

# LIGHT

## UV Index Sensor

- Measures damaging ultra violet radiation
- Indicates erythmal dose
- UV exposure causes skin damage and cancers
- Fully waterproof, suitable for long term datalogging
- Compatible with Skye MiniMet and other weather stations



Skye have been designing and manufacturing quality, fully calibrated light sensors since 1983. The range has included UVA and UVB sensors since 1992 and has now been further expanded with the addition of the UV Index sensor.

This sensor has a response closely matching the Erythemal Action Curve, the portion of the solar radiation

spectrum usually associated with sunburn and skin cancer.

The UV Index measurement given by the sensor ranges from zero showing low risk of sunburn, to high risk values of 15+.

The sensor is calibrated against a reference traceable to National Standards under full sunlight conditions, and so is ideal for long term


datalogging on meteorological stations.

It is fully waterproof and the output is compatible with most dataloggers and controllers.

Each sensor is provided with a radiation response curve and Calibration Certificate.



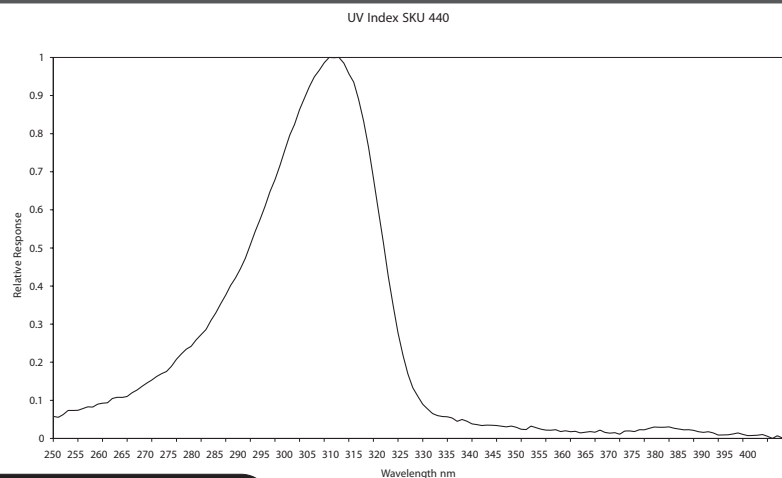
## SPECIFICATIONS

Dimensions	Weight	Construction	Cable	Sensor	Detector	Operating range	Spectral response
	200g. (with 3m cable)	Anodised black aluminium sealed to IP68 Submersible to 4m	Screened cable 7-1-4C military specification	Cosine corrected head. Specially formulated diffuser	Filtered TiO <sub>2</sub> Photodetector	-30 to +60°C 0-100% RH	280 - 315nm Erythema
Working range (1)	Output signal	Sensitivity	Thermal drift of output (-20 to +50°C)	Zero offset range (each sensor is individually calibrated)	Thermal drift of zero offset (-20°C to +50°C)	Output impedance	Power supply
0-30 UVI or 0-0.75 Wm <sup>-2</sup>	0-1V	33 mV / UVI Or 1.32 V / Wm <sup>-2</sup>	0.075mV/°C max	±1mV	typically 0.03 mV/°C	500Ω	5-15V DC
Linearity (0-1V with 9V power supply)	Absolute calibration error (2)	Cosine error (3)	Azimuth error (4)	Longterm stability (5)	Response time (6)		
Better than 1%	typ. <3% 5% max.	3%	<1%	±2%	Better than 50ms		

## NOTES ON SPECIFICATIONS

- (1) All Skye sensors will work at levels of irradiance well above that found in terrestrial sunlight conditions.
- (2) Main source of this error is uncertainty of calibration of Reference. Skye calibration standards are directly traceable to N.P.L. standard references.
- (3) 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.
- (4) Measured at 45° elevation over 360°
- (5) Maximum change in one year. Calibration check recommended at least every two years. Experience has shown that changes are typically much less than figures quoted
- (6) Times are generally less than the figure quoted, which is in milliseconds. They may be slightly increased if long leads are fitted, or those of a higher capacity cable

## SPECTRAL RESPONSE



## ORDERING INFORMATION

Sensor	
SKU 440	UV Index sensor with 3m cable
SKU 440/I	UV index sensor with 3m cable and DataHog connector
SKU 440/SS2	UV index sensor with 2m cable and SpectroSense2 connector
Accessories (see separate datasheet)	
SKM 221	Levelling unit
SKM 226	Long arm pole/wall mount
Meters and dataloggers (see separate datasheet)	
SKL 904	SpectroSense2 4-channel display meter
SKL 908	SpectroSense2+ 8-channel logging meter
SDL 5030/UVI	DataHog2 logger with built-in UVI sensor

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