

Press Information

Kyocera showcases its quantum tech innovations at World of Quantum 2025

Kyocera participates at the World of Quantum trade fair taking place in Munich, Germany, unveiling its advanced material solutions for quantum technologies.

Kyoto/London, 5th June 2025. The United Nations has declared 2025 the International Year of Quantum Science and Technology. World of Quantum 2025 will therefore play a special role in bringing the importance and applications of quantum technology to a broad audience. In order to contribute to the innovations in this field, Kyocera participates in World of Quantum 2025 (Hall A1, Booth #211), taking place from June 24-27 in Munich, Germany. The company will be unveiling its innovative material solutions that are accelerating the progression of quantum technologies across various industries, including finance, medicine, automotive, chemical sectors, and quantum sensing applications.

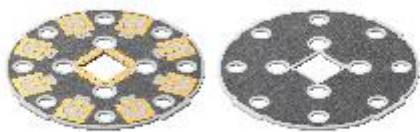
Kyocera's role in shaping quantum technologies

Kyocera is developing a range of ceramic packaging solutions and assembly options, offering excellent thermal management and hermetic solution, thereby facilitating stable and scalable qubits¹. The company's diverse materials, including HTCC and LTCC multilayer ceramic substrates and AlN carriers, offer excellent heat dissipation and plating options. This enables low magneticity and brazing material with low permeability, which are crucial for the development and functioning of quantum technologies.

Meeting connection requirements and ensuring quantum state stabilization

Kyocera's packages offer a variety of connection solutions for 2nd assembly such as Pin Grid Array (PGA) packages, and Land Grid Array (LGA) packages. Kyocera offers die assembly service for wire bonding and flip chip technology. Kyocera also provides materials for hermetic sealing, including "Ceramic to Metal" and "Metal to Metal" brazing materials, along with vacuum sealing packaging to support the stabilization of the quantum state.

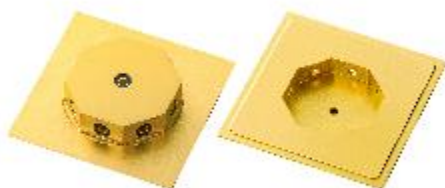
¹ Qubits, the basic unit of quantum information, process information differently from traditional binary bits. They enable more complex, faster calculations and ultra-high sensitive measurements of magnetic fields. This disruptive potential holds promise for numerous sectors.



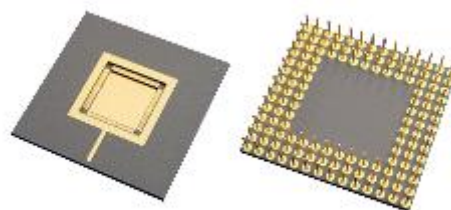
Wire bonding substrate for QPU chip



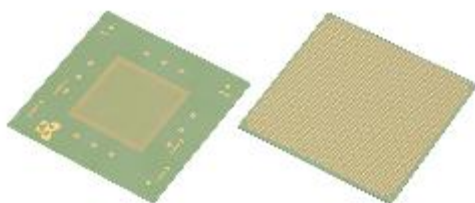
Flip chip substrate for QPU chip



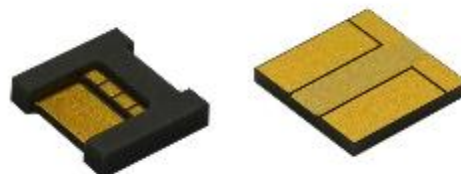
Hermetic seal lid with windows for trapped ion



HTCC PGA package



LTCC LGA package



AlN carrier

Sapphire wafer, Sapphire window and Ceramic feedthrough: Breakthrough solutions

Kyocera contributes to the progress in the quantum sector showcasing its innovative solutions Sapphire wafer, Sapphire window as well as Sapphire feedthrough at World of Quantum 2025.

1. Sapphire wafer

Kyocera's sapphire wafer, produced with excellent crystallinity, is expected to result in lower dielectric loss and excellent thermal conductivity at ultra-low temperatures, marking a significant advancement in quantum technology.



2. Sapphire window

Kyocera offers a one-stop solution for Sapphire windows, including advanced coatings such as anti-reflective coatings. These solutions are supporting the growing quantum technology sector by enabling the use of windows in various sizes to meet diverse application needs.



3. Ceramic feedthrough

Kyocera's proprietary brazing technology of Alumina/Sapphire using non-magnetic materials enables the reliable integration of feedthrough in quantum technology systems. These components deliver excellent performance at magnetic field and high-frequency condition, making them ideal for demanding quantum applications.



Optical and lithography lenses: high-tech products for semiconductor and medical devices

With decades of experience in design and manufacturing, Kyocera has gained unique expertise in the development and production of high-quality optical technologies. The company therefore offers a wide range of cutting-edge solutions, from spherical and aspherical to free-form lenses, and provides customised optics for cameras, scanners and numerous other applications. Thanks to a fully integrated, vertically aligned business model that combines design, component manufacturing, assembly and quality testing, Kyocera is able to meet particularly precise and complex requirements. Its specialised technologies cover the entire spectrum from deep ultraviolet (DUV) to infrared (IR) and are specifically designed for high-precision industries such as the semiconductor industry and medical technology – with a clear commitment to delivering the highest quality and reliability. At World of Quantum 2025, Kyocera showcases its glass aspherical lenses, its F-theta lens as well as its lens units.

1. Aspherical lenses

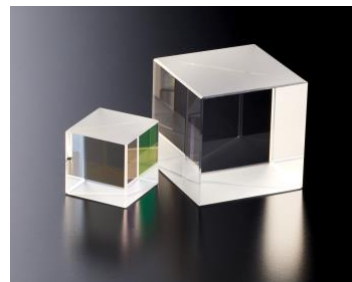
Kyocera's aspherical lenses are used in a wide range of applications that require high optical precision, compactness and efficiency, such the automotive and medical sector, in laser and light systems or in the machine and image processing. Their special shape

enables the correction of optical aberrations such as spherical and chromatic aberrations and contribute to the miniaturisation of optical systems. Kyocera's aspherical lenses are available in different shapes (diameter: approximately 30 mm, 20 mm, 10 mm).



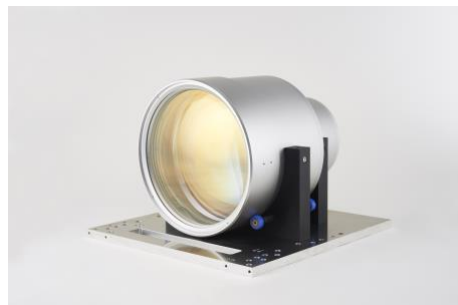
2. DUV optics

Kyocera's DUV optics such as mirrors and PBS have a high level damage threshold in the industry peer. Standard products are available for such wavelengths as 193 nm, 213 nm, and 266 nm. Kyocera also commits to customizing products along with customer's demand, based on the expertise in coating, polishing, and bonding since 1980s.



3. F-theta lenses

Kyocera's F-theta lenses are used in high-precision laser systems, particularly in applications that require uniform focusing across a flat surface. Their special optical design enables linear mapping of the scan angle onto the work surface, ensuring consistent spot size and intensity across the entire scan area.



4. Lens unit

Kyocera's lens units (optical units) are high-precision, custom-designed optical systems used in various industries that demand high image quality, miniaturisation and reliability. They combine optical, mechanical and electronic components into integrated modules and are used in areas such as automotive engineering, medical technology, semiconductor manufacturing and industrial image processing.



Kyocera's commitment to quantum technologies

Kyocera is committed to advancing the future of quantum technologies, offering tailored solutions designed to meet the specific requirements of different qubit technologies and their applications. Ceramic materials have been explored for use in challenging environmental conditions for decades. We are confident that our cutting-edge technology will support our customers' progress in this field.

About World of Quantum 2025

World of Quantum 2025 is the world's largest trade fair for quantum technologies. This year, it takes place from June 24 to 27 in Munich, Germany, at the Messe München exhibition center. The event offers a central platform for exchange between science, industry, and users, and presents the latest developments in areas such as quantum computing, communication, sensor technology, and metrology. The trade fairs Laser World of Photonics, the World of Photonics Congress, as well as automatica take place at the same time, enabling additional synergies between the fields of photonics, quantum technology, and automation.

Overview of World of Quantum 2025

Show	World of Quantum 2025
Date	24 to 27 June 2025
Location	Munich, Germany
Kyocera's booth	Hall A1, Booth #211

Images are available for download by clicking the following link:

<https://spgroup.box.com/s/b261whc8etdroozh6wzrbv00bys6mdjb>



For more information on Kyocera: 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 28 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 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 288 subsidiaries (31 March 2025). In England, Kyocera has a subsidiary in Frimley, KYOCERA Fineceramics Ltd. With around 77,200 employees, Kyocera generated net annual sales of around EUR 12.43 billion in the 2024/2025 fiscal year.

Kyocera is ranked 874 on Forbes magazine's 'Global 2000' list for 2024, 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 2025' for the ninth time by Clarivate, being one of the world's leading innovators.

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 €596,500 per prize category).

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