

1.1.1.2 Round Photodiode Sensors

20pW to 3W

Features

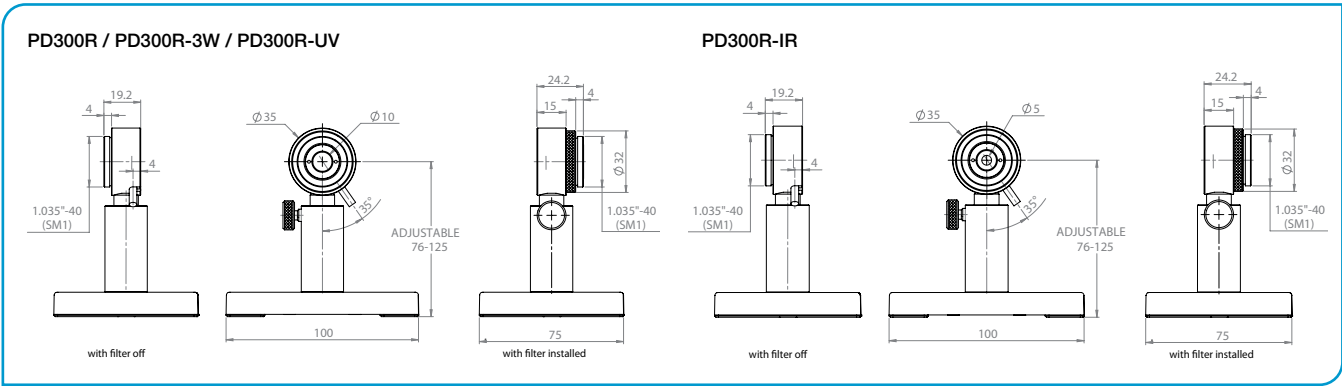
- Round geometry for easy centering
- Threaded to fit standard SM1 bench equipment
- Same performance as standard PD300 sensors
- Comes with removable filter as standard
- Fiber optic adapters available



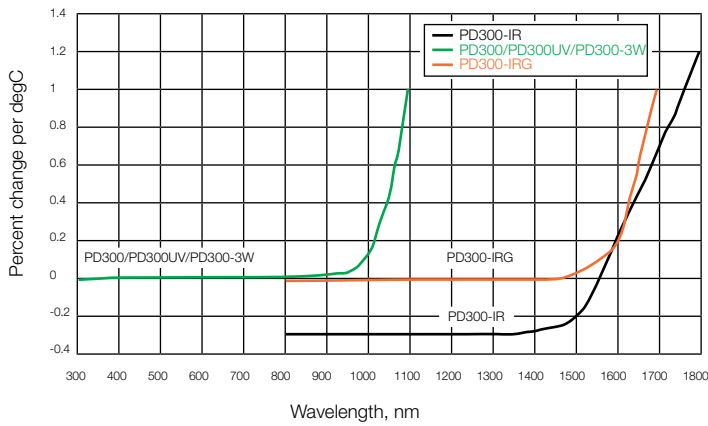
Model Use	PD300R General			PD300R-3W Powers to 3W			PD300R-UV Lowest powers from 200-1100nm			PD300R-IR IR wavelengths 700-1800nm		
Detector Type	silicon			silicon			silicon			Germanium		
Aperture	Ø10mm			Ø10mm			Ø10mm			Ø5mm		
Calibration Uncertainty nm	±1.1% 430-1000 (a)			±1.1% 430-1000 (a)			±1.1% 430-1000 (a)			±2.4% 700-1430 (a)		
Filter Mode	Filter out		Filter in	Filter out		Filter in	Filter out		Filter in	Filter out		Filter in
Spectral Range nm	350-1100		430-1100	350-1100		430-1100	200 -1100		220 -1100	700-1800		700-1800
Power Range	500pW to 30mW		2µW to 300mW	5nW to 100mW		2µW to 3W	20pW to 3mW		2µW to 300mW	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	3mW to 3nW and dBm		300mW to 300µW and dBm	30mW to 30nW and dBm		300mW to 300µW and dBm
Resolution nW	0.01		NA	0.1		NA	0.001		100	0.01		NA
Maximum Power vs. Wavelength	nm	mW	mW	nm	mW	mW	nm	mW	mW	nm	mW	mW
	<488	30	300	<488	100	3000	250 - 350	3	300	800	12	120
	633	20	300	633	100	3000	400	3	300	1000-1300	30	300
	670	13	200	670	100	2000	600	3	300	1400	30	250
	790	10	100	790	100	1200	800 - 950	2.5	150	1500	30	100
	904	10	100	904	100	1200	1064	3	300	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	±10	200-230	±10	220-300	±5	700-800
	±3	400-980	±5	±3	400-950	±5	±7	230-300	±4	300-420	±4	800-1700
	±5	980-1100	±7	±4	950-1030	±6	±3	300-420	±3	420-980	±7	1700-1800
				±6	1030-1100	±7	±2	420-980	±7	980-1100		
Damage Threshold W/cm2	10		50	10		30	10		50	10		50
Max Pulse Energy µJ	3		30	30		400	1		50	0.75		2
Noise Level for filter out pW	20			200			±1			200		
Response Time with Meter s	0.2			0.2			0.2			0.2		
Beam Position Dependence	±2%			±2%		±3%	±2%			±2%		
Fiber Adapters Available (see page 32)	ST, FC, SMA, SC			ST, FC, SMA, SC			ST, FC, SMA, SC			ST, FC, SMA, SC		
Compliance Version	CE, UKCA, China RoHS			CE, UKCA, China RoHS			CE, UKCA, China RoHS			CE, UKCA, China RoHS		
Part Number	7Z02436			7Z02437			7Z02438			7Z02439		

Notes: (a) For calibration uncertainty of wavelengths outside of this range see table on page 24

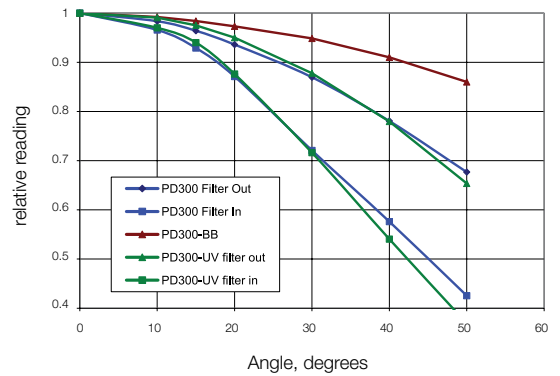
* For graphs see page 30-31



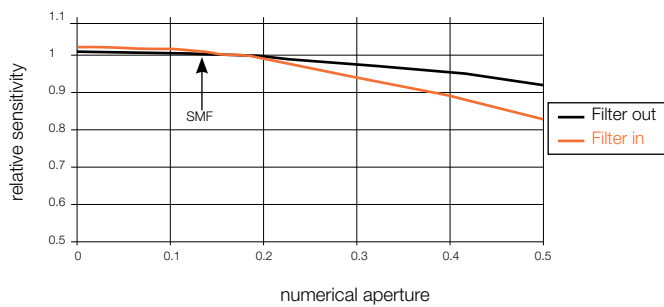
Temperature Coefficient of Sensitivity



PD300 Angle Dependence



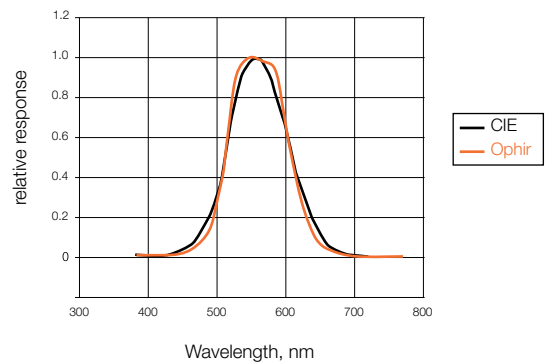
Dependence of Sensitivity on Numerical Aperture (PD300 - IRG)



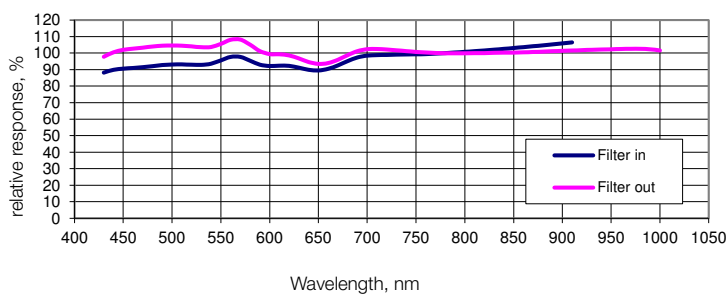
Note:

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

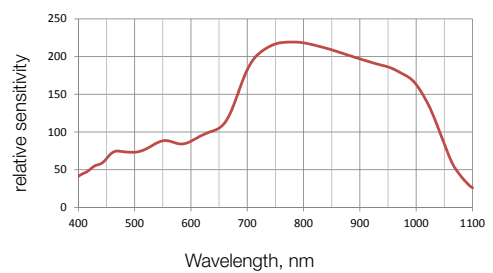
PD300-CIE Spectral Response vs. CIE Curve



Typical Sensitivity Curve of PD300-BB Sensors



BC20 Relative Spectral Response



Approximate Spectral Response

Relative to 633nm or 1550nm

