

1.1.1.1 Standard Photodiode Sensors

10pW to 300mW

- Features
- Spectral range including UV and IR
 - Very large dynamic range
 - Swivel mount for hard to measure places
 - Comes with filter in / filter out options
 - Fiber optic adapters available

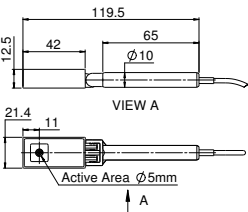


Model	PD300-UV/ PD300-UV-193				PD300-IR			PD300-IRG										
Use	Lowest powers from 200-1100nm				Low powers from 700-1800nm			Telecom wavelength fiber and free space measurements										
Detector Type	silicon				Germanium			InGaAs										
Aperture	10x10mm				Ø5mm			Ø5mm for free space beams										
Calibration Uncertainty nm	±1.1% 430-1000 ^(b)				±2.4% 700-1430 ^(b)			±2.4% 800-1430 ^(b)										
Filter Mode	Filter out		Filter in		Filter out		Filter in	Filter out		Filter in								
Spectral Range nm	200 -1100		220 -1100		700-1800		700-1800	800 - 1700		950 - 1700								
Power Range	20pW to 3mW		2µW to 300mW		5nW to 30mW		2µW to 300mW	10pW to 800µW		1µW to 200mW								
Power Scales	3mW to 3nW and dBm		300mW to 300µW and dBm		30mW to 30nW and dBm		300mW to 300µW and dBm	800 µW to 800pW and dBm		300mW to 30µW and dBm								
Resolution nW	0.001		100		0.01		NA	0.0001		1								
Maximum Power vs. Wavelength	nm	mW	mW		nm	mW	mW	nm	mW	mW								
	250 - 350	3	300		800	12	120	<1000	0.8	200								
	400	3	300		1000-1300	30	300	1100	0.8	200								
	600	3	300		1400	30	250	1200	0.8	200								
	800 - 950	2.5	150		1500	30	100	1300	0.8	200								
	1064	3	300		1600	30	100	1550	0.8	200								
				1800	30	300		>1600	0.8	200								
Accuracy (including errors due to temp. variations)																		
% error vs Wavelength nm ^(a)	±10	200-230		±10	220-300		±5	700-800		±6	700-900		±3	1000-1650		±6	1000-1650	
	±7	230-300		±4	300-420		±4	800-1700		±5	900-1700		±5	<1000 & >1650		±8	<1000 & >1650	
	±3	300-420		±3	420-980		±7	1700-1800		±9	1700-1800							
	±2	420-980		±7	980-1100													
	±7	980-1100																
Damage Threshold W/cm2	10		50		10		50		5		50							
Max Pulse Energy µJ	1		50		0.75		2		1		100							
Noise Level for filter out pW	±1				200				±300fW at 1550 nm and 1s average									
Response Time with Meter s	0.2				0.2				0.2									
Beam Position Dependence	±2%				±2%				±1% over 80% of aperture									
Fiber Adapters Available (see page 32)	ST, FC, SMA, SC				ST, FC, SMA, SC				FC, FC/APC, SMA									
Compliance	CE, UKCA, China RoHS				CE, UKCA, China RoHS				CE, UKCA, China RoHS									
Version									V1									
Part Number	PD300-UV: PD300-UV-193:		7Z02413 7Z02413A ^(a)		7Z02412				7Z02402									

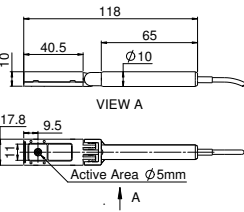
Notes: (a) Same as above with additional calibration point at 193nm accuracy ±6%
(b) For calibration uncertainty of wavelengths outside of this range see table on page 24

* For graphs see page 30-31

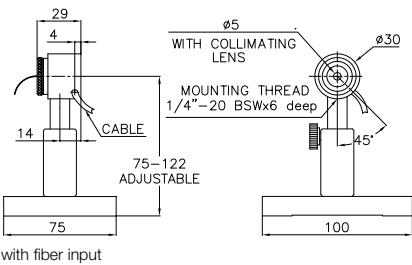
PD300-UV / PD300-IR filter installed
(Ø5mm for PD300-IR only)



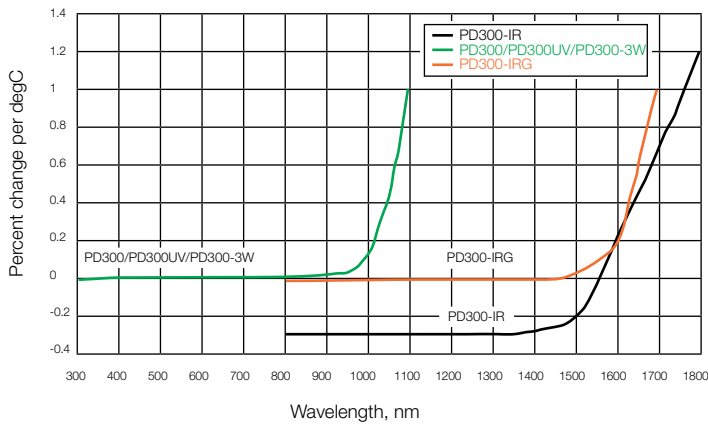
PD300-UV / PD300-IR filter off
(Ø5mm for PD300-IR only)



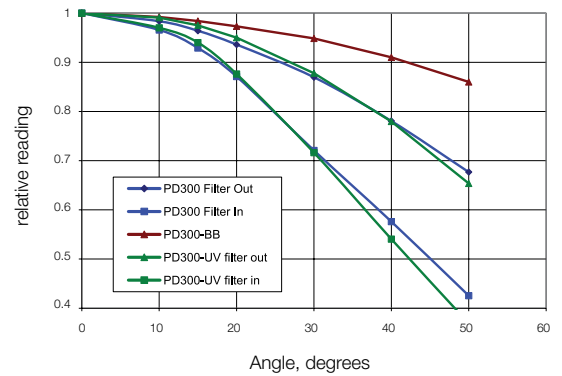
PD300-IRG



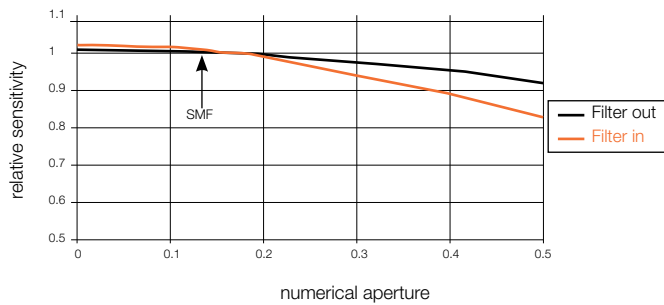
Temperature Coefficient of Sensitivity



PD300 Angle Dependence



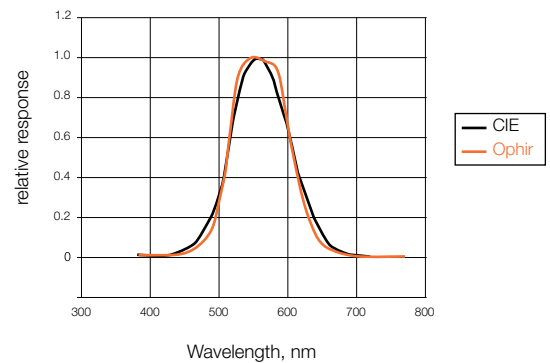
Dependence of Sensitivity on Numerical Aperture (PD300 - IRG)



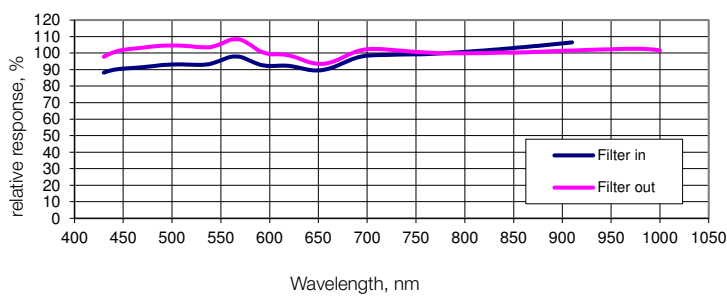
Note:

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

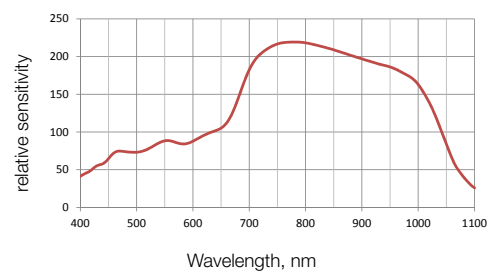
PD300-CIE Spectral Response vs. CIE Curve



Typical Sensitivity Curve of PD300-BB Sensors



BC20 Relative Spectral Response



Approximate Spectral Response

Relative to 633nm or 1550nm

