

1.1.1.3 Special Photodiode Sensors

Features

- PD300-BB for broadband light sources - radiometry
(PD300-BB-50mW option up to 50mW)
- PD300-CIE for human visual perception Lux measurements
- BC20 for measuring scanned beams such as bar code light sources

PD300-BB / PD300-BB-50mW



PD300-CIE



BC20



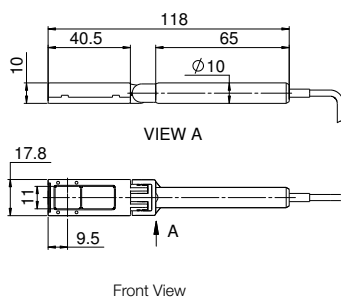
Model	PD300-BB	PD300-BB-50mW	PD300-CIE	BC20
Use	Radiometry-broad spectrum	Same as PD300-BB with removable attenuator for use to 50mW	Eye adjusted measurement in Lux	Scanned beams e.g. bar code with continuous wavelength curve
Detector Type	Silicon with special filter	Silicon with special filter	Silicon with special filter	Silicon with peak and hold circuit
Aperture	10x10mm	10x10mm	Active area 2.4 x 2.8mm	10x10mm
Spectral Range nm	430 - 1000 (see graph)	430 - 1000 (see graph)	400 - 700 (see graph)	400 - 1100 (see graph) ^(b)
Filter Mode		Filter out		
Power Range	50pW to 4mW	50pW to 4mW	20mLux to 200kLux	0.1mW to 20mW
Power Scales	4mW to 8nW and dBm	4mW to 8nW and dBm	200kLux to 200mLux	20mW to 2mW
Resolution	1pW	1pW	1mLux	1μW
Accuracy	Maximum deviation from flat spectrum (see graph)	Maximum deviation from flat spectrum (see graph)	(see graph)	±3% for >10% of full scale. Deviation from calibration -3% at 30,000 inch/s scan rate on sensor
	±10%	±10%		
Damage Threshold W/cm ²	10	10	10	50
Max Pulse Energy μJ	1	1	1	NA
Noise Level pW	2	2	±1mLux	5μW
Response Time with Meter s	0.2	0.2	0.2	0.2
				Two modes of operation: Hold: holds highest reading for 5s then updates. No Hold: updates reading 3 times per second
Beam Position Dependence	±2% for broadband light sources	±2% for broadband light sources	±3% for broadband light sources	NA – source overfills detector
Background Subtraction	NA	NA	NA	Background is automatically subtracted from both scanned and static beams
Fiber Adapters Available (see page 32)	NA	ST, FC, SMA, SC	NA	NA
Compatible Meter / Interface	All Meters & Interfaces	All Meters & Interfaces	Centauri, StarBright, Vega, Nova II, Juno, Juno+, LaserStar and Nova	StarBright, Vega, Nova II, Juno, Juno+, LaserStar and Nova
Compliance	CE, China RoHS	CE, China RoHS	CE, China RoHS	CE, China RoHS
Version				V1
Part Number	7Z02405	7Z02440	7Z02406	7Z02481 ^(a)

Notes: (a) Swivel stand for BC20 sensor P/N 1Z09004

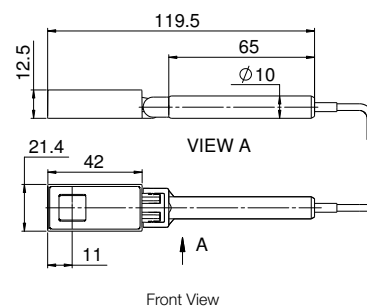
Notes: (b) The user can select up to 5 wavelengths from the spectral range. When used with the Nova or LaserStar meters, the sensor will only have the discrete wavelengths 405nm, 633nm, 650nm, 675nm and 780nm

* For graphs see page 30-31

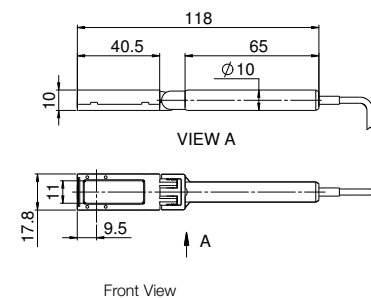
PD300-CIE / PD300-BB /
PD300-BB-50mW with filter off



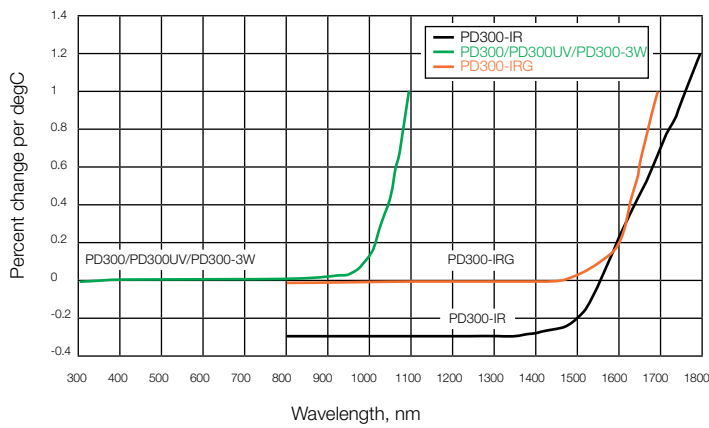
PD300-BB-50mW with filter installed



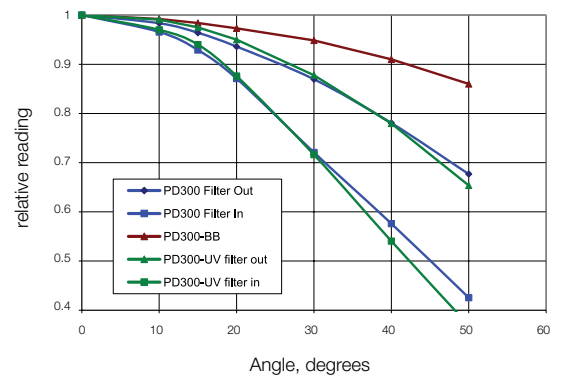
BC20



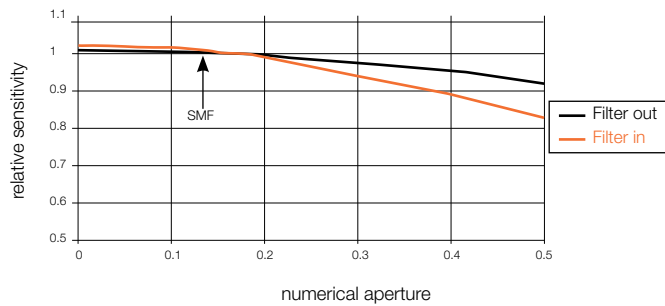
Temperature Coefficient of Sensitivity



PD300 Angle Dependence



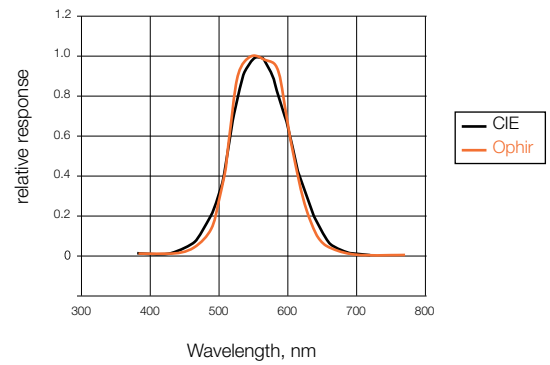
Dependence of Sensitivity on Numerical Aperture (PD300 - IRG)



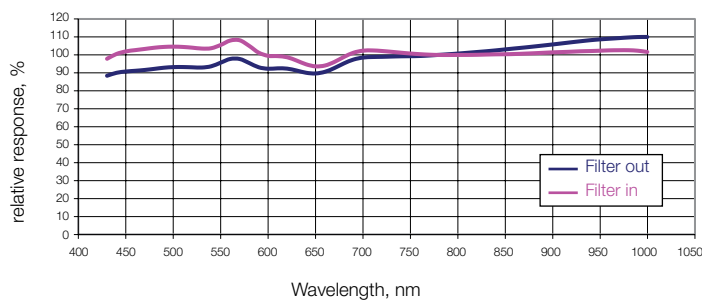
Note:

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

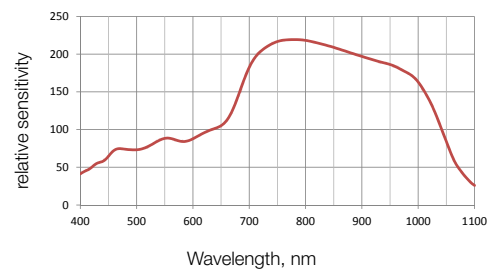
PD300-CIE Spectral Response vs. CIE Curve



Typical Sensitivity Curve of PD300-BB Sensors



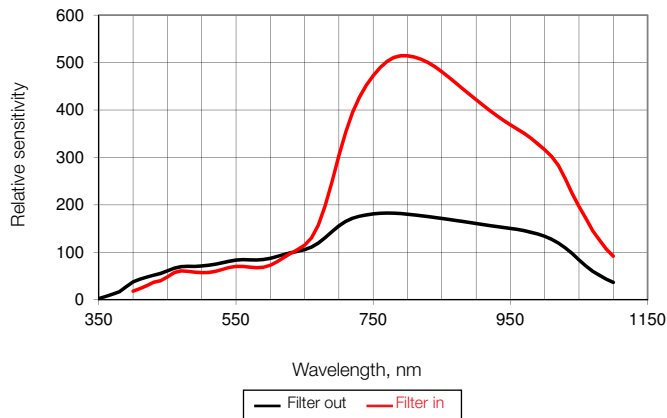
BC20 Relative Spectral Response



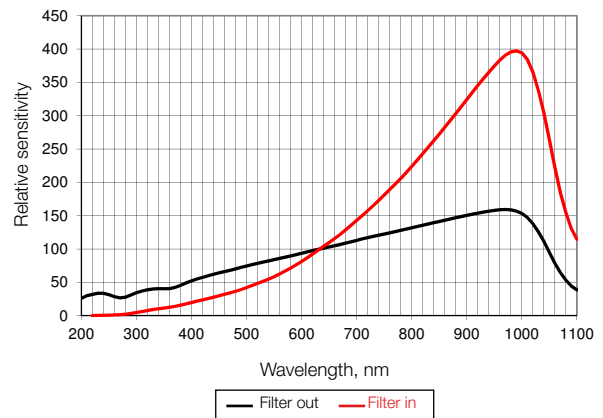
Approximate Spectral Response

Relative to 633nm or 1550nm

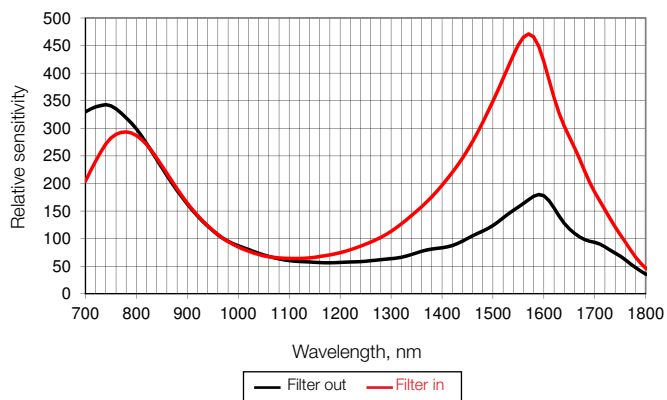
PD300 / PD300R



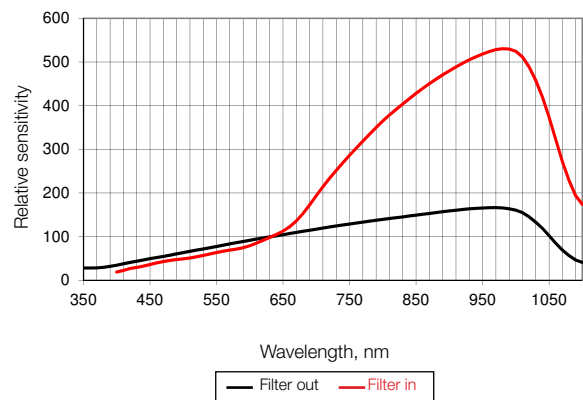
PD300-UV / PD300R-UV



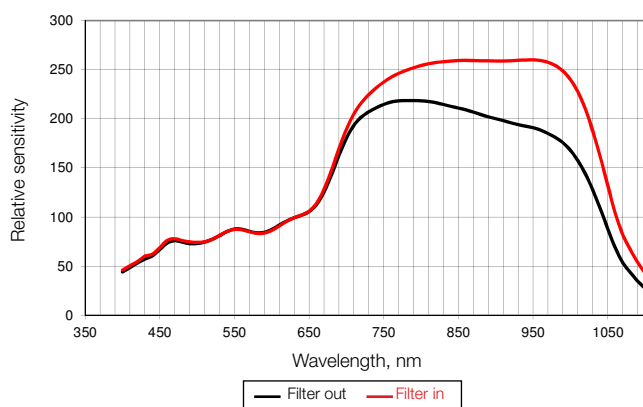
PD300-IR / PD300R-IR



PD300-TP



PD300-3W / PD300R-3W



PD300-IRG

