

PbSe Detector Performance Summary

Model Number	Element Size(mm)	Wave length Peak Signal(μm)	D*(λ, pk, 1050Hz, 1Hz) (cm Hz ^{1/2} /w ¹)	Responsivity (pk, 1050Hz)/W		Dark Resistance (MQ)	Time Constant(μsec)	Operating Temp(°C)	ΔT at Max Cool(°C)	Standard Package Options	
				Min.	Typical						
Flatplate Detectors:											
B1	1x1	3.8 typ	1.2×1010min 1.8 ×1010typ	20,000	40,000	0.1-3.5	2 typ	+25	N/A	Flatplate	
B2	2x2			10,000	20,000					Flatplate	
B3	3x3			6,500	13,000					Flatplate	
B6	6x6			9.0×109min	3,250	6,500	0.8 typ	5max			Flatplate
B10	10x 10			7.5×109min	1,950	3,900					Flatplate
Ambient Packaged Detectors:											
B1-5	1x1	3.8 typ	1.4×1010min 2.0 ×1010typ	22,000	44,000	0.1-3.5	2 typ	+25	N/A	TO-5	
B2-5	2x2			11,250	22,500					TO-5	
B3-5	3x3			7,400	14,800					TO-5	
B6-8	6x6			1.2×1010min	3,700	7,400	0.8 typ	5max			TO-8
B10-3	10x10			1.0×1010min	2,200	4,400					TO-3
Ambient Lens Detectors:											
B1-5(M)-L	1x1	3.8 typ	4.5 × 10 ¹⁰	100,000	150,000	0.1-3.5	2 typ	+23	N/A	1/2 ball Lens/TO-5	
B1-5(M)-LF	1x1		1x10 ¹¹	320,000	480,000	0.8 typ	5max			Full Ball Lens/TO-5	
2 Watt TE Cooled Detectors: Typical cooling power at or near max cooling: 0.9 volts @ 1.2 amps											
B1-7C3T	1x1	4.3 typ	1.6×1010min 3.0x1010typ	66,000	100,000	1.0-15.0	9 typ	-35	55 min	TO-37	
B2-7C3T	2x2			33,000	50,000					TO-37	
B3-7C3T	3x3			22,000	33,000	5.0 typ	20 max	60 typ	TO-37		
3Watt TE Cooled Detectors: Typical cooling power at or near max cooling: 0.9 volts @ 1.2 amps											
B1-8C4T	1x1	4.5 typ	2.0×1010min 3.5 ×1010typ	126,000	190,000	1.0-20.0	12 typ	-50	70 min	TO-8, TO-66	
B2-8C4T	2x2			63,000	95,000					TO-8, TO-66	
B3-8C4T	3x3			38,000	56,000					TO-8, TO-66	
B6-8C2T	6x6			1.6 ×1010 min	18,000	27,000	6 typ	25max	-25	50 min 55 typ	TO-8, TO-66

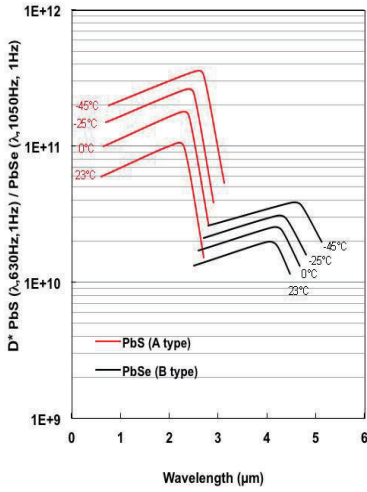
Ambient specifications apply using 500°K blackbody and bias of 50 V/mm across the detector and 1 Megohm load resistor in series.

TEC cooled specifications apply using 500°K blackbody and bias of 35 V/mm across the detector and 1 Megohm load resistor in series at room temperature or Si windows.

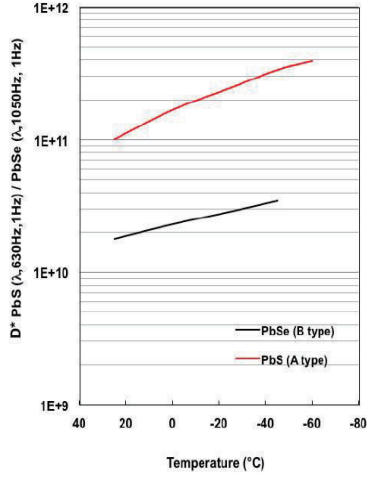
Max rated element temperature is +85°C.

Response Charts

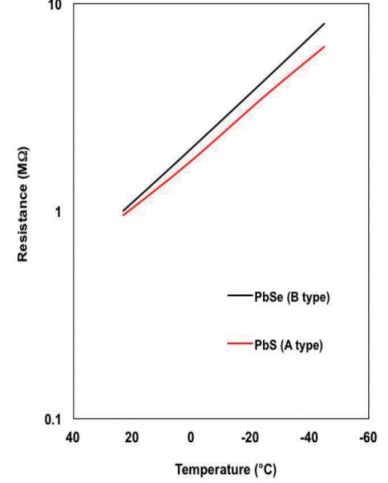
Typical Spectral Response



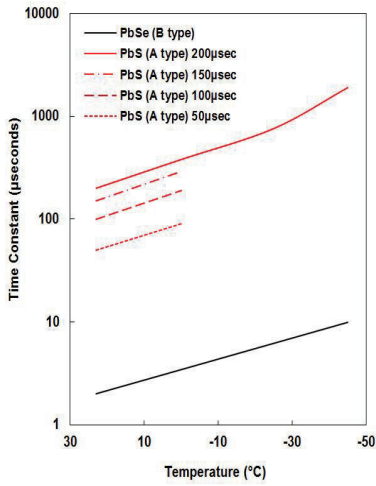
D^* vs. Temperature



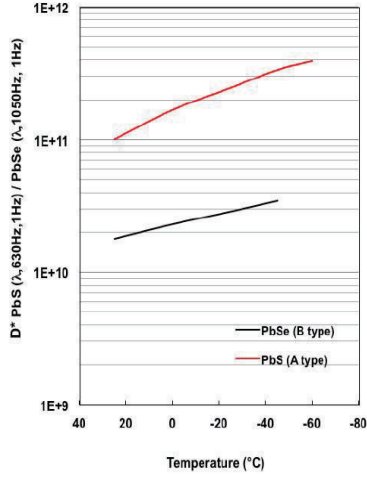
Resistance vs. Temperature



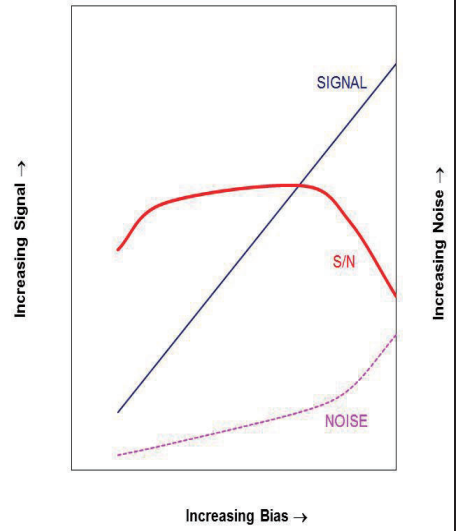
Time Constant vs. Temperature



D^* vs. Temperature



S/N ratio vs. Bias Voltage



Typical TE Cooler Power Curve

