

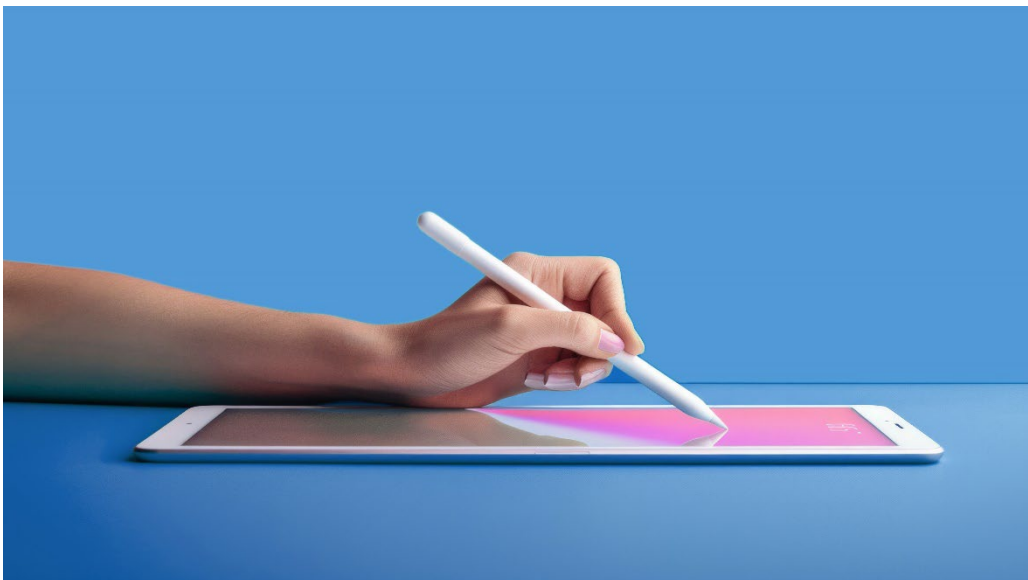
Nippon Electric Glass Launches a Mass Production Process for Cover Glass Incorporating its "Nano-texturing Technology," which Transforms the Writing Experience on Tablets.

~Combining a Paper-like Writing Feel with High Durability, with Applications in Education and Industry also in View~

Nippon Electric Glass Co., Ltd. (Head Office: Otsu, Shiga, Japan; President: Akira Kishimoto) has established a mass production process for cover glass^{※1} utilizing its proprietary "Nano^{※2}-texturing Technology," which forms nanometer-scale textures on glass surfaces. This enables a stable supply of products incorporating this technology, facilitating expansion into a wide range of markets, including tablet devices.

※1 Glass: Including glass film

※2 Nanometer (nm): A unit of length. 1nm is one millionth of a millimeter



■Overview and Development Background of Nano-texturing Technology

Nano-texturing technology is a proprietary processing technique that uniformly forms nanometer-scale textures on glass surfaces. This enables the design of contact area and contact ratio with target objects, allowing flexible control over the glass's friction characteristics and surface functions.

Tablets and LCD pen tablets are widely used in creative fields and business. However, the conventional glass screen has a slippery pen tip, and the natural writing feeling of paper cannot be reproduced. Special films are also used, but they are not as transparent or durable, and the pen nib is easily worn down.

Nano-texturing technology solves these challenges. By applying nano-level texturing to the glass surface, it moderates pen tip slippage, achieving a natural writing feeling like writing with a ballpoint pen on paper. Furthermore, because the texturing is at the nano level, it reduces pen tip wear, contributing to extended pen tip lifespan.

Compared to conventional special films, cover glass utilizing this technology demonstrates superiority in both quality and durability. It not only maintains a stable writing feel for a long period of time but also provides clear visibility without compromising the glass's inherent texture, high transparency, or strength.

The maximum processing size is 510mm × 600mm, and it can process not only glass but also metal, ceramics, and resin.

■Deployment as a Multifunctional Solution

Nano-texturing technology not only enhances writing comfort but also delivers the following features.

- Enhanced film adhesion: Increased surface area and the anchor effect^{※3} improve adhesion to metal films, resin films, and other substrates.
- Control of wettability^{※4}: By imparting water repellency, water droplet adhesion is suppressed, maintaining clear visibility even in rainy conditions.
- Control of light scattering: The light transmission, reflection and diffusion can be adjusted freely, and it can be applied to the reduction of reflection of the display, and the transparent screen that projects the image projected from the projector while maintaining high translucency.

Taking advantage of this multifunctionality, we will expand our supply to diverse markets through collaboration with a wide range of partner companies, including tablet and display manufacturers, as well as education and industrial equipment manufacturers.

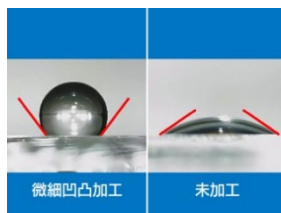
※3 Anchor Effect: A phenomenon in which the coating film or adhesive enters the "dent" of the uneven surfaces and is physically caught (anchor = digging like an anchor), making it difficult to peel off.

※4 Wettability: A property indicating how well a liquid spreads over a surface

■ Application Examples of Nano-texturing Technology



Coating adhesion strength improvement



Wettability control



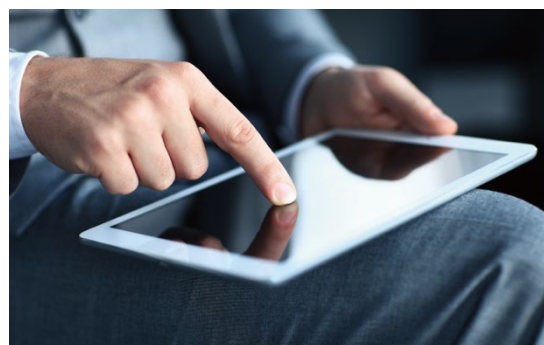
Anti-glare



Transparent screen



Writing feelings improvement



Touching feelings improvement

[Company Profile]

Nippon Electric Glass Co., Ltd. is a world-class specialty glass manufacturer headquartered in Otsu City, Shiga Prefecture. Special glass that creates novel functionality is transformed into a variety of products, such as sheets, tubes, fibers, and powder, and is used in a wide range of fields, including semiconductors, displays, automobiles, electronic devices, medical care, and energy. The special glass developed using the technology and track record that we have honed over our 70-year history is highly regarded in a wide range of fields, from everyday life to cutting-edge industry.

Company name: Nippon Electric Glass Co., Ltd.

Representative: Akira Kishimoto, President

Head office location: 7-1 Seiran 2-chome, Otsu, Shiga 520-8639, Japan

Founded: December 1, 1949

Business details: Manufacture and sale of special glass products and fabrication

URL: <https://www.neg.co.jp/en/>

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