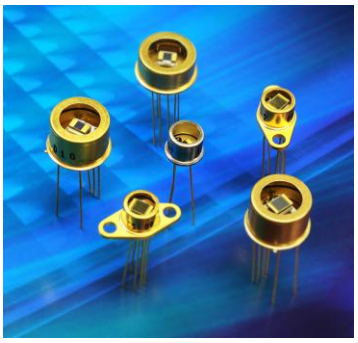
CalSensors
An ITW Company

SCD-15
High performance PbSe single-channel detectors

Key Features:

- Highest sensitivity detectors operating across 1-5 micron region
  - Provides high signal to noise performance for wide measurement dynamic range
- Fastest response speed for mid-IR applications
- High reliability for long life
- Best overall performance for the 1-5 micron spectrum
- Consistent repeatable results minimize testing



Cal Sensors' SCD-15 (single-channel detector) product line offers the best balance of performance and attributes for analyzing materials in the one to five micron spectrum. The combination of high sensitivity, fast response time, and industry leading reliability assure consistent performance where and when it is needed.

High sensitivity maximizes measurement dynamic range for applications with trace elements. Real-time measurements are easily supported with the SCD-15's fast response time. High durability and long life minimize repair and maintenance costs. With the goal of optimizing your system's performance, Cal Sensors is committed to providing high quality, reliable products.

Available in a number of configurations, customers can choose an assortment of options such as element size, cooling alternatives, and package type to suit a variety of 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. Supporting all stages of development, from early prototyping to high volume production, Cal Sensors is dedicated to helping customers develop market-leading instruments. Custom requirements can be addressed by contacting the Cal Sensors' sales team.

Applications:

- Gas analysis – CO, CO_2
  - Medical
  - Industrial
- Emissions monitoring
- Spectroscopy
- Process control systems
- Thermal imaging
- Defense and Security

CalSensors
An ITW Company
Santa Rosa, CA
(707) 303-3837
www.calsensors.com
Info@calsensors.com

SUNSTAR传感与控制 http://www.sensor-ic.com/ TEL:0755-83376549 FAX:0755-83376182 E-MAIL:szss20@163.com

SCD-15 Specifications

Model #	Part #	Element Size (mm)	Op. Temp. (°C)[3]	Wave-length (pk signal, µm)	D* (cm Hz$^{1/2}$/W)		Responsivity (λpk, 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				
BXP Series - Ambient PbSe detectors[1,3]												
BXP-15	40150	1x1	+23	3.8 typ	7.0 x 10^9 min 1.5x10^{10} typ	1.0x10^8 min 1.5x10^9 typ	1.5 x10^4	3.0 x10^4	0.1 - 2.5 0.8 typ	2 typ 5 max	N/A	5
BXP-18	40389											8
BXP-25	40135	2x2					7.5x10^3	1.5 x10^4				5
BXP-28	40390											8
BXP-35	40354	3x3					5.0x10^3	1.0x10^4				5
BXP-38	40057											8
BXP-68	40393	6x6			6.0 x10^9 min		2.5 x10^3	5.0 x10^3				8
BXP-103	40151	10x10			5.0 x10^9 min		1.5 x10^3	3.0 x10^3				3
BXT1 Series - One-stage (1.2W) TE cooled PbSe detectors[1, 2, 3]												
BXT1-17T	40394	1x1	-25	4.2 typ	1.4x10^{10} min 2.8x10^{10} typ	1.9x10^9 min 3.9x10^9 typ	4.0 x10^4	6.0 x10^4	0.5 - 10.0 4.0 typ	6 typ 12 max	45 min 50 typ	37
BXT1-18T	40396											8
BXT1-27T	40395	2x2					2.0 x10^4	3.0 x10^4				37
BXT1-28T	40059											8
BXT1-37T	40136	3x3					1.33 x10^4	2.0 x10^4				37
BXT1-38T	40061											8
BXT1-66T	40676	6x6			1.0x10^{10} min		6.7 x10^3	1.0 x10^4				66
BXT1-68T	40677											8
BXT1-103T	40400	10x10			8.0x10^9 min		4.0 x10^3	6.0 x10^3				3
BXT2S Series - Two-stage (2.5W) TE cooled PbSe detectors[1, 2, 3]												
BXT2S-16T	40426	1x1	-50	4.5 typ	2.0x10^{10} min 3.5x10^{10} typ	2.9x10^9 min 2.5x10^9 typ	1.0 x10^5	1.5 x10^5	1.0 - 20.0 6.0 typ	12 typ 25 max	70 min 75 typ	66
BXT2S-18T	40208											8
BXT2S-26T	40427	2x2	-50				5.0 x10^4	7.5 x10^4				66
BXT2S-28T	40186											8
BXT2S-36T	40428	3x3	-45				3.3 x10^4	3.75 x10^4				66
BXT2S-38T	40203											8
BXT2S-66T	40431	6x6	-25		1.5x10^{10} min		1.65 x10^4	2.5 x10^4				66
BXT2S-68T	40425											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: BXT1 - 0.8 V @ 2.0 A, BXT2S - 1.9 V @ 1.4A

[3] Max rated element temperature is 85°C.