

## 1.2.1 Photodiode Energy Sensors

2μJ to 200nJ

## Features

- Silicon detectors
- Very sensitive - down to  $40\text{nJ}$
- Repetition rates to  $20\text{kHz}$



Model	PD10-C-193 (b)		
Use	Low energies		
Entrance Aperture mm	Ø10mm		
Absorber Type	Si photodiode		
Spectral Range $\mu\text{m}$ (a)	190 – 400nm		
Surface Reflectivity % approx.	50		
Calibration Uncertainty $\pm\%$ (a) (f)	5		
Energy Scales	2 $\mu\text{J}$ to 200nJ		
Max Pulse Width Setting	2 $\mu\text{s}$	5 $\mu\text{s}$	
Lowest Measurable Energy nJ (c)	40 at 193nm	40 at 193nm	
Max Pulse Width ms (d)	0.002	0.005	
Maximum Pulse Rate pps (e)	20kHz	20kHz (e)	
Noise on Lowest Range nJ	4	4	
Additional Error with Frequency % (e)	$\pm 1\%$ to 20kHz	$\pm 1\%$ to 20kHz	
Maximum Energy vs. Wavelength	Wavelength	Max Energy	Max Energy
	190nm-220nm	1.5 $\mu\text{J}$	1.5 $\mu\text{J}$
	221nm-340nm	0.4 $\mu\text{J}$	0.4 $\mu\text{J}$
	341nm-400nm	0.15 $\mu\text{J}$	0.15 $\mu\text{J}$
Linearity with Energy for > 10% of full scale (c)	$\pm 1.5\%$		
Damage Threshold J/cm <sup>2</sup>	0.1		
Maximum Average Power mW	3 at 400nm		
Maximum CW Power Density W/cm <sup>2</sup>	50		
Mechanical Coating	Clear Anodic Coating per: MIL-A-8625 TYPE II, CLASS 1		
Fiber Adapters Available (see page 147)	NA		
Weight kg	0.25		
Compliance	CE, UKCA, China RoHS		
Version			
<b>Part number</b>	<b>7Z07150</b>		

PD10-C-193

