

1.1.1.2 Round Photodiode Sensors

500pW to 3W

Features

- Round geometry for easy centering
- Threaded to fit standard SM1 bench equipment
- Same performance as standard PD300 sensors
- Comes with removable filter as standard
- • Fiber optic adapters available

PD300R Filter Off



PD300R Filter installed



Model	PD300R			PD300R-3W			PD300R-IR		
Use	General			Powers to 3W			IR wavelengths 700-1800nm		
Detector Type	silicon			silicon			Germanium		
Aperture	Ø10mm			Ø10mm			Ø5mm		
Calibration Uncertainty ±%	1.1 430-1000nm ^(a)			1.1 430-1000nm ^(a)			2.4 700-1430nm ^(a)		
Filter Mode	Filter out		Filter in	Filter out		Filter in	Filter out		Filter in
Spectral Range nm	350-1100		430-1100	350-1100		430-1100	700-1800		700-1800
Power Range	500pW to 30mW		2μW to 300mW	5nW to 100mW		2μW to 3W	5nW to 30mW		2μW to 300mW
Power Scales	30mW to 30nW and dBm		300mW to 300μW and dBm	100mW to 300nW and dBm		3W to 300μW and dBm	30mW to 30nW and dBm		300mW to 300μW and dBm
Resolution nW	0.01		NA	0.1		NA	0.01		NA
Maximum Power vs. Wavelength	nm	mW	mW	nm	mW	mW	nm	mW	mW
	<488	30	300	<488	100	3000	800	12	120
	633	20	300	633	100	3000	1000-1300	30	300
	670	13	200	670	100	2000	1400	30	250
	790	10	100	790	100	1200	1500	30	100
	904	10	100	904	100	1200	1600	30	100
	1064	25	250	1064	100	2200	1800	30	300

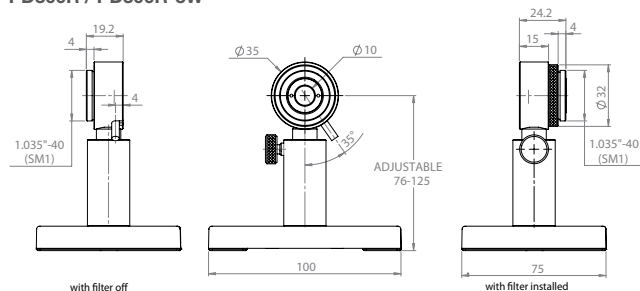
Accuracy (including errors due to temp. variations)

% error vs Wavelength nm	±10 360-400	NA	±10 360-400	NA	±5 700-800	±6 700-900
	±3 400-980	±5 430-980	±3 400-950	±5 430-950	±4 800-1700	±5 900-1700
	±5 980-1100	±7 980-1100	±4 950-1030	±6 950-1030	±7 1700-1800	±9 1700-1800
			±6 1030-1100	±7 1030-1100		
Damage Threshold W/cm²	10	50	10	30	10	50
Max Pulse Energy μJ	2	20	20	500	0.3	3
Noise Level for filter out pW	20		200		200	
Response Time with Meter s	0.2		0.2		0.2	
Beam Position Dependence	±2%		±2%	±3%	±2%	
Fiber Adapters Available (see page 35)	ST, FC, SMA, SC		ST, FC, SMA, SC		ST, FC, SMA, SC	
Compliance	CE, UKCA, China RoHS		CE, UKCA, China RoHS		CE, UKCA, China RoHS	
Version						
Part Number: Standard Sensor	7Z02436		7Z02437 (1.5m cable)		7Z02439	
Sensor with different cable length			7Z02437C (10m cable)			

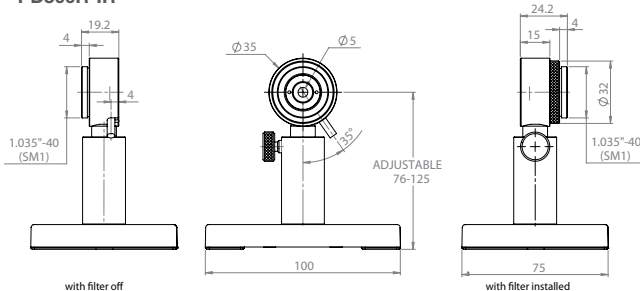
Note: (a) For calibration uncertainty of wavelengths outside of this range see table on page 25

* For graphs see page 33-34

PD300R / PD300R-3W

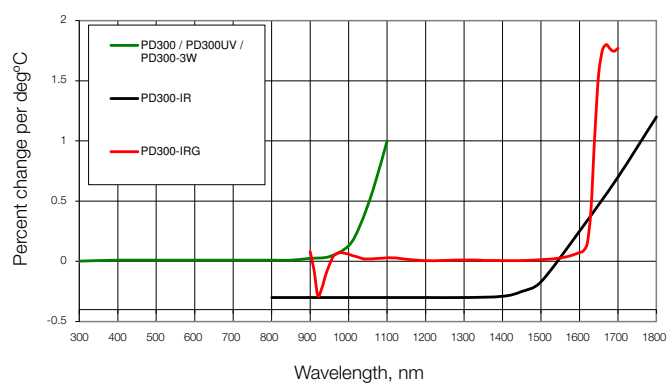


PD300R-IR

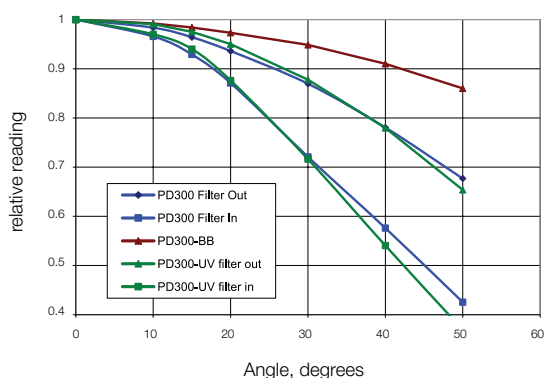


1.1.1.4 Graphs

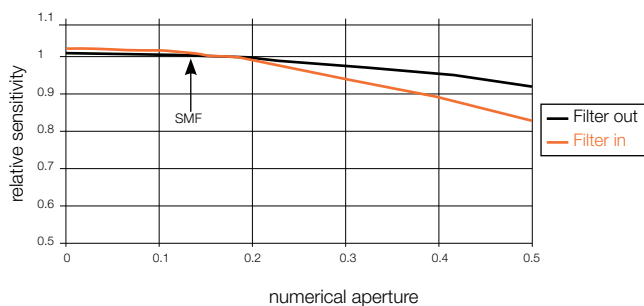
Temperature Coefficient of Sensitivity



PD300 Angle Dependence



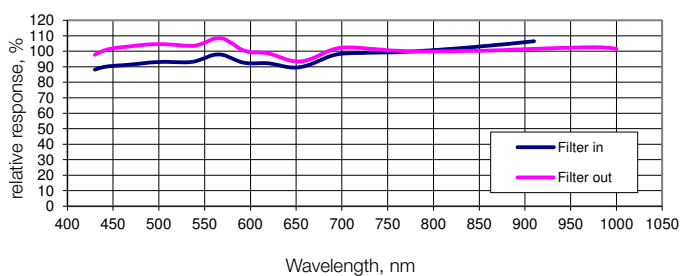
Dependence of Sensitivity on Numerical Aperture (PD300 - IRG)



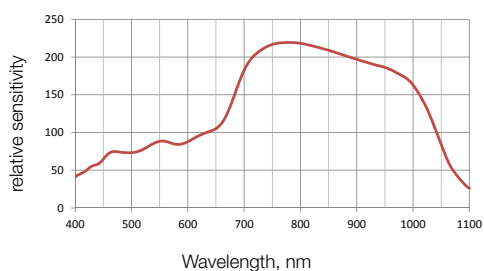
Note:

1. Graph assumes equal intensity into all angles up to maximum N.A.
2. Calibration is done with SMF, N.A. 0.13

Typical Sensitivity Curve of PD300-BB Sensors



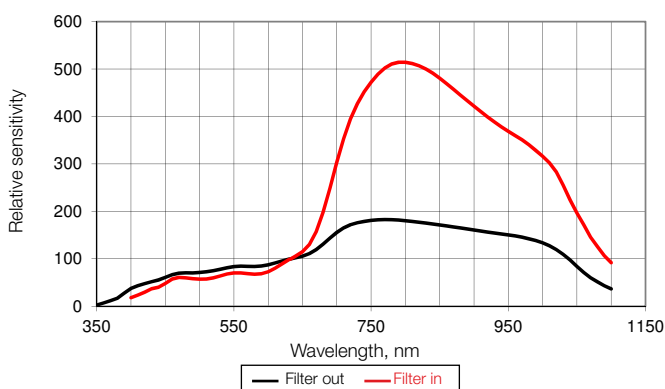
BC20 Relative Spectral Response



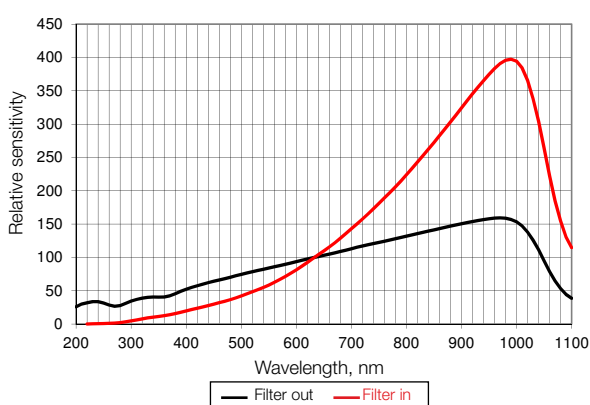
Approximate Spectral Response

Relative to 633nm or 1550nm

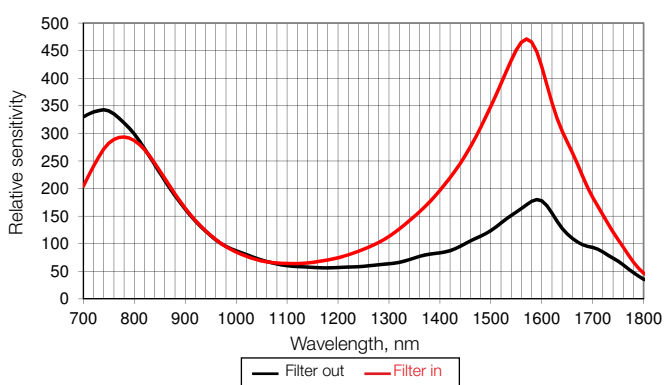
PD300 / PD300R



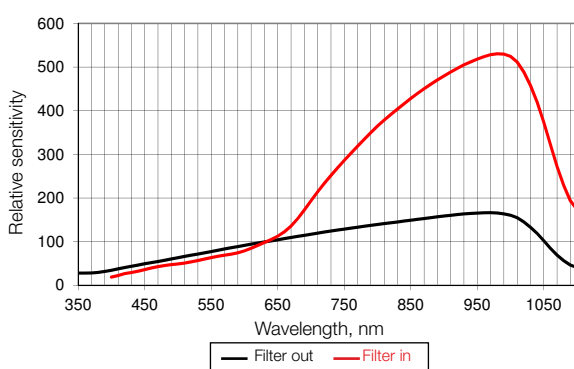
PD300-UV / PD300R-UV



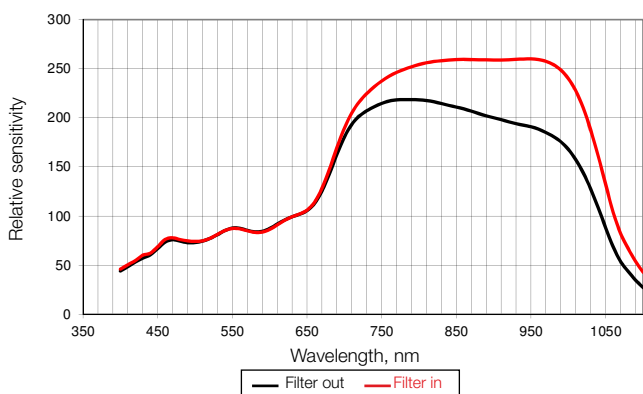
PD300-IR / PD300R-IR



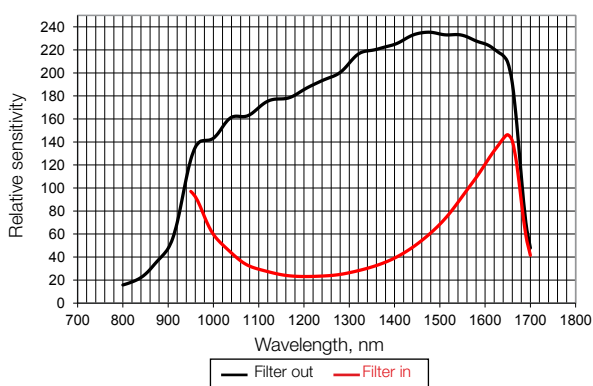
PD300-TP



PD300-3W / PD300R-3W



PD300-IRG



PD300-1W

