



## 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	Peak	20%	Peak responsivity S	Peak D*	Time	Dark
	temperature	wave-	cut-off	[V/W]	(606 Hz, 1 Hz)	Constant	resistance
	[°C]	length λ <sub>P</sub>	wavelength		[cm·Hz <sup>½</sup> /W]	[µs]	$R_D [M\Omega]$
		[µm]	λ <sub>c</sub> [μm]	Min.	Min.	Тур.*	
PbSe020020BC	22	3.8	4.5	$1\cdot 10^4$	2 · 10 <sup>9</sup>	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<sub>L</sub> = 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

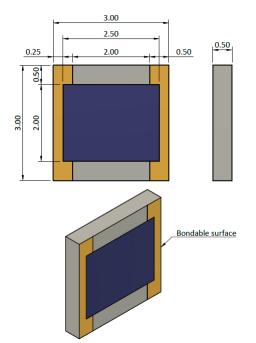
- Use clean, soft rubber tip for pick and place handling
- Element temperature should never exceed 90°C

#### 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





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