

September 26, 2013

Successful Development of a New Material for Extremely Thin “Glass-ribbon”

Innovation of a thermal expansion coefficient of $100 \times 10^{-7}/K$
will accelerate development of new applications

Nippon Electric Glass Co., Ltd. (Head office: Otsu, Shiga, Japan; President: Masayuki Arioka)(NEG) has successfully developed a new material for “Glass-ribbon.” The company will exhibit the newly developed material in the CEATEC JAPAN 2013 exposition to be held at Makuhari Messe from October 1.

NEG successfully developed “Glass-ribbon” in 2009, and they have already been used as materials for microchips for micro chemical analysis by several research organizations. A new addition to our lineup, the “Glass-ribbon” made of the new material has a thermal expansion coefficient of $100 \times 10^{-7}/K$, higher than that of conventional products, and has an excellent compatibility in terms of thermal expansion with general-purpose electric and electronic materials such as stainless steel and zirconia ceramics, allowing substantially increased freedom in design of parts.

In addition, “Glass-ribbon” not only has excellent material characteristics of glass such as chemical stability, heat resistance, optical properties, gas-barrier properties, and electric insulation properties, but they also have unique features such as:

- Capability of being bent and rolled like resin film;
- Extreme smoothness of their glass surface in spite of not having undergone a polishing process; and
- Smoothness of the end faces on both sides is identical to that of the glass surface, accompanied by the strength to withstand bending and twisting.

NEG will make the maximum possible use of these features possessed inherently by “Glass-ribbon” as well as their excellent compatibility with general-purpose materials in terms of thermal expansion, with the aim of positively developing applications in diverse product fields such as displays, sensors, medical treatment, optics, and lighting.

(Overview of the product)

1. Thermal expansion coefficient: $100 \times 10^{-7}/K$

2. Dimensional specifications

Thickness: 4 – 50 μm (micrometer)

Width: 0.5 – 20.0 mm (millimeter)

Length: 100 m (meter) at max

(Consult us about dimensions on a case-by-case basis.)

(Product photo)

