

**PD204* Cos
SEALED UV DETECTORS
WITH PRE-AMPLIFIERS**

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	Circuits & Connections
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Handbook Update Log

<u>Issue</u>	<u>Date</u>	<u>Pages changed</u>
A	10/5/99	New Issue
B	05/06/00	Update UVA response add picture



Macam's PD204 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 weatherproof enclosure and operates from a single rail power supply.

Models in the PD204 series include a UVA detector with peak response at 369nm, a UVB2 and narrower bandwidth UVB3 detector with peak responses at 311nm and a broad band UVAB detector.

SPECIFICATION:

MODELS:	Spectral Region	Figure	λ_{peak}	FWHM
PD204A Cos	UVA	1	369 \pm 2nm	30 \pm 2nm
PD204B2 Cos	UVB2	2	311 \pm 2nm	19 \pm 2nm
PD204B3 Cos	UVB3	3	311 \pm 2nm	14 \pm 2nm
PD204AB Cos	UVAB	4	352 \pm 5nm	79 \pm 4nm

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

Sensitivity*: 1mV per W.m⁻²

* Other ranges available on request.

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

Linearity: <1% Error

Operating Temperature Range:
 PD204A Cos & PD204B2 Cos -20 to +60 °C
 PD204AB Cos & PD204B3 Cos -10 to +60 °C

Storage Temperature Range:
 PD204A Cos & PD204B* Cos -40 to +60 °C
 PD204AB Cos & PD204B3 Cos -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

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

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

Enclosure Rating: IP65

Weight: 125g (excluding cable)

SPECTRAL RESPONSES:

PD204A Cos
Relative Spectral Response

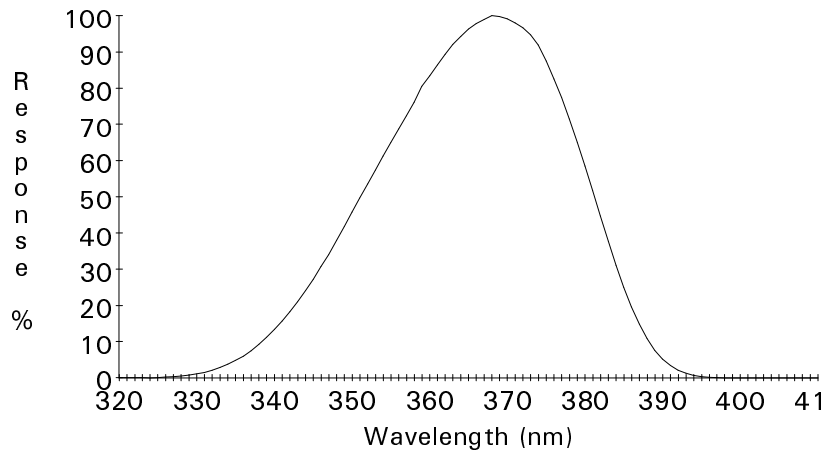


Figure 1

PD204B2 Cos
Relative Spectral Response

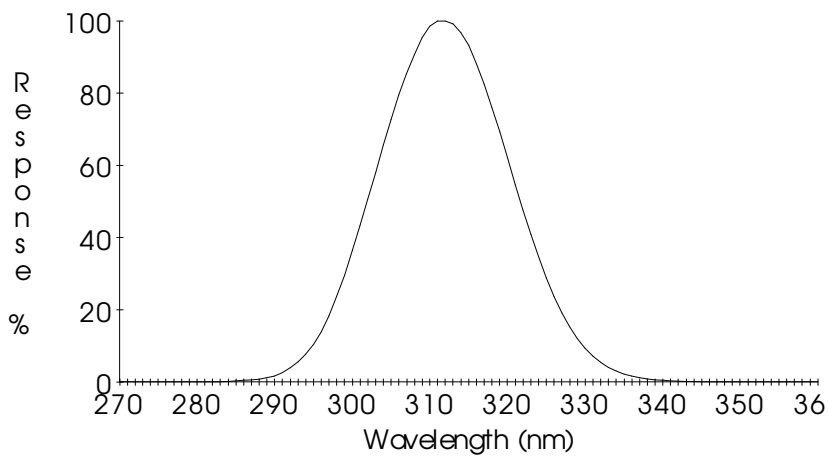


Figure 2

PD204B3 Cos
Relative Spectral Response

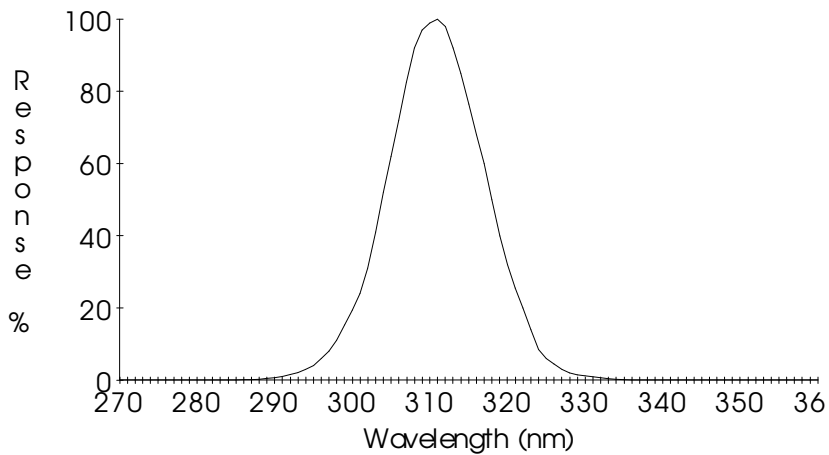


Figure 3

SPECTRAL RESPONSES (cont.):

PD204AB Cos
Relative Spectral Response

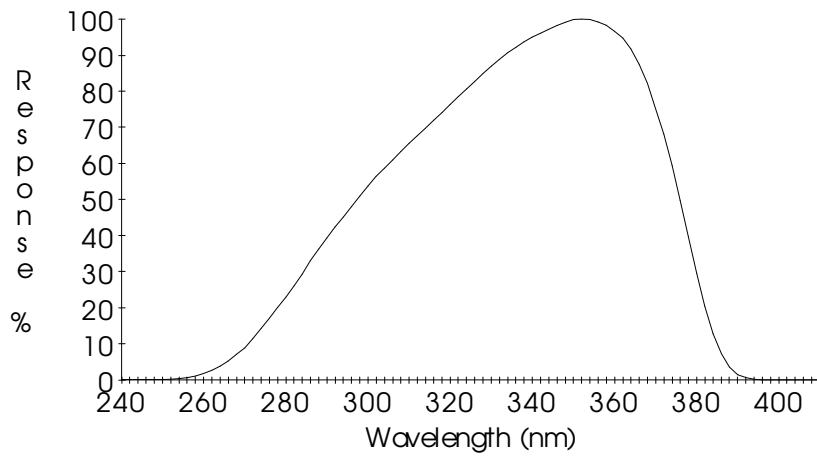


Figure 4

COSINE ANGULAR RESPONSE:

Typical PD204 Cosine Angular Response

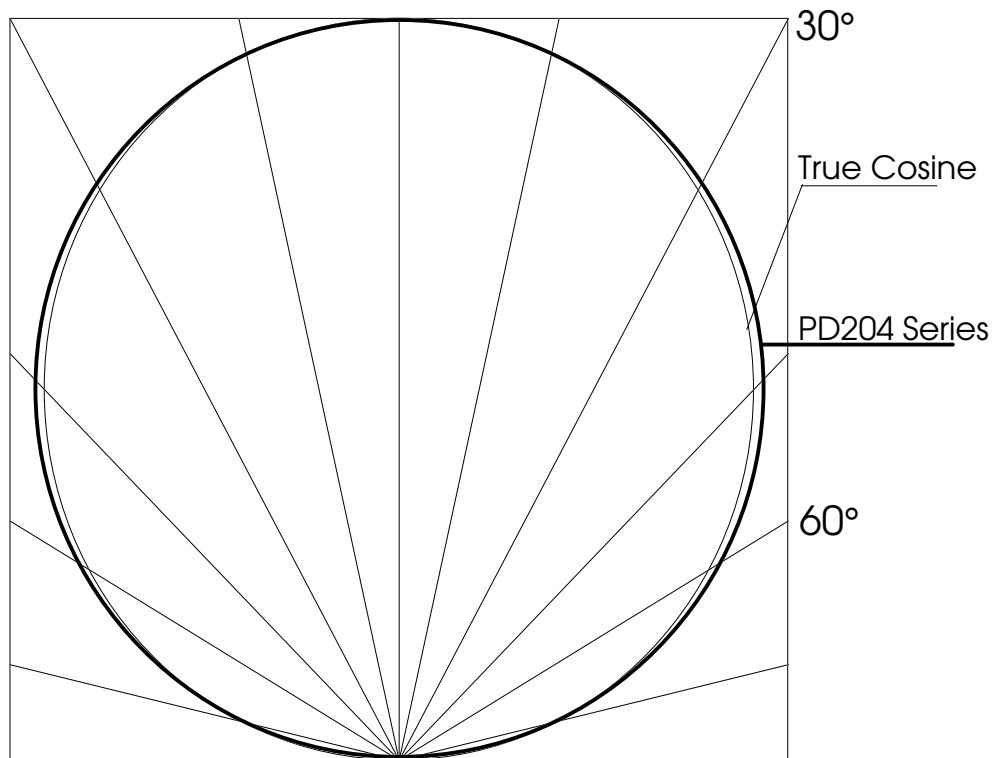


Figure 5

Amplifier DC Offset

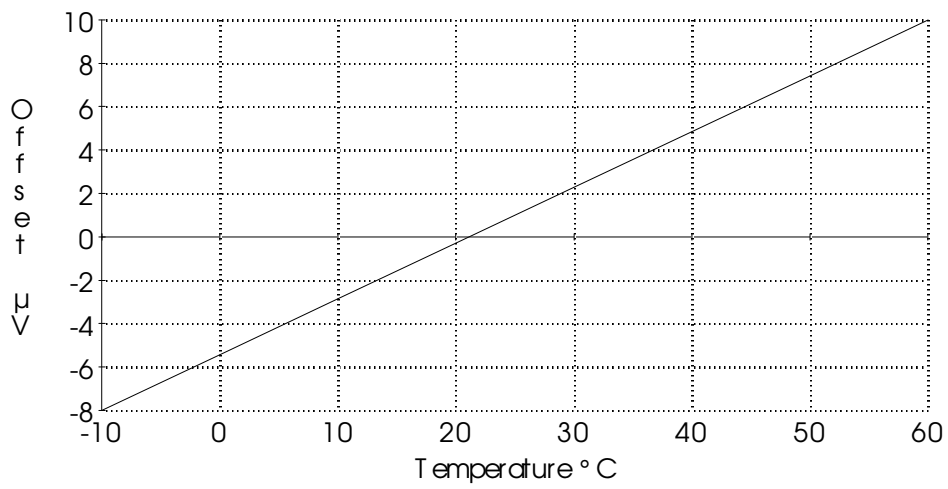
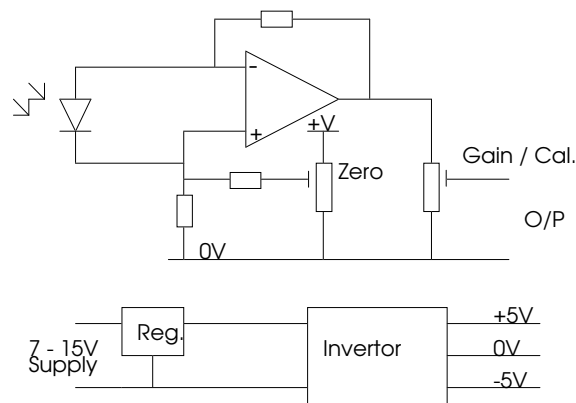


Figure 6

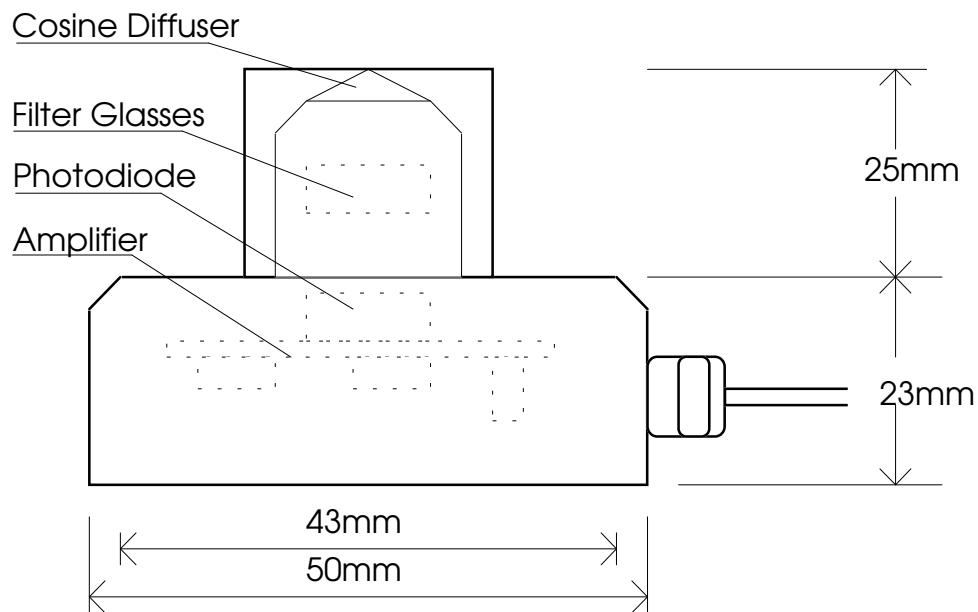
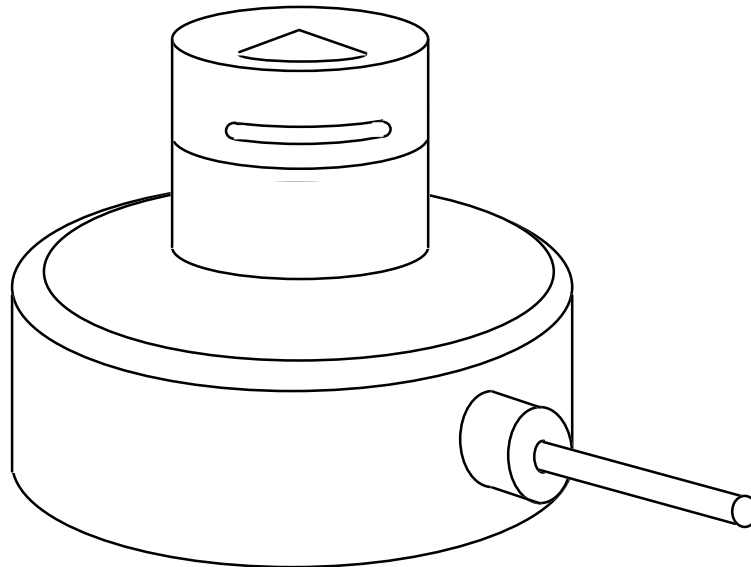


PD204* Cos Wiring

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:



CONTACT DETAILS

Macam Photometrics Ltd
10 Kelvin Square
Livingston
Scotland EH54 5PF

Telephone: 01506 437-391
Facsimile: 01506 438-543
E-mail: support@macam.com
Web: www.macam.com