

Infrared detectors

PbS photoconductive detector

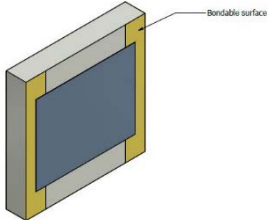
Applications

- Gas analysis
- Spectroscopy
- Process control
- Temperature control

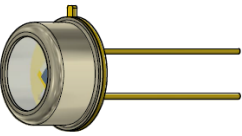
Specification

Operating temperature [°C]	Storage temperature [°C]	Peak sensitivity wavelength λ_P [μm]	20 % cut-off wavelength λ_C [μm]	Time constant [μs]	Dark resistance R_d [$\text{M}\Omega$]	Min D^* (606 Hz, 1 Hz) [$\text{cm}\cdot\text{Hz}^{1/2}/\text{W}$]	Peak D^* (606 Hz, 1 Hz) [$\text{cm}\cdot\text{Hz}^{1/2}/\text{W}$]
-30 to +70	-55 to +70	2.2	2.9	200	0.3 to 3.0	$5 \cdot 10^{10}$	$1 \cdot 10^{11}$
<ul style="list-style-type: none"> • Measured with 1550 nm LED, incident power $22 \mu\text{W}/\text{cm}^2$ • Measured in a voltage divider circuit with 10 V/mm and linearly extrapolated to 50 V/mm • Photo responsivity and detectivity are measured with matched load resistance ($R_L = R_D$) 							

Thin film encapsulation (bare chip)

Type No.	Active area [mm x mm]	Peak responsivity S [V/W]	Download datasheet	Mechanical outline
PbS005005BC	0.5x0.5	$16 \cdot 10^5$	pdf	
PbS010010BC	1x1	$8 \cdot 10^5$	pdf	
PbS020020BC	2x2	$4 \cdot 10^5$	pdf	
PbS030030BC	3x3	$3 \cdot 10^5$	pdf	
PbS060060BC	6x6	$1.4 \cdot 10^5$	pdf	
PbS100100BC	10x10	$6.0 \cdot 10^4$	pdf	

Double encapsulation (thin film and TO)

Type No.	Active area [mm x mm]	Peak responsivity S [V/W]	Download datasheet	Mechanical outline
PbS005005TO5	0.5x0.5	$16 \cdot 10^5$	pdf	
PbS010010TO5	1x1	$8 \cdot 10^5$	pdf	
PbS010050TO5	1x5	$3.5 \cdot 10^5$	pdf	
PbS020020TO5	2x2	$4 \cdot 10^5$	pdf	
PbS030030TO5	3x3	$3 \cdot 10^5$	pdf	