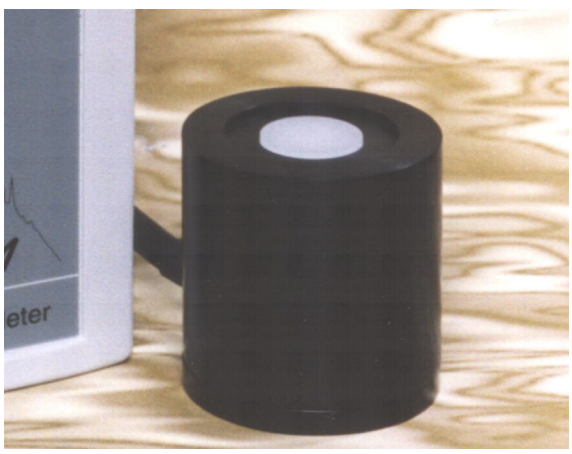
UV201 RADIOMETER

The Macam ultra violet radiometer model UV201 allows for easy measurement of uv sources in production and quality control environments. A choice of detectors is available to cover the spectral ranges from 300 to 500 nm. The standard UV201 is supplied with the SD221A-Cos detector with response between 320 - 390 nm. Different sources can be measured including mercury and metal halide discharge lamps and uv fluorescent lamps. Adaptors are available for connecting light guides directly to the detector.

APPLICATIONS

- Measurement of ultra violet irradiance from discharge lamps, in photolithography, printing and UV curing processes.
- Measurement of spot curing sources including Flexicure and other liquid light guided sources.



SD221A-Cos Detector

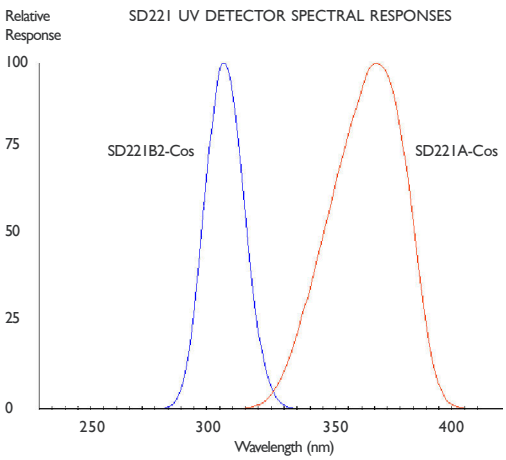
FEATURES

- Compact and robust it is ideal for field, laboratory and factory use.
- Detachable detector head for remote sensing.
- Easy to operate with micro-processor control.
- Integrated detector / amplifier / digitiser within detectors' aluminium housing.

OPTIONS / ACCESSORIES

- Replacement / spare lithium battery.
- Adaptor for 5 mm or 3 mm diameter liquid light guides.
- Macam SD221 series UVB, photo-resist and blue light detectors.

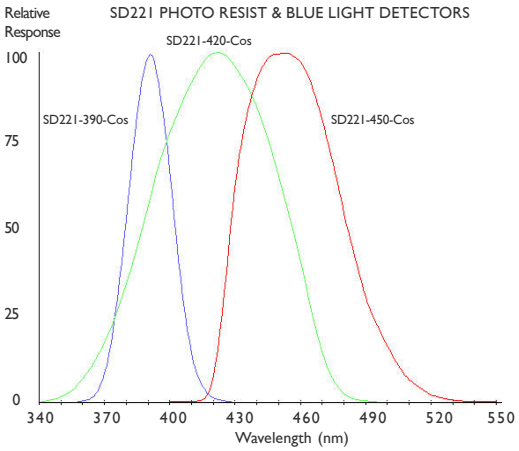
DETECTOR	λ PEAK	BANDWIDTH FWHM
SD221A-Cos	365 ± 2 nm	35 ± 2 nm
SD221B2-Cos	311 ± 2 nm	19 ± 2 nm



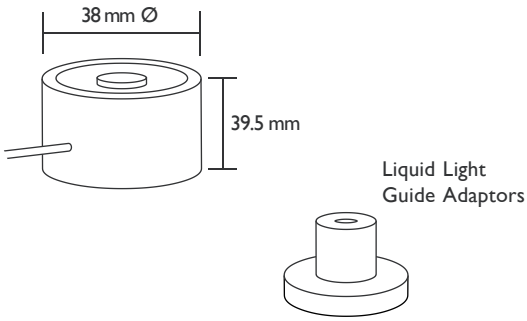
SD221 SERIES PHOTO-RESIST AND BLUE LIGHT DETECTORS

These filter rings are designed to measure ultra violet and blue light bands used for the exposure of photoresist inks and adhesives.

DETECTOR	λ PEAK	BANDWIDTH FWHM
SD221-390-Cos	392 ± 2 nm	23 ± 2 nm
SD221-420-Cos	420 ± 2 nm	82 ± 5 nm
SD221-450-Cos	450 ± 2 nm	48 ± 5 nm



UV221 SERIES DETECTORS



COSINE CORRECTION

The Macam SD221 series of detectors are supplied with a profiled light input diffuser. This adjusts the angular response of the detector/filter ring to match Lambert's Cosine Law to within ± 5% up to 70° from normal incidence.

LIGHT GUIDE ADAPTORS

The UV201 radiometer is supplied with an adaptor for locating the 8 mm diameter, series 300 liquid lightguide precisely over the centre of the diffuser. Adaptors are also available for the 5 mm and 3 mm liquid lightguides.

SPECIFICATION

The Macam model UV201 radiometer comprises of a UV201X display unit with lithium battery, SD221A-Cos detector with integral amplifier, lightguide adaptor for 8 mm diameter liquid lightguides, calibration certificate and CC-2 carrying case.

DISPLAY UNIT

Model:	UV201X
Design:	Portable µprocessor controlled meter with 4½ digit LCD display, simple key pad operation, battery powered.
Standard Range:	0-1999.9 (Other ranges available.)
Units:	mW.cm^{-2}
Accuracy:	± 1%, ± 1 digit on display.
Keypad Operations:	*Power* On / Off. *Hold* display on / off action. *Zero* stores offset for subtraction from subsequent readings.
Display:	4½ digit LCD display with 10 mm high numerals.
Power Supply:	PP3 Lithium battery. Operating life 30 to 50 hours.
Dimensions:	80 mm x 45 mm x 150 mm.
Weight:	Approximately 0.3 Kg.

Calibration:

The UV201 can be calibrated with monochromatic light at λ_{peak} or at a mercury emission line. Spectroradiometric calibration with specified sources sis also available. All calibration standards are traceable to NPL optical metrology standards. Absolute calibration accuracy is estimated as ± 5%.

DETECTOR

Model:	SD221A-Cos
Design:	GaAsP photodiode with integral detector amplifier and signal to frequency convertor. Aluminium housing with UVA absorption glass filters, cosine diffuser and 1m cable.
Linearity:	Better than ±1% across range.
Dimension:	38 mm Ø x 39.5 mm high

OPTIONAL DETECTORS & ACCESSORIES

Detector Models:	SD221B2-Cos SD221-390-Cos SD221-420-Cos SD221-450-Cos
Lightguide Adaptors:	LLGA-5 (5 mm Ø LLG's) LLGA-3 (3 mm Ø LLG's)
Battery:	Lithium Manganese size PP3

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