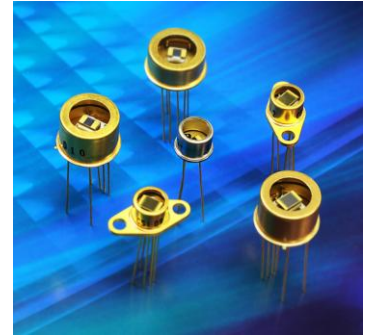


SCD-13 High sensitivity PbS single channel detectors

Key Features:

- Highest sensitivity detectors covering 1-3 micron region
 - Provides high signal to noise performance for wide measurement dynamic range
- High durability ensures long operation in the field
 - Minimizes maintenance and repair costs
- Repeatable performance, promotes high manufacturing yields
 - Consistent results from batch to batch



Cal Sensors' SCD-13 (single-channel detector) product line integrates PbS technology with proven manufacturing processes to provide the highest sensitivity detectors across the one to three micron spectrum. In addition, SCD-13 products minimize maintenance costs and assure dependable operation with industry-leading reliability,

Many of today's demanding applications require levels of performance that stretch the limits of existing technologies. Cal Sensors meets these challenges by providing high sensitivity to detect trace elements, superior quality – consistent performance between lots and within a batch – and high durability.

Available in a variety of standard configurations, customers can choose from an assortment of options including, element size, cooling alternatives and package size to suit numerous system and application requirements. Cooled units provide additional sensitivity for very low level signal detection and enhanced stability for environments where temperatures are in constant flux.

Cal Sensors has been manufacturing and selling high performance PbS and PbSe infrared detectors for over 25 years. Having established a reputation for highly controlled manufacturing processes, customers can rely on consistent, repeatable performance and superior customer service. Cal Sensors works with customers from prototype to production to help deliver valuable instruments. Custom requirements can be addressed by contacting the Cal Sensors' sales team.

Applications:

- Gas analysis
 - Medical
 - Industrial
- Emissions monitoring
- Spectroscopy
- Process control systems
- Thermal imaging
- Flame Monitoring and Detection

SCD-13 Specifications

Model #	Part #	Element Size (mm)	Op. Temp. (°C) ³	Wave-length (pk signal, μm)	D* (cm Hz ^{1/2} /W)		Responsivity (A _{pk} , 650Hz, V/W)		Dark Resistance (@23°C, MΩ/sq)	Time Constant (μs)	ΔT at max cool (°C)	Std Pkg (TO)
					(λ _{pk} , 650Hz, 1Hz)	(500K, 650Hz, 1Hz)	Min	Typ				
AP Series - Ambient PbS detectors^{1,3}												
AP-15	40361	1x1	+23	2.4 typ	8x10 ¹⁰ min 1x10 ¹¹ typ	7.5x10 ⁸ min 9.4x10 ⁸ typ	5.3 x10 ⁵	8.0 x10 ⁵	0.5 - 2.0 1.0 typ	200 typ 400 max	N/A	5
AP-18	40364	1x1					8					
AP-25	40128	2x2					5					
AP-28	40365	2x2					8					
AP-35	40363	3x3					5					
AP-38	40366	3x3					8					
AP-68	40368	6x6					8					
AP-103	40338	10x10	3									
AT1 Series - One-stage (1.2W) TE cooled PbS detectors^{1,2,3}												
AT1-17T	40372	1x1	-25	2.5 typ	1.0x10 ¹¹ min 1.5x10 ¹¹ typ	1.0x10 ⁹ min 1.5x10 ⁹ typ	1.3 x10 ⁶	6.0x10 ⁵	1.5 - 10.0 3.0 typ	800 typ 1600 max	45 min 50 typ	37
AT1-18T	40374	1x1					8					
AT1-27T	40373	2x2					37					
AT1-28T	40375	2x2					8					
AT1-37T	40147	3x3					37					
AT1-38T	40342	3x3					8					
AT1-66T	40678	6x6					66					
AT1-68T	40679	6x6	8									
AT1-103	40680	10x10	3									
AT2S Series - Two-stage (2.5W) TE cooled PbS detectors^{1,2,3}												
AT2S-16T	40415	1x1	-50	2.7 typ	2.0x10 ¹¹ min 3.0x10 ¹¹ typ	2.2x10 ⁹ min 3.3x10 ⁹ typ	1.4 x10 ⁶	2.1 x10 ⁶	3.0 -20.0 6.0 typ	1750 typ 3500 max	70 min 75 typ	66
AT2S-18T	40411	1x1	8									
AT2S-26T	40416	2x2	66									
AT2S-28T	40412	2x2	8									
AT2S-36T	40417	3x3	66									
AT2S-38T	40029	3x3	8									
AT2S-66T	40420	6x6	66									
AT2S-68T	40156	6x6	8									

¹ Specifications apply at a bias voltage of 50 V/mm across a detector and 1Mohm load resistor (in series) or 25V/mm directly across the detector

² Specifications apply at max cooling with a heat sink at +25°C. Typical cooler power at max cooling: AT1 - 0.8V @ 2.0A, AT2S - 1.9V @ 1.4A

³ Max rated element temperature is 65°C

