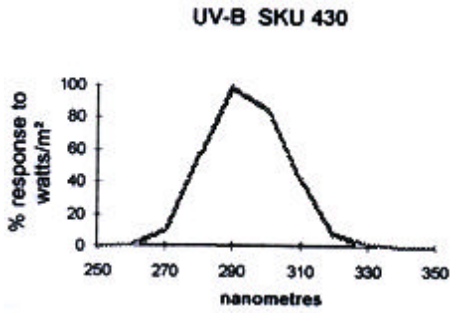
(4) Cosine error to 80° is typically 5% max. Figures shown are for normal use sources, e.g., sun plus sky, diffuse sun, growth chambers, etc.

(5) Measured at 45° elevation over 360° .

(6) Maximum change in one year. Calibration check recommended at least every two years. Experience has shown that changes are typically much less than figures.

(7) Times are generally less than the figure quoted, which is in nanoseconds. They may be slightly increased if long leads are fitted, or those of a higher capacity cable.

GRAPH



ORDERING INFORMATION

Sensor

SKU 430	Sensor to measure UVB (280 - 315 nm)

Accessories

SKM 221	Levelling unit