

## 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

PD300R Filter Off



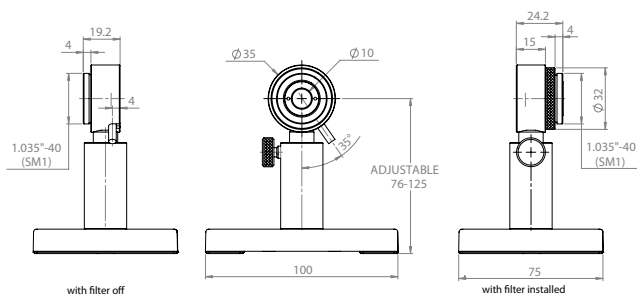
PD300R Filter installed



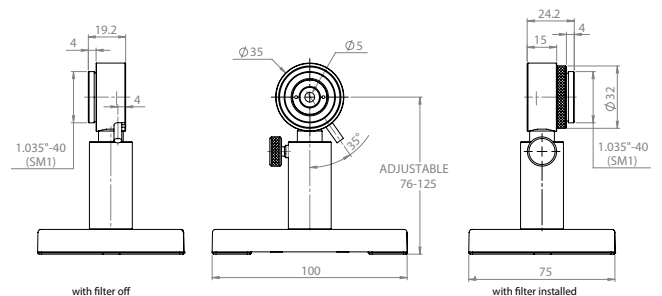
Model	PD300R			PD300R-3W			PD300R-UV			PD300R-IR				
Use	General			Powers to 3W			Lowest powers from 200-1100nm			IR wavelengths 700-1800nm				
Detector Type	silicon			silicon			silicon			germanium				
Aperture	Ø10mm			Ø10mm			Ø10mm			Ø5mm				
Filter mode	Filter out	Filter in		Filter out	Filter in		Filter 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	200µW to 300mW		5nW to 100mW	200µW to 3W		20pW to 3mW	2µW to 300mW		5nW to 30mW	200µW to 300mW			
Power Scales	30mW to 30nW and dBm	300mW to 30mW and dBm		100mW to 300nW and dBm	3W to 30mW and dBm		3mW to 3nW and dBm	300mW to 300µW and dBm		30mW to 30nW and dBm	300mW to 30mW 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	25	80		
	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	±6	200-270	±10	220-400	±5	700-900	±7	700-900
	±3	400-950	±5	430-950	±3	400-950	±5	430-950	±5	400-950	±4	900-1700	±6	900-1700
	±5	950-1100	±7	950-1100	±5	950-1100	±7	950-1100	±5	950-1100	±7	1700-1800	±9	1700-1800
Damage Threshold W/cm <sup>2</sup>	10	50		10	100		10	50		10	50			
Max Pulse Energy µJ	2	20		20	500		0.4	15		0.3	3			
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 69)	FC, ST, SC, SMA			FC, ST, SC, SMA			SC, ST, FC, SMA			SC, ST, FC, SMA				
Version														
Part Number	<b>7Z02436</b>			<b>7Z02437</b>			<b>7Z02438</b>			<b>7Z02439</b>				

\* For graphs see page 26-27

PD300R/ PD300R-3W/ PD300R-UV

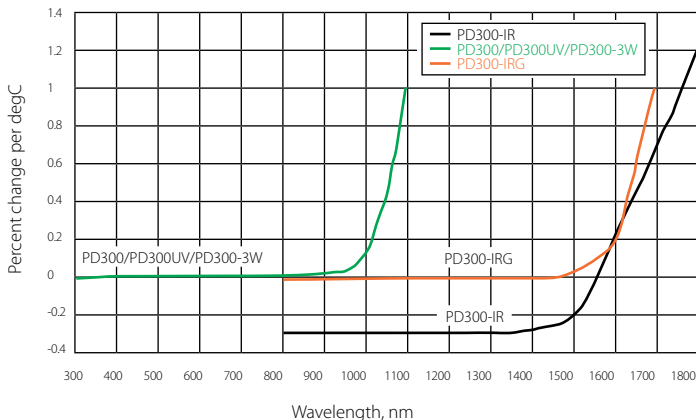


PD300R-IR

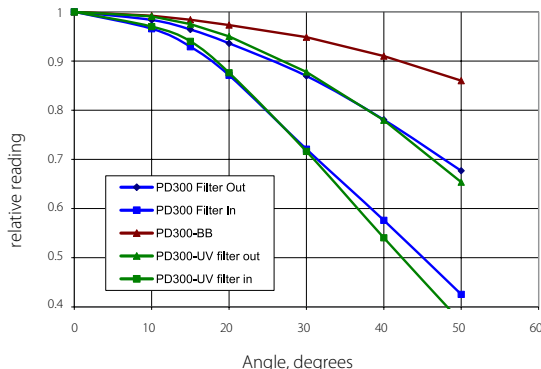


### 1.1.1.4 Graphs

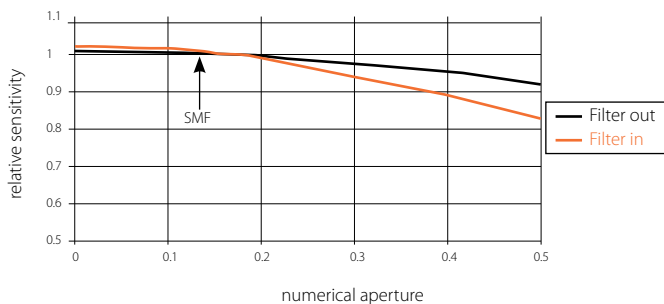
**Temperature Coefficient of Sensitivity**



**PD300 Angle Dependence**



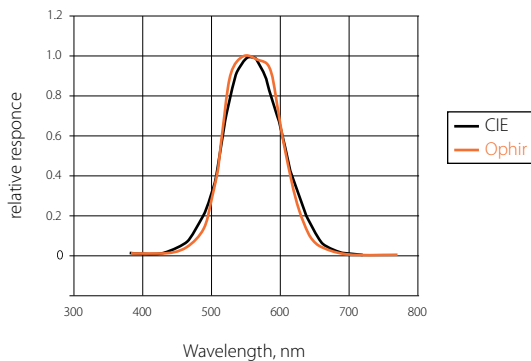
**Dependence of Sensitivity on Numerical Aperture (PD300 - IRG)**



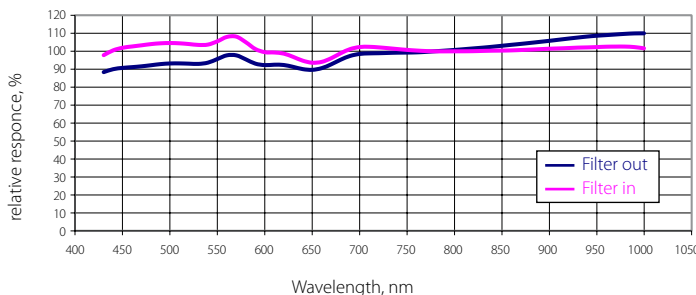
Note:

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

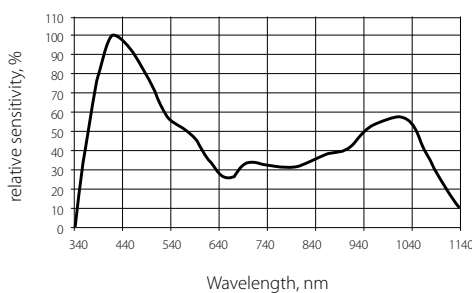
**PD300-CIE Spectral Response vs. CIE Curve**



**Typical Sensitivity Curve of PD300-BB Sensors**



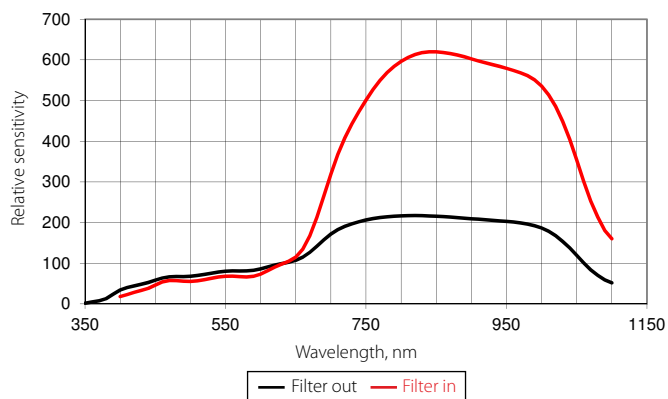
**Relative Spectral Response of BC20**



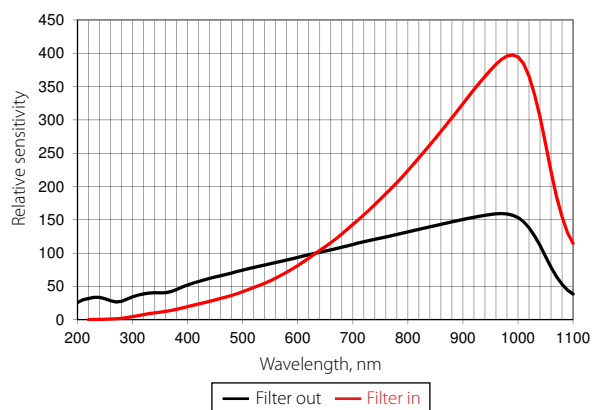
Graph of the approximate relative spectral response of the BC20 for purpose of interpolation, if the instrument is to be used at a wavelength other than the ones that are factory calibrated

# Approximate Spectral Response Relative to 633nm or 1550nm

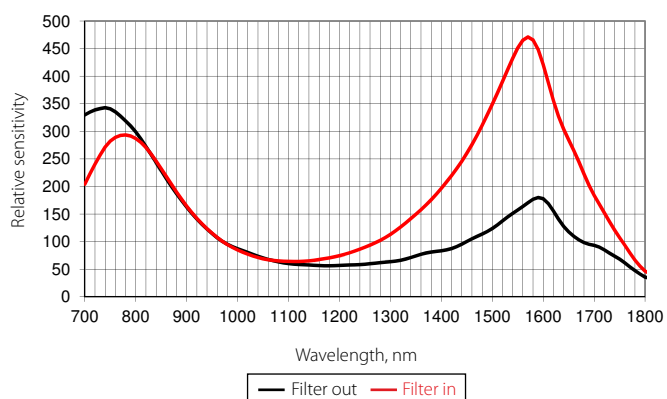
PD300 / PD300R



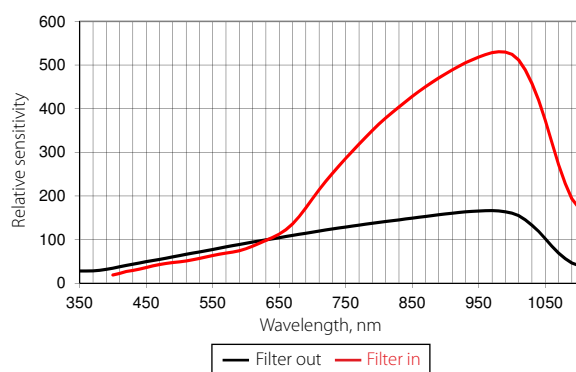
PD300-UV / PD300R-UV



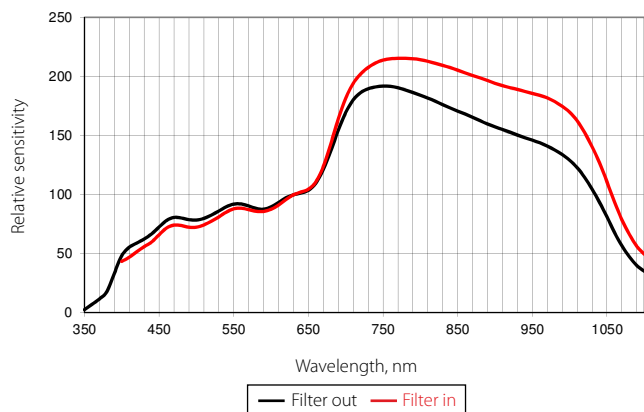
PD300-IR / PD300R-IR



PD300-TP



PD300-3W / PD300R-3W



PD300-IRG

