

#Electronica

## The entire world of electronics and a superstar: high-performance ceramics

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CeramTec Industrial

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**From November 12 to 15, the Who's Who of the electronics industry will be meeting in Munich at electronica. CeramTec will also be there. The Plochingen-based specialist for technical ceramics will be showcasing its range of solutions under the motto "Let's Talk Ceramics!" at stand 429 in hall B5.**

- **High-performance ceramics are indispensable for the semiconductor industry**
- **Advanced ceramic solutions meet the highest thermal requirements in high-power electronic applications**
- **Piezoceramics fulfill conversion tasks – now also based on lead-free materials**

High-performance ceramics meet the highest requirements in terms of purity, chemical, thermal and wear resistance. At the same time, they function permanently, reliably and precisely. This makes them indispensable in the semiconductor industry – and makes CeramTec a preferred development partner for the semiconductor business. The specialist for technical ceramics will be presenting high-precision components for semiconductor front end manufacturing and metrology equipment such as wafer chucks and structural chamber products. CeramTec will also be demonstrating how enhanced processes for hard machining, grinding, and lapping enable improved technical parameters of final flatness, parallelism and roughness.

Technical ceramics also play an important role in high-performance electronics – especially in applications with high thermal requirements. Whether in the field of e-mobility, heaters/coolers or power electronics, the high thermal conductivity, excellent electrical insulation and high chemical and mechanical stability ensure that ceramic materials can withstand the thermal challenges. As a European one-stop shop for high-quality ceramic substrates and ceramic coolers, CeramTec offers its customers particular reliability and flexibility: thanks to high production capacities at different European sites, they can rely not only on consistently high quality, but also on a fast and secure supply chain.

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### **3D printing – ceramics in new dimensions**

CeramTec will also be showcasing its expertise in the field of 3D printing with silicon carbide (SiSiC) at the trade fair. 3D printing technology offers the opportunity for enormous increases in efficiency and quality in numerous industries and applications, for example for molded and functional parts in lightweight construction. SiSiC is a highly stable material for this purpose, which also offers impressive design freedom. CeramTec is a development and production partner for numerous industries – even for small quantities.

### **Piezoceramics for conversion tasks**

Piezoceramics are at the heart of a wide range of applications such as precise, stable and durable flow measurement using ultrasonic technology. Piezo ceramics have the task of converting mechanical excitation such as pressure or acceleration into electrical variables – or vice versa. They then translate electrical signals into mechanical movement or vibrations. Until now, piezoceramics were usually based on lead. CeramTec now offers a lead-free alternative for many piezoceramic applications in the form of BNT-BT (bismuth sodium titanate barium titanate).

In Munich, CeramTec will be showcasing its broad portfolio of services in the customized development and production of piezoceramics for ultrasonic solutions. From individual piezoceramic components to fully assembled sensors and transducers for industrial applications, CeramTec will also be presenting its application-oriented manufacturing expertise.

### **A material of possibilities**

In addition to its range of solutions in the field of high-performance electronics and semiconductor technology, as well as its expertise in the field of piezo ceramics, CeramTec will be demonstrating at electronica what can be developed and manufactured from a variety of more than 40 structural ceramic materials. These include, for example, silicate ceramic solutions, ceramic membranes and vacuum-tight ceramic-to-metal connections for electrical feedthroughs.

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### Image material

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#### **CeramTec\_electronic-applications.jpg**

Ceramic solutions for electronic applications – from passive components and coolers to a full range of ceramic substrates

**Source: CeramTec**



#### **CeramTec\_3D-printing.jpg**

Complete design freedom with silicon carbide – ROCAR 3D printed semicon component

**Source: CeramTec**



#### **CeramTec\_wafer.jpg**

CeramTec develops ceramic components and parts for the semiconductor industry according to their individual application requirements – here ceramic wafer polishing plates.

**Source: CeramTec**



#### **CeramTec\_Piezo.jpg**

Lead-free piezoceramic components in different shapes, sizes and designs. Available for certain smart metering or high-power applications.

**Quelle: CeramTec**

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**The following information can help you to publish this press release in your online and social media channels.**

### **Meta Description**

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### **Social Media / Newsletter Teaser:**

#### **Facebook**

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#### **X**

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### About CeramTec

CeramTec has been a supplier and manufacturer of technical ceramics since 1903, specializing in advanced performance ceramics (HPC) solutions and developing, manufacturing and distributing parts, components and products made of ceramic materials. With more than a century of development and production experience in the HPC industry, CeramTec is a world leader in the manufacture of advanced ceramics and develops these materials for use in a wide range of applications. CeramTec's advanced ceramics are used in a number of areas, including medical applications such as hip prostheses, other orthopaedic implants, dental implants and medical devices, as well as in the mobility and electronics industries and other industrial applications. With production sites and subsidiaries in Europe, North and South America and Asia, CeramTec is present as a manufacturer and supplier all over the world. CeramTec's headquarters are located in Plochingen near Stuttgart. In 2023, CeramTec generated revenues of approx. 817 million euros. CeramTec employs more than 3,800 people worldwide, including around 2,000 in Germany.

**More info:** [www.ceramtec-group.com](http://www.ceramtec-group.com)

