1.1.2.2 High Sensitivity Thermal Sensors

10μW to 3W

Features

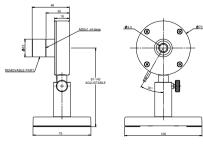
- Very low noise and drift to measure very low powers and energies
- PF absorber has high damage threshold for CW and pulses
- Up to 3W





Model	3A	3А-Р		3A-PF-12
Use	General purpose	Short p	ulses	Short Pulses UV
Absorber Type	Broadband	P type		PF type
Spectral Range µm	0.19 - 20	0.15 - 8		0.15 - 20
Aperture mm	Ø9.5mm	Ø12mm	1	Ø12mm
Maximum Beam Divergence	NA	NA		NA
Power Mode				
Power Range (a)	10μW - 3W	15µW - 1	3W	15μW - 3W
Power Scales	3W to 300µW	3W to 3	00μW	3W to 300µW
Power Noise Level	2µW	4µW		4µW
Thermal Drift (30min) (a)	5 - 20μW	5 - 30µV	V	5 - 30μW
Maximum Average Power Density kW/cm ²	1	0.05		3
Response Time with Meter (0-95%) typ. s	1.8	2.5		2.5
Power Accuracy +/-% (d)	3	3		3 (c)
Linearity with Power +/-%	1.5	1.5		1.5
Energy Mode	1.5	1.5		1.5
Energy Range	20µJ - 2J	20µJ - 2	I	20µJ - 2J
Energy Scales	2J to 200μJ	2J to 20		2J to 200μJ
Minimum Energy	20μJ	20µJ	υμυ	20µJ
Maximum Energy Density J/cm ^{2 (b)}	20μ3	20μ3		Ζύμ
<100ns	0.3	1		1.5
0.5ms	1	1		7
2ms	2	1		15
10ms	4	1		40
			ilaua.	
Cooling	convection 0.2	convect	ION	convection 0.2
Weight kg			144 CC	
Fiber Adapters Available (see page 69)	ST, FC, SMA, SC	ST, FC, S	MA, SC	ST, FC, SMA, SC
Version		V1	_	
Part number: Standard Sensor	7Z02621	7Z0262		7Z02720
BeamTrack Sensor: Beam Position & Size (p. 65)	7Z07934 7Z07935			
Note: (a)	Depending on room airflow and temperature variations. Lowest measurable powers are achieved by thermally quiet room conditions, using removable snout, averaging and offset subtraction.			
Note: (b) For P and PF types and shorter wavelengths	conditions, using femov	P type	PF type	
derate maximum energy density as follows:	Wavelength	Derate to value	Derate to value	
	1064nm	Not derated	Not derated	
	532nm	Not derated	Not derated	
	355nm	40% of stated value	70% of stated value	
	266nm	5% of stated value	15% of stated value	
Note: (c)	193nm	10% of stated value	5% of stated value	Calibrated from 193nm to 2.2µm and at 10.6µm.
Note: (c)				There is an additional error of +/-1% from 450nm to 650nm.
Note: (d)	The 3A has a relatively la	ge spectral variation in abso	rption and has a calibrated	spectral curve at all wavelengths in its spectral range
	to the above specified accuracy. Nova, Orion and LaserStar meters do not support this feature and when used with those meters, the accuracy will be ±3% as above for 532nm, 905nm, 1064nm and 10.6µm but there will be an additional error of up to 3% at other			

ЗА



3A-P / 3A-PF-12

wavelengths in the spectral range 190 – 3000nm.

