



1 Channel Custom Sensor

Skye Instruments have been designing and manufacturing specialist light and radiation sensors since 1983.

This range of sensors has ten standard responses including total solar radiation, PAR or Photosynthetically Active Radiation, Lux, UV and Red / Far-red sensors.

For specific applications Skye also offer 1, 2 and 4 channel sensors where the user can choose the wavelength response between 280 and 1100 nm, in bandwidths from 5nm up to broadband.

The 1 channel custom light sensor has the same cosine corrected construction as Skye's standard sensors, and is fully waterproof to 4m depth.

Each sensor is individually calibrated traceable to the UK's National Physical Laboratory and is supplied with a Calibration Certificate and Response Curve.

Calibrated measurements can be made in natural solar conditions or under any artificial light source

These sensors are ideal for use with the Skye SpectroSense2 meter or DataHog logger. They are also available in a variety of outputs to suit most dataloggers and controllers.



- Custom wavelength response between 280 - 1100 nm
- Broadband or narrow band
- Ideal for long term datalogging
- Fully weatherproof
- Submersible to 4m depth

SKR 1850 SPECIFICATIONS

Construction - Black anodised aluminium housing, Cosine corrector acrylic & PVC. Unit completely waterproof, sealed with wide transparency glass flats and 'O' rings. Can be immersed up to 4m. Sealed to IP68

Cable - Screened, 7-4C military specification.

Sensor - Cosine corrector head

Detector - GaP, GaAsP or silicon depending on Wavelengths & bandwidths chosen

Filters - Metal interference and/or glass depending on wavelengths & bandwidths chosen, to military spec

Sensitivity - current (1) - Dependant on Wavebands

Sensitivity - voltage - Dependant on Wavebands

Working range (2) - Dependant on Wavebands

Linearity error - Linearity error

Absolute calibration error (3) - typ. <3%5% max

Cosine error (4) - 3%

Azimuth error (5) - 1%

Temperature coefficient - +0.1%/°C

Longterm stability (6) - +2%

Response time (7) (voltage output) - 10ns

Internal resistance (voltage output) - Dependant on wavebands chosen

Temperature range - -35 to +75°C

Humidity range - 0-100% RH

Dimensions -



Weight - 400g (with 3m cable)

ORDERING INFORMATION

Sensor

SKP 218 - 1 Channel sensor

Accessories

SKM 221 - Levelling unit

SKM 226 - Long arm pole/wall mount

Meters and Dataloggers

SKP 200 - Display meter

SKL 904 - SpectroSense2

SKL 908 - SpectroSense2+

SDL 5000 series DataHog datalogger

NOTES ON SPECIFICATIONS

(1) Current output varies from sensor to sensor. Each individual unit will have a slightly different output. A calibration certificate is supplied with each sensor.

(2) All Skye 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. Skye 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 quoted.

(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.

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