

SCREEN Finetech Solutions Co., Ltd.

SCREEN Launches Special Coating System Developed for Next Generation Displays

New System Enables Mass Production of High-Quality Flexible Substrates

Kyoto, Japan – May 19, 2016 – SCREEN Finetech Solutions Co., Ltd. (SCREEN FT) has developed a new range of polyimide* coating systems specifically for flexible display manufacturing. Sales of the SK-P series began in March 2016. The systems are expected to make a major contribution to the mass production of organic EL and other flexible displays.

Organic EL displays have been attracting significant attention as a next generation technology. These displays can be formed onto flexible substrates using polyimide material as well as onto glass substrates. When using the polyimide material, the result is a thin, lightweight substrate with impressive flexibility that can easily be folded into a circular shape.

These advantages have raised expectations the panels can be used for applications that require both high functionality and thinness, such as wearable devices and electronic paper as well as in-vehicle displays. However, with the current production process, it has proven difficult to produce large size panels that are thin and uniform when coating the polyimide material onto the glass support layer. This has become a significant issue in relation to mass production of the displays.

To address this point, SCREEN FT began working on the development of coating technologies for high-viscosity materials in 2013. It has made rapid progress by repurposing the proven coating and drying technologies that have allowed its coater/developer systems to share approximately 80 percent of the global market. Using this expertise, SCREEN FT has successfully created a new technology that markedly reduces the generation of particles and air bubbles inside the polyimide layer. These factors have a great influence on the transparency and diffusion of the final display.

The technology makes it possible to perform uniform coating of the polyimide material at a thickness of approximately 10 micrometers. It is able to accommodate sizes of up to 1,500 x 1,850 mm, so called sixth generation substrates, in a processing time of 120 seconds or less. This technology is now commercially available in the SK-P series, enabling high-quality coating of polyimide films with enhanced yield rates.

SCREEN FT anticipates that, with its launch, the SK-P series will become the de-facto standard polyimide coating technology for next generation displays as demand for these panels continues to expand. SCREEN FT is committed to meeting the diverse needs of the display panel industry and to ensuring its continuing growth.

* Polyimide is a general term for a high molecular compound. It demonstrates extremely high mechanical strength, outstanding heat resistance and strong electrical insulation as well as excellent chemical resistance. Polyimide film is widely used in the flexible printed circuit boards for cameras and office automation devices, interlaminar insulation for electrical wiring and protective films for semiconductors.

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