



LIGHT

Light Sensors - Broadband v Spectroradiometers

Skye Instruments manufacture and calibrate a range of broadband light sensors for the measurement of light and radiation between 280 and 1100 nm. The width of the wavebands can be from as small as 5 nm to several hundred nm, depending on the response required. The sensor can consist of single or multiple (up to 4) wavebands. Calibration is fully traceable to UK National Standards via the National Physical Laboratory.

There are many field portable scanning spectroradiometers available which measure light and radiation within similar wavelength ranges to the Skye broadband sensors. The resolution of individually scanned wavelengths is usually 1 nm or less. Traceable calibrations are also available.

The following table outlines a comparison of the advantages and disadvantages of both broadband sensors and spectroradiometers:

| FEATURE | BROADBAND SENSOR | SPECTRORADIOMETER |
|----------------------------|---|--|
| Cost | Low cost | High cost |
| Accuracy | Accurate with traceable calibration | Accurate with traceable calibration |
| Resolution | Low wavelength resolution | High wavelength resolution |
| Range | Fixed wavelength range (up to 4 fixed wavebands per sensor) | Scanning wavelength range |
| Bandwidth | From 5nm upwards, fixed at time of ordering | Usually 1nm or less, usually fixed |
| Field use | Fully waterproof for continuous outdoor use | Usually non waterproof for short term use |
| Laboratory use | Ideal for monitoring lamp intensity and ageing | Ideal for measuring spectral output of lamps |
| Datalogging | Ideal for long term datalogging | Generally not suitable for long term datalogging |
| Light source | Ideal for all light sources | Ideal for all light sources |
| Lighting conditions | Ideal for all light conditions, constant and rapidly changing as whole waveband is constantly Monitored | Best used in constant light conditions as wavelengths are scanned individually over time |

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