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KANEKA CORPORATION

Kaneka develops super heat-resistant polyimide film for 5G millimeter wave zones
— Expands lineup of 5G-supporting materials that are set to see sudden growth —

Kaneka Corporation (Headquarters: Minato-ku, Tokyo; President: Minoru Tanaka) has developed “Pixeo™^{*1}IB”, a super heat-resistant polyimide film for high-speed, high frequency 5G^{*2}. The offering of samples began in October, and a full-scale rollout is scheduled for 2021. “Pixeo™ IB” reduces the dielectric loss tangent^{*3} in high frequencies down to 0.0025, the global best level for polyimide film. This was achieved using the advanced polyimide development technologies that Kaneka has accumulated over many years. This makes possible the handling of 5G millimeter wave zones^{*4}, which can realize high speed communications.

With the emergence of 5G-equipped smartphones, which are said to reach communication speeds of around 100 times of 4G, 5G models in the global smartphone market are predicted to spread rapidly from here on. With both the millimeter wave-supporting “Pixeo™ IB” and the “Pixeo™ SR” that handles sub-6, Kaneka will expand their lineup of 5G-supporting products and grow sales of these materials that help digital devices reach more advanced functionalities.

In terms of materials for supporting high-speed information transmission, Kaneka owns a high share of the market with the super heat-resistant polyimide “Pixeo™”. However, Kaneka continues to provide a variety of solutions through different kinds of polyimide products. These include transparent polyimide film for flexible displays that acts as a glass substitute, polyimide varnish for a TFT^{*5} substrate, and ultrahigh thermal conductive graphite sheets.

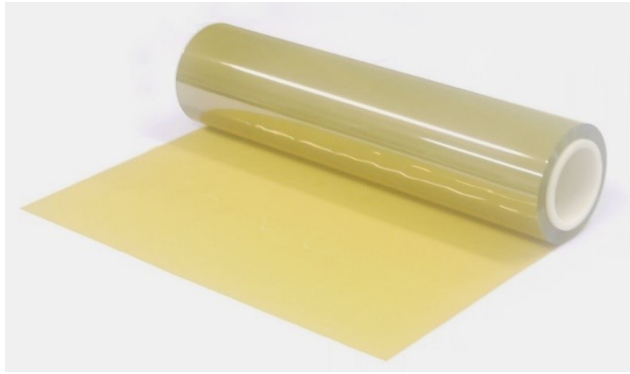
*1. A super heat-resistant polyimide film with excellent processability achieved through applying thermoplastic polyimide layers on both surfaces of the core polyimide film. It’s used in two-layer flexible print circuit boards. Two-layer flexible print circuit boards can be made thinner than conventional three-layer boards, and also have superior reliability and dimensional stability.

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

*3. The amount of electrical energy lost within a material.

*4. A new frequency range that can be used with 5G. 5G can be split into the two frequency ranges of “sub-6” (3.6 GHz to 6 GHz) and “millimeter waves” (28 GHz to 300 GHz). It’s expected that in the future, usage of millimeter waves, which send communications faster through higher frequencies, will spread further.

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



“Pixeo™ IB”, a super heat-resistant polyimide film