1.2.1 Photodiode Energy Sensors

30pJ to 600nJ

Features

- Germanium detectors
- Very sensitive - down to 30pJ
- Repetition rates to 10kHz
- Wide spectral range

PD10-IR-C /
PD10-IR-pJ-C

Model	PD10-IR-C [b]		PD10-IR-pJ-C [b]	
Use	**Infrared**		**Infrared, lowest energies**	
Aperture mm	Ø5		Ø5	
Absorber Type	Ge photodiode		Ge photodiode	
Spectral Range µm [a]	0.7 – 1.8		0.7 - 1.8	
Surface Reflectivity % approx.	30		30	
Calibration Uncertainty ±% [a]	5		5	
Energy Scales	600nJ to 6nJ		20nJ to 200pJ	
Lowest Measurable Energy nJ [c]	1 at 1550nm		0.03 at 1550nm	
Max Pulse Width ms	0.005		0.005	
Maximum Pulse Rate pps	10kHz		10kHz	
Noise on Lowest Range nJ	0.2		0.01	
Additional Error with Frequency %	±1.5% to 10kHz		±1.5% to 10kHz	
Linearity with Energy for > 10% of full scale [c]	±1.5%		±1.5%	
Damage Threshold J/cm²	0.1		0.1	
Maximum Average Power mW	6		0.2	
Maximum Average Power Density W/cm²	50		5	
Maximum Energy vs. Wavelength	Wavelength	Max Energy	Wavelength	Max Energy
	800 - 900nm	600nJ	800 - 900nm	14nJ
	1000 - 1300nm	240nJ	1000 - 1300nm	7nJ
	1300 - 1400nm	200nJ	1300 - 1400nm	6.5nJ
	1480 - 1560nm	170nJ	1480 - 1560nm	6nJ
	>1650nm	300nJ	>1650nm	13nJ
Fiber Adapters Available (see page 140)	ST, FC, SMA, SC		ST, FC, SMA, SC	
Weight kg	0.25		0.25	
Compliance	CE, UKCA, China RoHS		CE, UKCA, China RoHS	
Version				
Part number	**7Z02955**		**7Z02946**	
Note: (a) This is basic calibration accuracy. In certain wavelength regions calibration there is additional error as tabulated here.	<900nm add ±2% >1700nm add ±2%		<900nm add ±2% >1700nm add ±2%	

Note: (b) The PD10-IR-C & PD10-IR-pJ-C sensors are not under ISO/IEC 17025:2017 accreditation.

Note: (c) With the "user threshold" setting set to minimum. For other settings, the spec is for >10% of full scale or greater than twice the "user threshold", whichever is greater. The user threshold is not available with LaserStar, Nova, Pulsar, USBI and Quasar. For these meters, the threshold is set to minimum and the linearity spec is >10% of full scale. The PD-C series will only operate with Nova meter with an additional adapter Ophir P/N 7Z08272 (see page 141). The adapter can introduce up to 1% additional measurement error. The user threshold feature allows adjustment of the internal threshold up to 25% of full scale if desired to avoid false triggering in noisy environments.
For further information, see the FAQs on our Website.

PD10-IR-C / PD10-IR-pJ-C