# 1.1.1.3 Special Photodiode Sensors

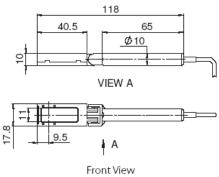
### Features

• BC20 for measuring scanned beams such as bar code light sources



Model	BC20 <sup>(b)</sup>
Use	Scanned beams e.g. bar code
Detector Type	Silicon with peak and hold circuit
Aperture	10x10mm
Spectral Range nm	633, 650, 675 (others available)
Filter Mode	
Power Range	100µW to 20mW
Power Scales	20mW to 2mW
Resolution nW	0.001
Accuracy	±3% for >10% of full scale. Deviation from calibration -3% at 30,000 inch/s scan rate on sensor
Damage Threshold W/cm <sup>2</sup>	50
Max Pulse Energy µJ	NA
Noise Level pW	5μW
Response Time with Meters s	Two modes of operation: Hold: holds highest reading for 5s then updates. No Hold: updates reading 3 times per second.
Beam Position Dependence	±2%
Background Subtraction	Background is automatically subtracted from both scanned and static beams.
Fiber Adapters Available (see page 68)	NA
Version	
Part Number	7Z02422A <sup>(a)</sup>
Notes:	(a) Swivel stand for BC20 sensor P/N 1Z09004
Notes:	(b) The PD300-CIE and BC20 sensors are not fully supported by Ophir PC Interfaces (USBI, Pulsar and Quasar) or by StarLite Meter.
* For graphs see page 26 (Note: graphs are in page 2 of this spec)	





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## 1.1.1.4 Graphs

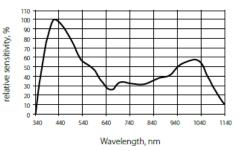
1.4

**Temperature Coefficient of Sensitivity** 

#### PD300-12 300UV/PD300-3W 00 1 Percent change per degC 0.8 0.8 relative reading 0.6 0.7 PD300 Filter Ou 0.4 0.6 PD300 Filter In PD300-BB 0.2 PD300/PD300UV/PD300-3W 0.5 PD300-UV filter out PD300-IRG 0 PD300-UV filter in 0.4 -0.2 D300-0 10 20 30 40 50 -0.4 Angle, degrees 300 400 500 600 700 800 900 1000 1100 1200 1300 1400 1500 1600 1700 1800 Wavelength, nm Dependence of Sensitivity on Numerical Aperture PD300-CIE Spectral Response vs. CIE Curve (PD300 - IRG) 1.2 1.1 1.0 1 4 relative sensitivity 0.9 0.8 SMF elative respond Filter out - CIE 0.8 06 – Ophi 0.7 0.4 0.6 0.2 0.5 0 Ó 0.1 0.2 0.3 0.4 numerical aperture 300. 400 500 600 700 800 Note: Wavelength, nm

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

**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

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## PD300 Angle Dependence

