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PbSe near-infrared detector
Single-Pixel thin-film encapsulated

HERTZSTÜCK™

Features

- **Bare Chip**
- High durability for rugged operation

Applications

- Gas analysis
- Spectroscopy
- Process control
- Temperature control

Specification

Type No.	Package	Active area [mm x mm]	Operating temperature [°C]	Storage temperature [°C]
PbSe020020BC	Bare Chip	2 x 2	-30 to +90	-55 to +90

Electrical and optical characteristics

Type No.	Element temperature [°C]	Peak wave-length λ_P [µm]	20% cut-off wavelength λ_C [µm]	Peak responsivity S [V/W]	Peak D* (606 Hz, 1 Hz) [cm·Hz^{½}/W]	Time Constant [µs]	Dark resistance R_D [MΩ]
				Min.	Min.	Typ.*	
PbSe020020BC	22	3.8	4.5	$1 \cdot 10^4$	$2 \cdot 10^9$	4	0.1 - 3

- Measured with 500K blackbody
- Measured in a voltage divider circuit with 50 V/mm
- Photo responsivity and detectivity are measured with constant load resistance (R_L = 1 MΩ) and calculated for matched resistance

* Not 100% tested

Storage

- Storage temperature: -55°C to 90°C

Handling

- Active area is scratch sensitive, protect top surface from any mechanical contact
- Ensure dust-free environment for device handling
- Operating temperature: -55°C to 90°C

Die attach

- Use clean, soft rubber tip for pick and place handling
- Element temperature should never exceed 90°C

Wire-bonding

- Electrodes are optimized for room temperature Al-wire-bonding
- Element temperature should never exceed 90°C

Infrared detector
PbSe photoconductive detector
Double encapsulated TO-package
Mechanical outline