

1.1.1 Photodiode Power Sensors

1.1.1.1 Standard Photodiode Sensors

50pW to 3W

Features

- Very large dynamic range
- Swivel mount for hard to measure places
- Comes with filter in / filter out options
- Patented automatic background subtraction
- Fiber optic adapters available



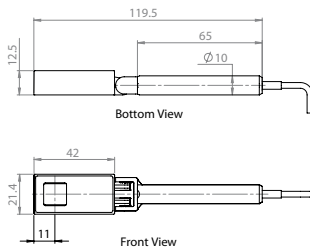
Model	PD300			PD300-1W			PD300-3W			PD300-TP		
Use	General			Powers to 1W			Powers to 3W			Thin profile for tight fit		
Detector Type	silicon			silicon			silicon			silicon		
Aperture	10x10mm			10x10mm			10x10mm			10x10mm		
Filter mode	Filter out	Filter in		Filter out	Filter in		Filter out	Filter in		Filter out	Filter in	
Spectral Range nm	350-1100	430-1100		350-1100	430-1100		350-1100	430-1100		350-1100	400-1100	
Power Range	30mW to 500pW	300mW to 200µW		30mW to 500pW	1W to 200 µW		100mW to 5nW	3W to 200µW		3mW to 50pW	1W to 20µW	
Power Scales	30mW to 30nW and dBm	300mW to 30mW and dBm		30mW to 30nW and dBm	1W to 30mW and dBm		100mW to 300nW and dBm	3W to 30mW and dBm		3mW to 3nW and dBm	1W to 3mW and dBm	
Resolution nW	0.01	NA		0.01	NA		0.1	NA		0.001	1	
Maximum Power vs. Wavelength	nm	mW	mW	nm	mW	mW	nm	mW	mW	nm	mW	mW
	<488	30	300	<488	30	1000	<488	100	3000	350-400	3	NA
	633	20	300	633	20	1000	633	100	3000	400-500	3	1000
	670	13	200	670	13	1000	670	100	2000	600	2.5	1000
	790	10	100	790	10	600	790	100	1200	700	2	500
	904	10	100	904	10	700	904	100	1200	800-950	1.5	300
	1064	25	250	1064	25	1000	1064	100	2200	1064	3	500
Accuracy (including errors due to temp. variations)												
% error vs Wavelength nm	±10	360-400	NA	±10	360-400	NA	±10	360-400	NA	±7	350-400	NA
	±3	400-950	±5	430-950	±3	400-950	±5	430-950	±5	430-950	±3	400-950
	±5	950-1100	±7	950-1100	±5	950-1100	±7	950-1100	±5	950-1100	±7	950-1100
Damage Threshold W/cm ²	10		50	10		10 ^(a)	10		100	10		50
Max Pulse Energy µJ	2		20	2		100	20		500	1		100
Noise Level for filter out pW	20			20			200			±2		
Response Time with Meter s	0.2			0.2			0.2			0.2		
Beam Position Dependence	±2%			±2%			±2%			±2%		
Background Subtraction	95-98% of background is cancelled automatically under normal room conditions, even when changing continuously						NA			NA		
Fiber Adapters Available (see page 43)	SMA, FC, ST, SC			SMA, FC, ST, SC			SMA, FC, ST, SC			NA		
Version							V1					
Part Number: Standard Sensor	7Z02410			7Z02411A			7Z02426			7Z02424		
StarLink Sensor: Direct USB link to PC (p. 42)	787100											

Note: (a) Maximum power density

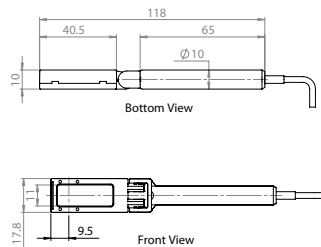
For graphs see page 24

For PD300-3W drawing see PD300-UV/PD300-IR drawing in page 23

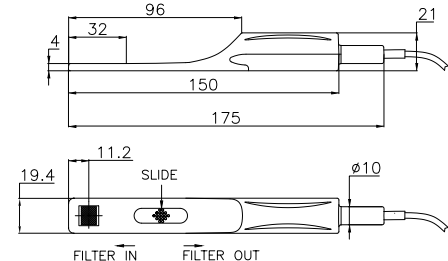
PD300/ PD300-1W filter installed



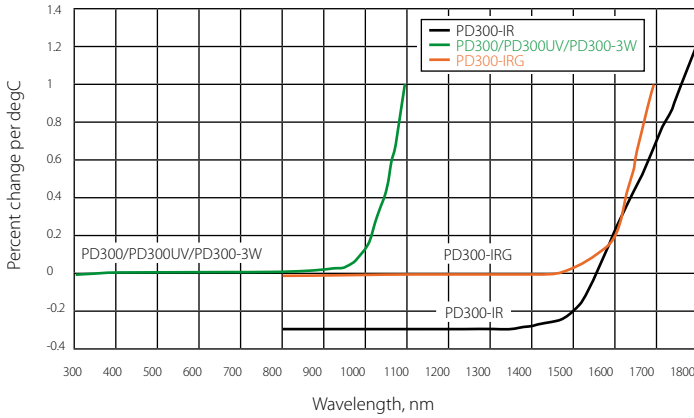
PD300/ PD300-1W filter off



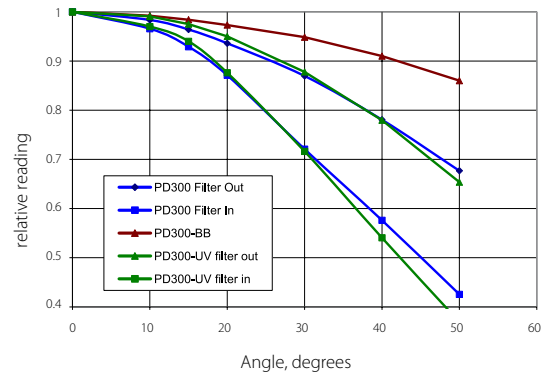
PD300-TP



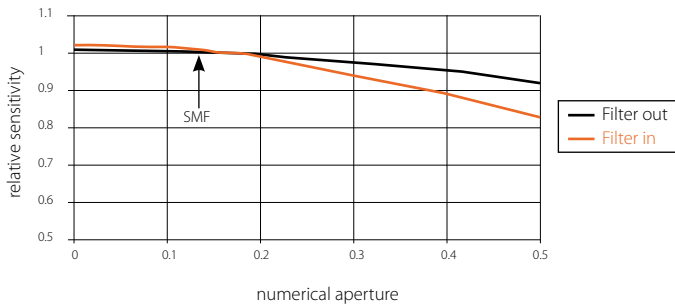
Temperature Coefficient of Sensitivity



PD300 Angle Dependence



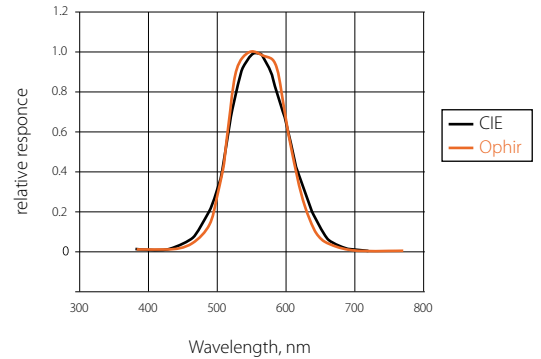
Dependence of Sensitivity on Numerical Aperture (PD300 - IRG)



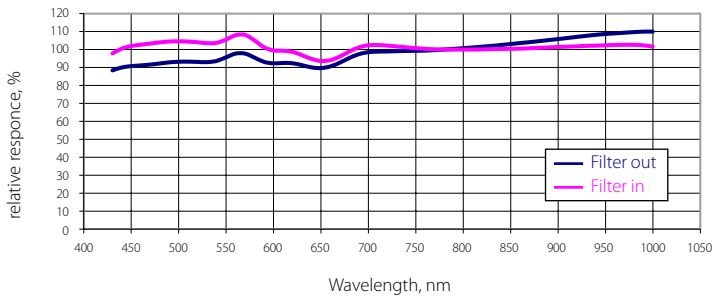
Note:

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

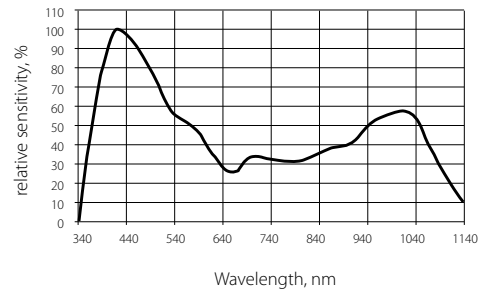
PD300-CIE spectral response vs. CIE curve



Typical Sensibility 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