

## Press information

### **Kyocera receives BSFZ seal for the development of a new high-end ceramic**

**KYOCERA Fineceramics Europe GmbH has been recognised for its innovative expertise and internal research and development work in the semiconductor industry.**

**Kyoto/Esslingen, 11<sup>th</sup> December 2024.** Already in 2023, KYOCERA Fineceramics Europe GmbH has received the BSFZ seal by the German Certification Body for Research Grants (Bescheinigungsstelle Forschungszulage, BSFZ) for its ceramic support structures for vacuum insulation glazing. This year, Kyocera has been awarded the seal again – this time for the development of a new type of silicon nitride that is used to test the functioning of microchips.

#### **High level of research and development work**

The seal is awarded to companies that can demonstrate outstanding entrepreneurial innovation expertise as well as in-house research and development work, among other things. By receiving the award, Kyocera is demonstrating its activities as a driver of innovation at its research site in Germany.

#### **Technical ceramics for the semiconductor industry**

The production of AI chips and components for fifth-generation electronic devices, such as 5G smartphones, is subject to the highest quality standards. Testing the proper functioning of these high-end microchips is a correspondingly complex process. Kyocera has therefore continued to refine its innovative high-end ceramics and launched a new silicon nitride for functional testing of next-generation microchips.

Before the chips are further separated, they are tested on a silicon wafer. What are known as 'probe cards' guide up to 100,000 fine contact needles and more to the contacts of the microchips, making it possible to test their functionality. A silicon nitride plate is used to guide and insulate the contact pins from each other. This fixes the needles at regular intervals of a few tens of micrometres.

#### **Trademark: high temperature resistance and flexural strength**

Silicon nitride has proven to be the key material here: it is able to keep these small distances absolutely constant even over the extreme temperature range of minus 40 to plus 200 °C (degrees Celsius) at which the tests are carried out. The new silicon nitride also has a high

flexural strength of > 800 MPa (megapascals). This allows the production of thin silicon nitride plates with very narrow distances between the contact needles. This [video](#) provides an insight into Kyocera's technical ceramics, their uses and their properties.

Dr Krishna Uibel, Director Innovations at Kyocera, emphasises: 'We are very proud to have been awarded the BSFZ seal once again, as the seal underlines the innovative drive and philosophy of our company. Thanks to continuous further development, we are able to work with our customers to develop customised materials and solutions for their individual needs. We use state-of-the-art production processes to achieve this.' He adds: 'In the future, semiconductors will continue to be important for the industry. This is why we are constantly refining our technical ceramics in order to be able to offer our customers the best product solutions.'

### **About the BSFZ**

The [Certification Body for Research Grants](#) (Bescheinigungsstelle-Forschungszulage, BSFZ), which operates under the Federal Ministry of Education and Research, awards the seal to companies that achieve special technological results through their research and development activities, as a result of which they are eligible for funding. It primarily focuses on investing in the R&D sector and endeavours to strengthen Germany's role as a leading business hub.



**BSFZ seal 2024**



For more information on Kyocera: [uk.kyocera.com](https://uk.kyocera.com)

## About Kyocera

Kyocera has been successful in Europe for over 50 years. From its European headquarters in Esslingen am Neckar, KYOCERA Europe GmbH operates 27 sites including manufacturing facilities, with products ranging from fine ceramics, electronics, automotive, semiconductor and optical components to industrial tools, LCDs, touch solutions, industrial printing components, solar systems and consumer goods such as kitchen and office products.

Kyocera's high-performance ceramic products are produced and distributed by [KYOCERA Fineceramics Europe GmbH](#), a subsidiary of KYOCERA Europe GmbH. The Kyocera Group is one of the world's leading providers of high-performance ceramic components for the technology industry, offering over 200 different ceramic materials, as well as state-of-the-art technologies and services tailored to the specific needs of each market.

KYOCERA Europe GmbH is a company of the KYOCERA Corporation headquartered in Kyoto/Japan, a world leader in semiconductor, industrial and automotive components as well as electronic components, printing and multifunction systems, and communications technology. The technology group is one of the world's most experienced manufacturers of smart energy systems, with more than 45 years of industry expertise. The Kyocera Group comprises 292 subsidiaries (31 March 2024). In England, Kyocera has a subsidiary in Frimley, KYOCERA Fineceramics Ltd. With around 79,200 employees, Kyocera generated net annual sales of around EUR 12.29 billion in the 2023/2024 fiscal year.

Kyocera is ranked 672 on Forbes magazine's 'Global 2000' list for 2023, and ranked as 'The 100 Most Sustainably Managed Companies in the World' according to the Wall Street Journal. For the second year in a row, Kyocera qualified for the Dow Jones Sustainability Index (Asia-Pacific). As well, Kyocera receives a Bronze rating on EcoVadis Sustainability Survey and was acknowledged as a 'Top 100 Global Innovator 2023', being one of the world's leading innovators, for the eighth time by Clarivate.

The company also takes an active interest in cultural affairs. The Kyoto Prize, a prominent international award, is presented each year by the Inamori Foundation — established by Kyocera founder Dr Kazuo Inamori — to individuals worldwide who have contributed significantly to the scientific, cultural, and spiritual betterment of humankind (equivalent to approximately €596,500 per prize category).

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