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KANEKA CORPORATION

Kaneka Developed Super Heat-Resistant Polyimide Film for 5G Applications
- As flexible print circuit board members for 5G Smartphones -

Kaneka Corporation (Headquarters: Minato-ku, Tokyo; President: Mamoru Kadokura) has developed "Pixeo™¹ SR", a super heat-resistant polyimide film for high-speed, high frequency 5G^{*2}. It is to be employed as a member of a flexible print circuit board for 5G smartphones, which is scheduled to be launched this year.

The general perception is that 5G will be rolled out in 2020 and by 2023, 5G smartphones will account for about 30% of total smartphone production volume^{*3}. It is expected that demand for circuit board with less transmission loss^{*4} at high frequency zones will further increase. "Pixeo™ SR", exhibits low transmission loss in the high frequency zones for 5G through Kaneka's unique polyimide molecular design technology, while offering excellent processability by using the thermoplastic^{*5} polyimide layer on the copper foil surface. Kaneka will expand the sales of Pixeo™ SR as the product that supports digital devices with advanced features, aiming at the sales of 15 billion yen in 2023.

With the rapid rollout of 5G, it is expected that demand for polyimide materials that support the communication system will further expand in the future. Kaneka has focused on development of a transparent polyimide film for flexible displays, polyimide varnish for a TFT^{*6} substrate, and ultrahigh thermal conductive graphite sheets as well as a super heat-resistant polyimide film, and will continue to offer a wide variety of solutions with various polyimide products for the advent of the IoT/ AI era.

*1. Super heat-resistant polyimide film with a thermoplastic polyimide layer applied on both surfaces of the core polyimide film. It is used for two-layer flexible print circuit boards. Two-layer flexible print circuit boards can be made thinner than conventional three-layer boards, and also have excellent reliability and dimensional stability.

*2. An abbreviation for the fifth generation mobile communication system (5th Generation).

*3. Fuji Chimera Research Institute, Inc. "2018 market research report on future perspective of the core technologies for 5G/high speed and large capacity communication" (only available in Japanese)

*4. Degradation level of the electrical signal that travels on the circuit board.

*5. Nature of plastic to become soft when heated and hardened again when cooled.

*6. TFT is an abbreviation for a Thin Film Transistor. It controls light emission of organic EL elements.



"Pixeo™ SR", a super heat-resistant polyimide film