

Press Release

Kyocera Announces Innovative Epoxy Molding Compound, High-Thermal-Conductive Silver Sintering Paste and Revolutionary TOROKERU Sheet

The new Kyocera innovations were presented at the PCIM exhibition in Nuremberg from 16 – 18 May in hall 6, stand 301

Kyoto/London, 23 May 2017. Kyocera Corporation has recently developed a high-thermal-conductivity epoxy molding compound with a thermal conductivity of 6W/mK. This marks a significant increase in the conventional thermal conductivity of 0.9-3W/mK and thus enhances the protection of semiconductor components from light, temperature, humidity, dust and physical shock.

The new product has achieved an extremely high thermal conductivity through higher alumina filler loading while still maintaining excellent flow ability. Transfer moldings as well as compression moldings are available. By using this high-thermal-conductivity molding compound, the thermal dispersion of packages becomes higher; thus it is possible to eliminate the heatsink and also becomes easier to design the package structure.

In addition, the company will launch an innovative environmental friendly silver sintering paste in Europe — a proprietary formulation specifically developed to deliver a wider range of benefits and performance characteristics compared to high-lead solders. Kyocera's lead-free pressureless silver sintering paste exhibits excellent thermal and electrical performance as well as an extremely strong adhesion to bare copper.

These characteristics make this new paste ideal for high-reliability applications in which heat dissipation is crucial, such as in power semiconductors, automotive modules and high-brightness LEDs. Based on the Nano-Silver technology, Kyocera's silver sintering paste demonstrates a thermal conductivity of more than 200W/mK and an excellent die-shear adhesion to bare copper, silver- and gold-plated surfaces. Compared to standard solders and electrically conductive die-attach pastes, Kyocera's silver sintering paste offers more than three times higher thermal conductivity. Moreover, through the utilization of a novel resin-dispersion system, the paste shows excellent interface reliability in the most demanding applications.

Another ground-breaking innovation of the Japanese technology company is its new TOROKERU Sheet. With curing temperatures of 100 - 120 degrees Celsius and a curing time of 30 - 120 minutes the innovative sheets will reinforce and protect mounted parts from environmental stress in power semiconductor packages, passive components and general parts. The size of the applied product forms can vary from small specific customized shapes to 450mm². During the sealing process, no dam or pressure is needed and the original shape of the product form can be maintained (non-shrink). The TOROKERU Sheet is an ideal alternative to liquids or solids and guarantees a perfect encapsulation.



Kyocera is actively engaged in the development of environmentally friendly products and strives to reduce the use of environmentally harmful materials and processes as much as possible in the industries it supports.

For more information on Kyocera: www.kyocera.co.uk

About Kyocera

Headquartered in Kyoto, Japan, Kyocera Corporation is one of the world's leading manufacturers of fine ceramic components for the technology industry. The strategically important divisions in the Kyocera Group, which is comprised of 231 subsidiaries (as of March 31, 2017), are information and communications technologies, products which increase quality of life, and environmentally friendly products. The technology group is also one of the oldest producers of solar energy systems worldwide, with more than 40 years of experience in the industry.

The company is ranked #531 on Forbes magazine's 2016 "Global 2000" listing of the world's largest publicly traded companies. With a global workforce of over 70,000 employees, Kyocera posted net sales of approximately €11.86 billion in fiscal year 2016/2017. The products marketed by the company in Europe include printers, digital copying systems, microelectronic components, and fine ceramic products. The Kyocera Group has two independent companies in the United Kingdom: Kyocera Fineceramics Ltd. and Kyocera Document Solutions.

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 and groups worldwide who have contributed significantly to the scientific, cultural, and spiritual betterment of humankind (converted at approximately €360,000 per prize category).

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