

**PD126\* Cos**  
**WATERPROOF UV DETECTORS**  
**WITH PRE-AMPLIFIERS**

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A	31/1/01	New Issue

## PD126\* Cos WATERPROOF ULTRA VIOLET DETECTORS

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Macam's PD126 range of data logger compatible ultra-violet detectors comprise of a ultra-violet sensitive photodiode detector with filter glasses and a transimpedance amplifier for a voltage output. Each detector is sealed in a waterproof enclosure and operates from a single rail power supply.

Models in the PD126 series include a UVA detector with peak response at 365nm, a UVB2 and narrower bandwidth UVB3 detector with peak responses at 311nm and a broad band UVAB detector.

### SPECIFICATION:

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MODELS:	Spectral Region	Figure	$\lambda_{peak}$	FWHM
PD126A Cos	UVA	1	365 $\pm$ 2nm	35 $\pm$ 2nm
PD126B2 Cos	UVB2	2	311 $\pm$ 2nm	19 $\pm$ 2nm
PD126B3 Cos	UVB3	3	311 $\pm$ 2nm	14 $\pm$ 2nm
PD126AB Cos	UVAB	4	352 $\pm$ 5nm	79 $\pm$ 4nm

Cosine Corrected Input: Within  $\pm$ 5% upto 70°. Ref. figure 5

Sensitivity\*: 10mV per W.m<sup>-2</sup>

\* Other ranges available on request.

Calibration (@ 20°C )  $\pm$  7.5% Traceable to NPL standards.

Linearity: <1% Error

Operating Temperature Range: -10 to +60 °C

Storage Temperature Range: -20 to +60 °C

Temperature Dependence: Sensitivity <0.1% / °C (typical)  
Amplifier DC offset Ref. figure 6.

Input Supply: 7 to 15V DC

Current Consumption: <2mA @12V

Warm Up Period: 10 seconds

Cable: 5 meter screened multicore  
(other lengths available)

Mounting: Two M4 tapped holes on a 43mm PCD.

Housing: Black anodised aluminium, also available in stainless steel.

Enclosure Rating: Waterproof to 10 meters depth.

Weight: 230g (excluding cable)

SPECTRAL RESPONSES:

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PD126A Cos  
Relative Spectral Response

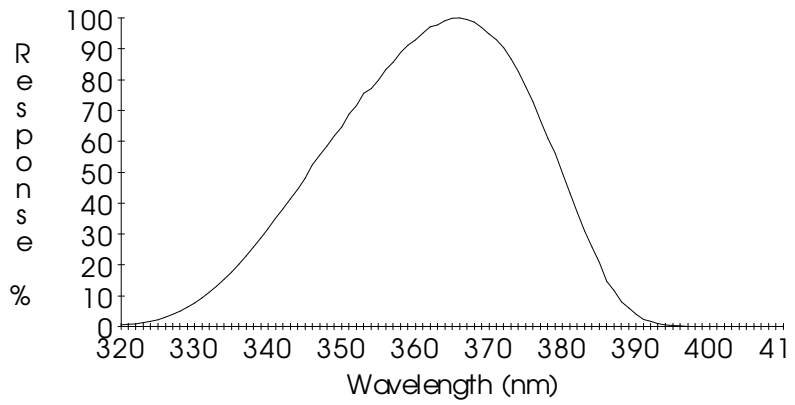


Figure 1

PD126B2 Cos  
Relative Spectral Response

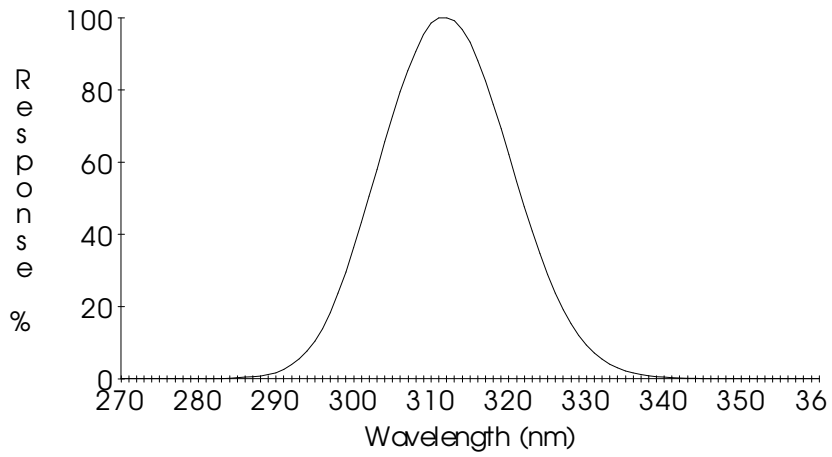


Figure 2

PD126B3 Cos  
Relative Spectral Response

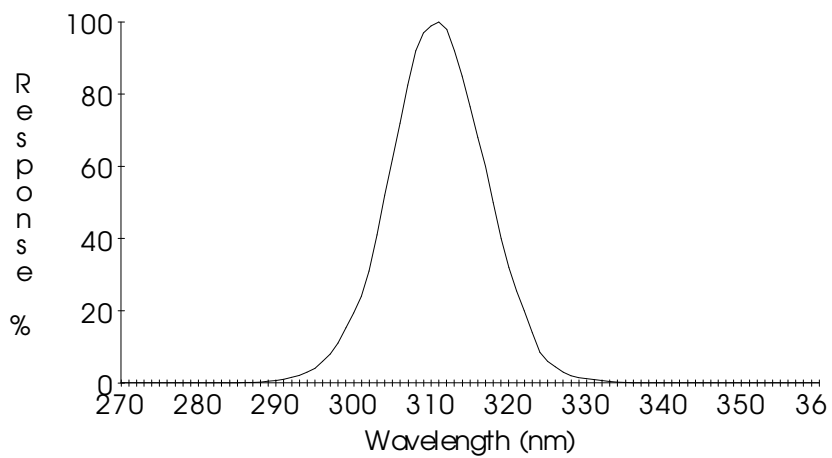


Figure 3

SPECTRAL RESPONSES (cont.):

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PD126AB Cos  
Relative Spectral Response

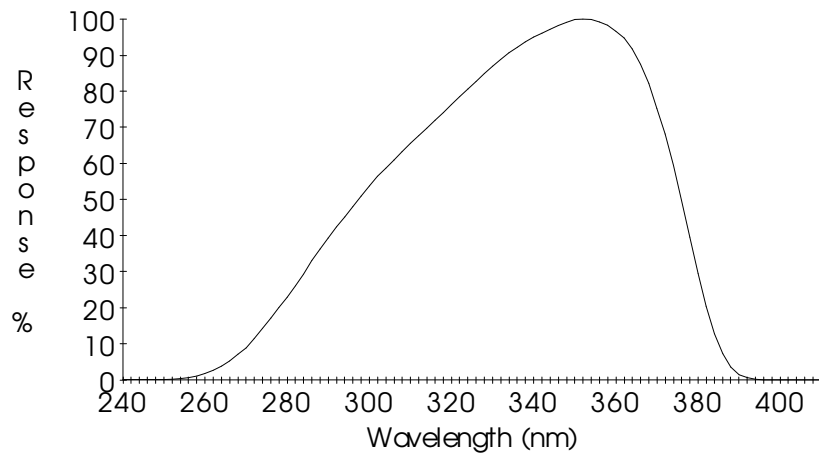


Figure 4

COSINE ANGULAR RESPONSE:

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Typical PD126 Cosine Angular Response

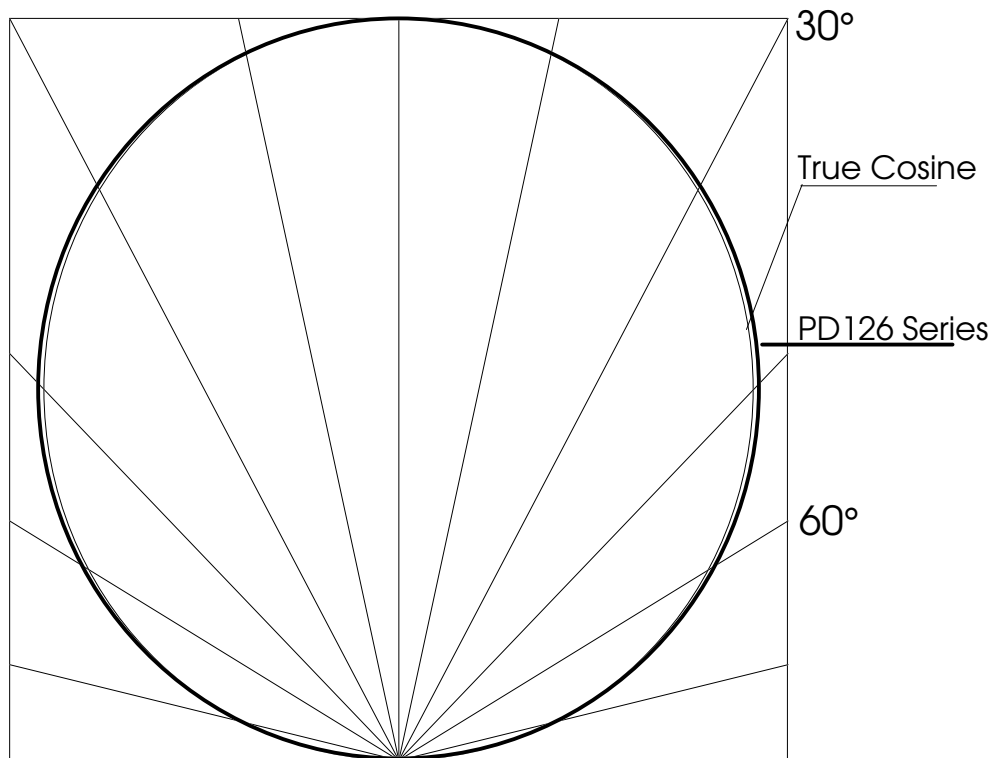


Figure 5

### Amplifier DC Offset

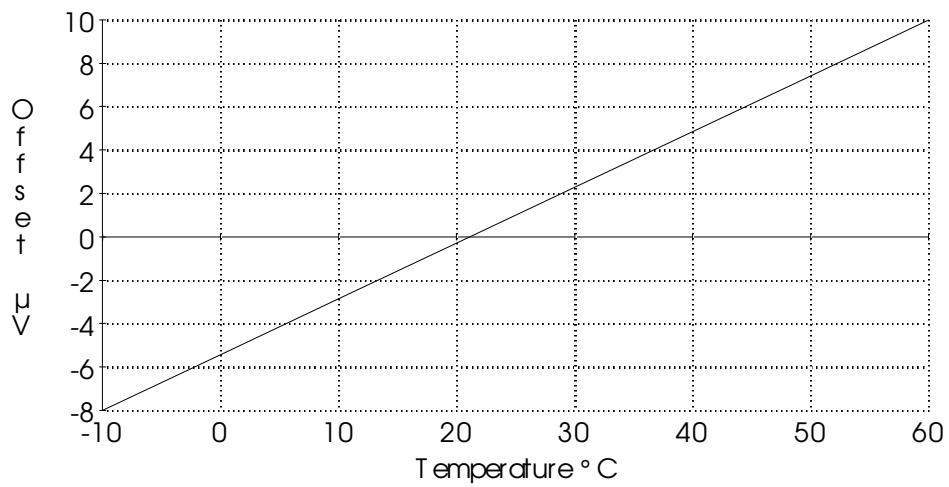
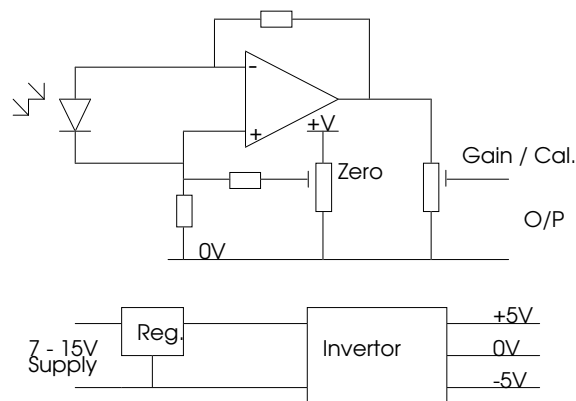


Figure 6



#### PD126\* Cos Wiring

SUPPLY (+)	-----	RED
SUPPLY (-)	-----	YELLOW
OUTPUT (+)	-----	BLUE
OUTPUT (-)	-----	GREEN

NOTE: DO NOT LINK OUTPUT (-) TO SUPPLY (-) ON DATA LOGGER. DO NOT CONNECT CABLE SCREEN TO DATA LOGGER.

OUTLINE DRAWINGS:

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