

## PbS Detector Performance Summary

Model Number	Element Size (mm)	WL Peak Signal ( $\mu\text{m}$ )	D* $\lambda\text{pk}$ , 630Hz, 1Hz ( $\text{cm Hz}^{1/2} \text{W}^{-1}$ )	Responsivity ( $\text{Ipk}$ , 630Hz) VW-1		Dark Resistance ( $\text{M}\Omega$ )	Time Constant ( $\mu\text{sec}$ )	Operating Temp ( $^{\circ}\text{C}$ )	$\Delta\text{T}$ at		Package Options
				Minimum	Typical				Max Cool ( $^{\circ}\text{C}$ )	( $^{\circ}\text{C}$ )	
<b>Flatplate Detectors:</b>											
A1	1x 1	2.4 typ	8.0 $\times$ 10 <sup>10</sup> min 1.0 $\times$ 10 <sup>11</sup> typ	530,000	800,000	0.2 – 3.5	100 – 400	25	N/A	Flatplate	
A2	2x 2			270,000	400,000					Flatplate	
A3	3x 3			170,000	260,000					Flatplate	
A6	6x 6			90,000	140,000					Flatplate	
A10	10x 10			50,000	75,000					Flatplate	
<b>Ambient Packaged Detectors:</b>											
A1-5	1x 1	2.4 typ	8.0 $\times$ 10 <sup>10</sup> min 1.0 $\times$ 10 <sup>11</sup> typ	530,000	800,000	0.2 – 3.5	100 – 400	25	N/A	TO-5	
A2-5	2x 2			270,000	400,000					TO-5	
A3-5	3x 3			170,000	260,000					TO-5	
A6-8	6x 6			90,000	140,000					TO-8	
A10-3	10x 10			50,000	75,000					TO-3	
<b>2 Watt TE Cooled Detectors:</b> Typical cooling power at or near max cooling: 0.9 volts @ 1.2 amps											
A1-7C3T	1x 1	2.5 typ	1.0 $\times$ 10 <sup>11</sup> min 1.5 $\times$ 10 <sup>11</sup> typ	1,300,000	2,000,000	2.0 – 15.0	1250 – 2500	-35	55 min 60 typ	TO-37	
A2-7C3T	2x 2			660,000	1,000,000					TO-37	
A3-7C3T	3x 3			430,000	640,000					TO-37	
<b>3 Watt TE Cooled Detectors:</b> Typical cooling power at or near max cooling: 1.8 volts @ 1.2 amps											
A1-8C4T	1x 1	2.7 typ	2.0 $\times$ 10 <sup>11</sup> min 3.0 $\times$ 10 <sup>11</sup> typ	1,400,000	2,100,000	2.0 – 20.0	1750 – 3500	-50	70 min 75 typ	TO-8, TO-66	
A2-8C4T	2x 2			700,000	1,100,000			TO-8, TO-66			
A3-8C4T	3x 3			430,000	650,000			TO-8, TO-66			
A6-8C2T	6x 6		1.0 $\times$ 10 <sup>11</sup> min	240,000	360,000			-25	50min 55 typ	TO-8, TO-66	
Specifications apply using 500°K blackbody, a bias of 50 V/mm across the detector and a one Megohm load resistor in series.											
TE cooled specs apply at or near max cooling from a +25°C heatsink. Units are hermetically sealed with a sapphire or Silicon window.											
Max rated element temperature is +65°C.											
<b>PbSe Detector Performance Summary</b>											
Model Number	Element Size (mm)	WL Peak Signal ( $\mu\text{m}$ )	D* $\lambda\text{pk}$ , 1050Hz, 1Hz ( $\text{cm Hz}^{1/2} \text{W}^{-1}$ )	Responsivity ( $\text{Ipk}$ , 1050Hz) VW-1		Dark Resistance ( $\text{M}\Omega$ )	Time Constant ( $\mu\text{sec}$ )	Operating Temp ( $^{\circ}\text{C}$ )	$\Delta\text{T}$ at		Package Options
				Minimum	Typical				Max Cool ( $^{\circ}\text{C}$ )	( $^{\circ}\text{C}$ )	
<b>Flatplate Detectors:</b>											
B1	1x 1	3.8 typ	1.2 $\times$ 10 <sup>10</sup> min 1.8 $\times$ 10 <sup>10</sup> typ	20,000	40,000	0.1 – 3.5 0.8 typ	2 typ 5 max	25	N/A	Flatplate	
B2	2x 2			10,000	20,000					Flatplate	
B3	3x 3			6,500	13,000					Flatplate	
B6	6x 6			3,250	6,500					Flatplate	
B10	10x 10			1,950	3,900					Flatplate	
<b>Ambient Packaged Detectors:</b>											
B1-5	1x 1	3.8 typ	1.4 $\times$ 10 <sup>10</sup> min 2.0 $\times$ 10 <sup>10</sup> typ	22,000	44,000	0.1 – 3.5 0.8 typ	2 typ 5 max	25	N/A	TO-5	
B2-5	2x 2			11,250	22,500					TO-5	
B3-5	3x 3			7,400	14,800					TO-5	
B6-8	6x 6			3,700	7,400					TO-8	
B10-3	10x 10			2,200	4,400					TO-3	
<b>2 Watt TE Cooled Detectors:</b> Typical cooling power at or near max cooling: 0.9 volts @ 1.2 amps											
B1-7C3T	1x 1	4.3 typ	1.6 $\times$ 10 <sup>10</sup> min 3.0 $\times$ 10 <sup>10</sup> typ	66,000	100,000	1.0 – 15.0 5.0 typ	9 typ 20 max	-35	55 min 60 typ	TO-37	
B2-7C3T	2x 2			33,000	50,000					TO-37	
B3-7C3T	3x 3			22,000	33,000					TO-37	
<b>3 Watt TE Cooled Detectors:</b> Typical cooling power at or near max cooling: 1.8 volts @ 1.2 amps											
B1-8C4T	1x 1	4.5 typ	2.0 $\times$ 10 <sup>10</sup> min 3.5 $\times$ 10 <sup>10</sup> typ	126,000	190,000	1.0 – 20.0 6 typ	12 typ 25 max	-50	70 min 75 typ	TO-8, TO-66	
B2-8C4T	2x 2			63,000	95,000			TO-8, TO-66			
B3-8C4T	3x 3			38,000	56,000			TO-8, TO-66			
B6-8C2T	6x 6		1.6 $\times$ 10 <sup>10</sup> min	18,000	27,000			-25	50 min 55 typ	TO-8, TO-66	
Ambient specifications apply using 500°K blackbody and bias of 50 V/mm across the detector and 1 Megohm load resistor in series.											
TE Cooled specifications apply using 500°K blackbody and bias of 35 V/mm across the detector and 1 Megohm load resistor in series at or near max cooling from a +25°C heatsink. Units are hermetically sealed with sapphire or Si window.											
Max rated element temperature is +85°C.											



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