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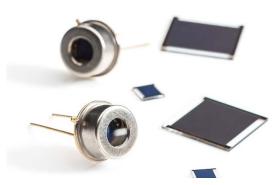
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Higher stability through double encapsulation

- TO-package and thin film encapsulation for double protection
- Increased safety and longer lifetime for moisture detection, gas sensing, spectroscopy, spark detection, flame control or chemical analysis

The infrared detectors Hertzstück™ are double encapsulated for higher safety and longer lifetime. The sensors are not only protected by a TO-package, but also by a novel thin-film encapsulation directly on the chip. This patent-pending technique ensures not only longer lifetime, but also highest detectivity (at room temperature) and thus increased safety.

Applications like moisture detection, gas sensing, spectroscopy, spark detection, flame control or chemical analysis depend on reliable detection of infrared light. Current production processes for optical devices in the semiconductor industry are optimized for TO-packages. Hertzstück™ doubleencapsulated sensors are fully compatible to such automated production and can readily replace existing single-encapsulated sensors. Hertzstück™ sensors are available for wavelength range up to 3μm (PbS) and up to 5μm (PbSe).



Infrared detectors Hertzstück™ as bare chip and double-encapsulated

The infrared detectors Hertzstück™ are developed and completely manufactured at a production site in Ludwigshafen, Germany. Detailed specifications can be found at www.hertzstueck.de.

Bare chip for small spaces

TO-packages provide extra protection but also take up space. Their placement and precise adjustment can be complex for specific applications. The thin film encapsulation applied on Hertzstück™ sensors enables customers to use them even as bare chips. Environmental influences like water and oxygen and thus degradation are eliminated. Package size and total footprint are reduced. The highly regular size and shape of bare chip Hertzstück™ sensors make



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them well suited to automated assembly via pick-and-place robot. This combination of benefits means that with Hertzstück™ bare chips, many applications can be smaller, cost less to assemble, and have better alignment tolerances.

About Hertzstück™

Hertzstück™ is a brand of trinamiX GmbH, a spin-off and wholly owned subsidiary of BASF SE. trinamiX GmbH was founded in 2015 and is based in Ludwigshafen, Germany. The team around Hertzstück™ consists of experts from various competence areas such as chemistry, physics, material science and engineering. We offer standard and custom-engineered products in the field of infrared (IR) detection. Our focus is on providing the right sensor for your measurement need. www.hertzstueck.de

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