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

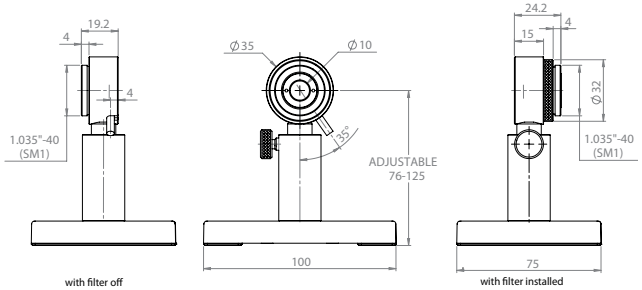
PD300R Filter installed

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	**7Z02436**		**7Z02437**		**7Z02439**	

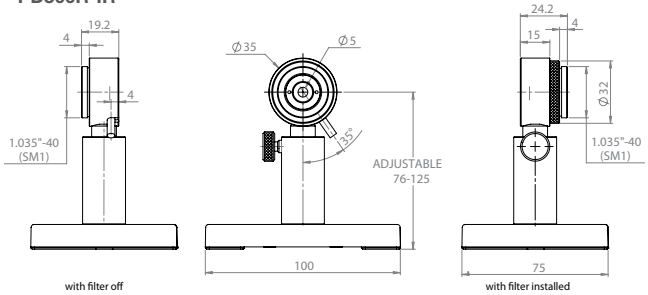
Note: (a) For calibration uncertainty of wavelengths outside of this range see table on page 25

* For graphs see page 33-34

PD300R / PD300R-3W

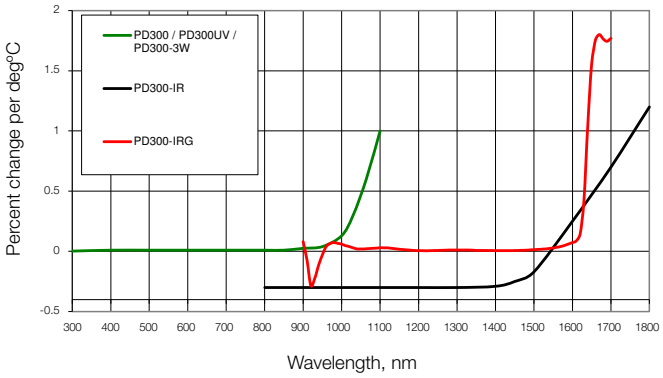


PD300R-IR

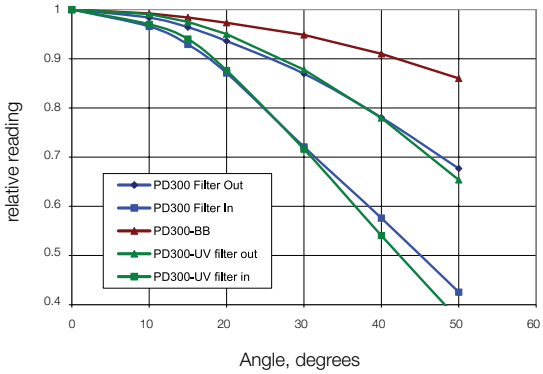


1.1.1.4 Graphs

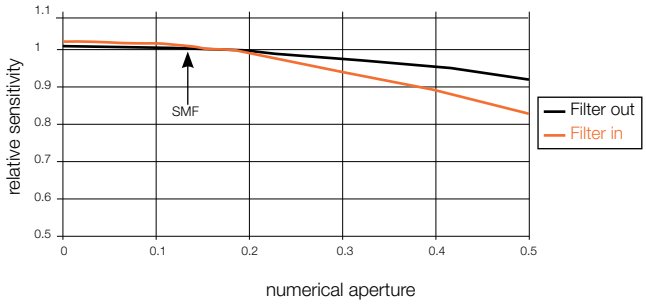
Temperature Coefficient of Sensitivity



PD300 Angle Dependence

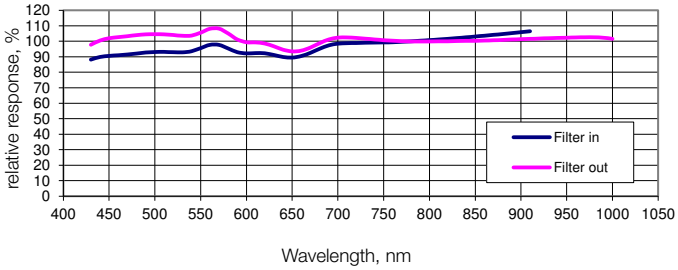


Dependence of Sensitivity on Numerical Aperture (PD300 - IRG)

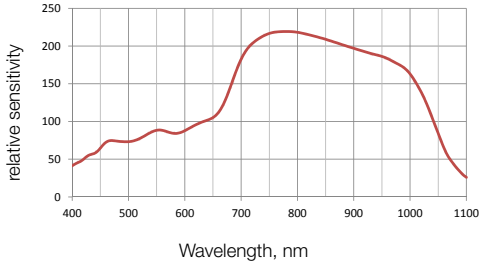


Note:
1. Graph assumes equal intensity into all angles up to maximum N.A.
2. Calibration is done with SMF, N.A. 0.13

Typical Sensitivity Curve of PD300-BB Sensors



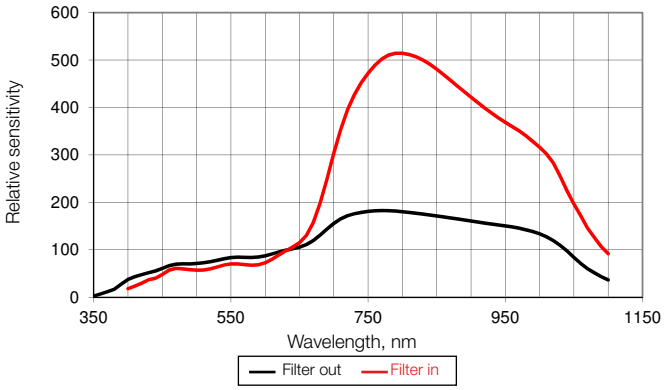
BC20 Relative Spectral Response



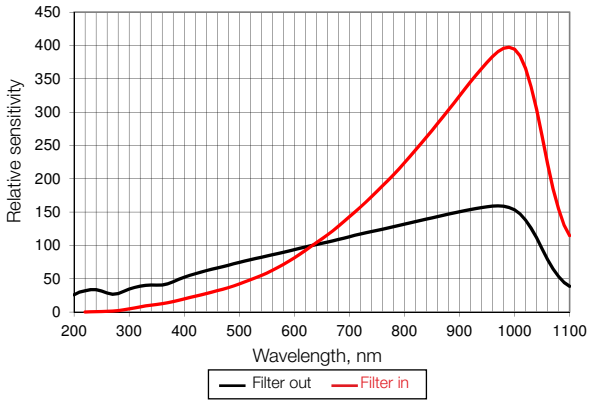
Approximate Spectral Response

Relative to 633nm or 1550nm

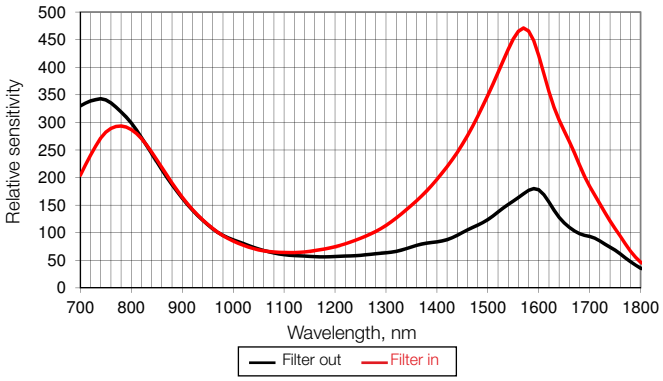
PD300 / PD300R



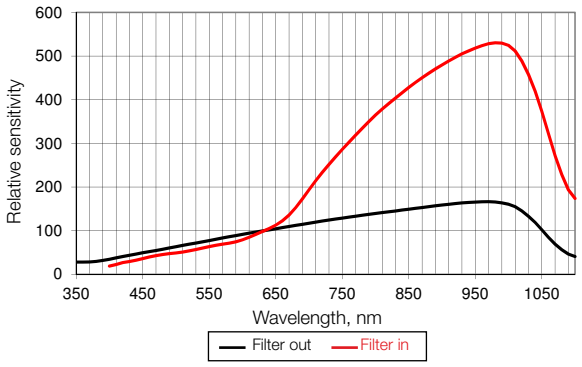
PD300-UV / PD300R-UV



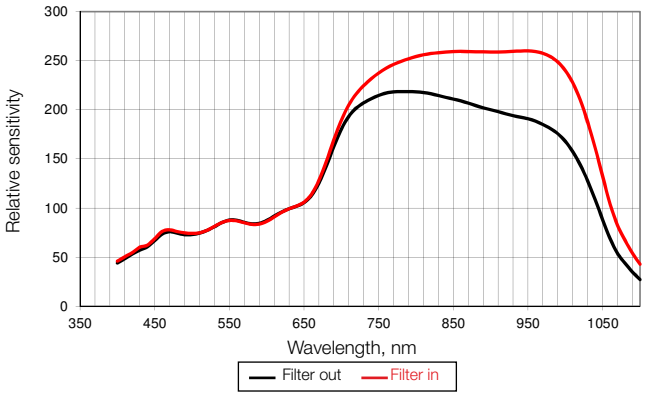
PD300-IR / PD300R-IR



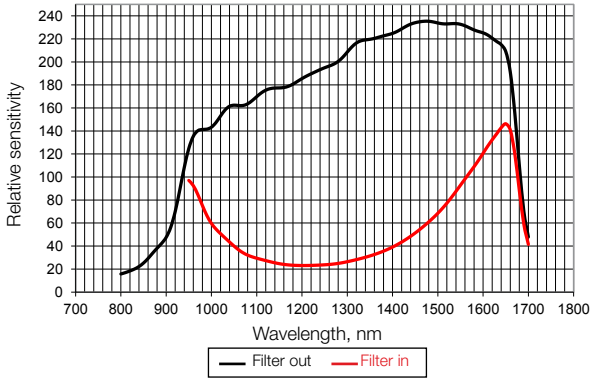
PD300-TP



PD300-3W / PD300R-3W



PD300-IRG



PD300-1W