Press Information

Kyocera showcases its high-performance ceramics for demanding applications at Space Tech Expo Europe 2026

At Space Tech Expo Europe 2026, taking place in Bremen from 17 to 19 November, Kyocera will be presenting solutions made from Fine Cordierite®, silicon nitride, silicon carbide and silicon-infiltrated silicon carbide, as well as options for the additive manufacturing of ceramic components.

Kyoto/Esslingen, 12th November 2026. KYOCERA Fineceramics Europe GmbH focuses on high-performance ceramics for demanding technical applications at this year's Space Tech Expo Europe in Bremen, Germany. At the trade fair, Kyocera showcases components and solutions based on Fine Cordierite®, silicon nitride (Si_3N_4), silicon carbide (SSiC) and silicon-infiltrated silicon carbide (SiSiC), whilst also presenting its capabilities in the additive manufacturing of ceramic components.

Fine Cordierite® brings together dimensional stability and light weight

When it comes to structural components that must function reliably even under extreme conditions, Fine Cordierite® offers a combination of various material properties. The material has an extremely low coefficient of thermal expansion and therefore exhibits high dimensional stability even in the face of significant temperature fluctuations. At the same time, its high stiffness results in low weight.

Silicon nitride combines mechanical strength and light weight

Kyocera's silicon nitride (Si_3N_4) is a material that combines high strength and fracture toughness with low density. It also offers excellent thermal shock resistance, as well as high wear and impact resistance. Low thermal expansion rounds off this profile of properties. This makes silicon nitride suitable for lightweight, mechanically robust structures and high-performance components in the aerospace industry.

Silicon carbide for high thermal and chemical stresses

With StarCeram® S, Kyocera also offers sintered silicon carbide (SSiC). The material combines high strength and stiffness with low density and excellent chemical resistance. Its temperature resistance up to approximately 1,600 °C in an oxidising atmosphere makes it suitable for applications involving high thermal loads. SSiC thus complements the range of materials

available for technically complex components in the aerospace sector.

Silicon-infiltrated silicon carbide combines precision and design flexibility

Another option for applications with high precision requirements is silicon-infiltrated silicon carbide. SiSiC is one of the highest-performance engineering ceramics and combines high mechanical strength and stiffness with thermal stability and high wear resistance. It also exhibits extremely low thermal expansion. This property profile makes the material equally suitable for applications in the aerospace sector as it is for semiconductor manufacturing or industrial production processes. Complexity and scale can be combined when processing SiSiC: Using its proprietary bonding and manufacturing technology, Kyocera is able to produce gas- and watertight components with detailed structures measuring less than one millimetre. At the same time, large-area, monolithic components up to a size of Ø 1.6 m x H = 2.5 m can be produced. Kyocera covers a range of manufacturing processes using its own materials. For conventional manufacturing processes, the company produces StarCeram® Si, whilst StarCeram® AM-Si is designed for additive manufacturing. Both material variants have an almost identical property profile. This ensures a consistently high material quality, regardless of the manufacturing process used.

More design freedom through additive manufacturing

Additive manufacturing expands the design possibilities, particularly for complex components. 3D printing of SiSiC allows structures to be produced that are difficult or impossible to achieve using conventional forming processes. These include topology-optimised designs, which can be used to reduce component weight. The advantages are particularly evident where processes such as isostatic pressing, slip casting or film casting reach their limits when dealing with complex designs.

Manufacturing takes place in two consecutive process steps. First, a green body is built up using binder jetting from silicon carbide powder and a polymer binder. This is then infiltrated with molten silicon. The silicon reacts with the remaining carbon, thereby forming the final SiSiC structure. This process produces high-precision, durable components that are suitable for both prototyping and series production.

The process is designed specifically for large-volume components and complex geometries. As there is no need for rough machining or tool manufacture, and the programming effort is reduced, production times can be shortened. As geometric complexity increases, the differences

compared with conventional processes become particularly apparent. This applies, for example, to undercuts, curved surfaces or bionic structures.

Kyocera not only supports the manufacturing process. The company also advises customers in the design and optimisation of component geometries. Working in collaboration with its proprietary design centre, it develops solutions tailored to specific requirements.

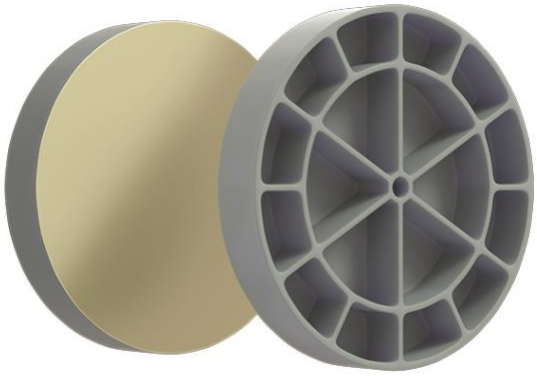
Abut Space Tech Expo Europe 2026

Space Tech Expo Europe 2026 is Europe's leading trade fair for aerospace technologies. It brings together professionals from the space industry in Bremen, Germany, and showcases technologies and solutions from various sectors of the industry. The technologies on display include, amongst others, materials, components, subsystems and manufacturing, as well as satellite operations, launch services, communications and ground systems, as well as engineering services. The exhibition is complemented by an international conference programme.

Overview – Kyocera at Space Tech Expo Europe 2026

Show	Space Tech Expo Europe 2026
Date	17th – 19th November 2026
Location	Bremen, Germany
Kyocera's booth	Hall 7, Booth # X18

The press material is available for download via the following link:
https://spgroup.box.com/s/0azumbm8naodk12a8ws7h5gucdpsqo1j



Fine Cordierite® mirror



Camera housing



Example of complex geometries realised using additive manufacturing from silicon-infiltrated silicon carbide (SiSiC)



SiSiC mirror

For more information on Kyocera: www.kyocera-fineceramics.de

About Kyocera Corporation

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, automotive, semiconductor and optical components to components for medical products, industrial tools, LCDs, touch solutions, industrial printing components, 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 renowned supplier in semiconductor, industrial and automotive components as well as electronic components, printing and multifunction systems, smart energy systems, and communications technology. Kyocera is one of the most experienced technology producers, with more than 65 years of industry expertise. The Kyocera Group comprises 279 subsidiaries (31 March 2026). With around 73,800 employees, Kyocera generated net annual sales of around EUR 11.83 billion in the 2025/2026 fiscal year.

Kyocera appears on the 2026 Forbes list "Global 2000" of the world's largest publicly listed companies. In addition, Kyocera has received, for the fourth time, the grade A in the CDP rating (2025) in the area of climate and, for the year 2025, a silver rating in the EcoVadis sustainability survey. Already for the tenth time, Kyocera has been recognized by Clarivate as a "Top 100 Global Innovator 2026" as one of the world's innovation drivers.

Kyocera 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 €539,000 per prize category).

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