Translation

Note: This document has been translated from the Japanese original for reference purposes only. In the event of any discrepancy between this translated document and the Japanese original, the original shall prevail.

# News Release

KOHOKU

December 10, 2024

To whom it may concern

KOHOKU KOGYO CO., LTD.
1623, Takatsuki, Takatsuki-cho,
Nagahama-shi, Shiga, 529-0241, Japan
(Code: 6524, TSE Standard Market)

## New plasticity processing technology of slurry cast silica glass (SSG®) Expanding lineups of shapes applicable to various industrial applications

Kohoku Kogyo Co., Ltd. (Head office: Nagahama City, Shiga Prefecture; President and CEO: Futoshi Ishii) has developed a plasticity processing technology for forming high purity silica glass into semi-dome shapes difficult to achieve using ordinary grinding methods by drawing on our proprietary slurry cast silica glass (SSG®) manufacturing technology. The Company has also completed successful prototype production.

With conventional manufacturing methods, forming high purity silica glass into a semi-dome shape requires cutting a cylindrical silica glass ingot and grinding the cut piece into the desired shape. This process scrapes off large portions of silica glass—for the semi-dome shape shown in the photo, approximately 75% must be scraped off (our estimation). In addition to requiring a cutting process, this results in the waste of significant amounts of material. Our newly developed slurry cast manufacturing method forms semi-dome high purity silica glass products via plasticity processing during the sintering of the plate-shape high purity silica glass.

Offering corrosion resistance and heat resistance superior to ordinary transparent glass, high purity silica glass has various important applications, including use in clinical laboratory equipment, semiconductor manufacturing equipment, and industrial products. To date, however, the difficulty of processing high purity silica glass into small or complex shapes has restricted its use. Our proprietary slurry casting method we used to form semi-dome shapes will generate unprecedented applications across a wide range of fields, drawing on the high purity, high stability, and other desired characteristics of high purity silica glass.

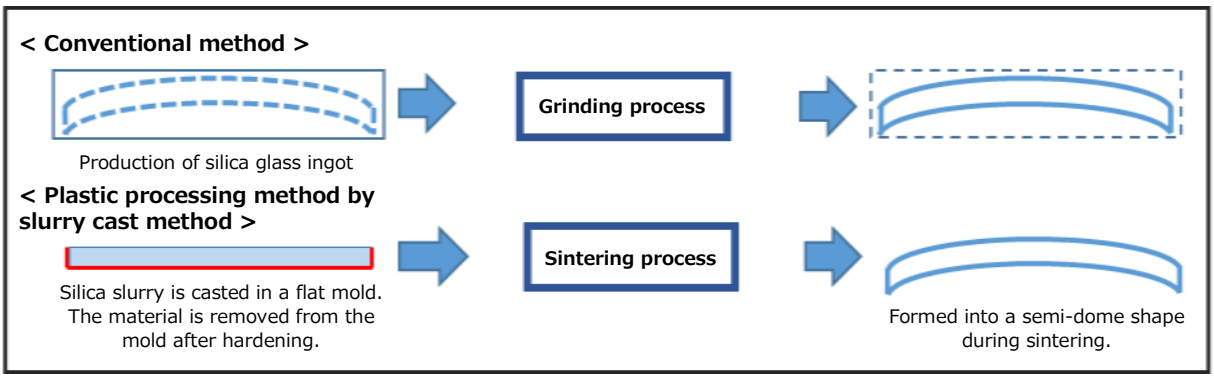
Our newly developed technology and prototypes will be exhibited at SEMICON Japan 2024, held from December 11 to 13, 2024 at Tokyo Big Sight.

Kohoku Kogyo is introducing a lineup of products of various shapes, including products based on the above newly developed plasticity processing technology, to semiconductor manufacturing equipment manufacturers and other industrial equipment developers, with the aims of expanding applications for high purity silica glass and promoting the development of products that take advantage of the features of the slurry casting method. These efforts are intended to meet various next-generation needs, including the need to reduce carbon dioxide emissions by customers through elimination of cutting processes.

< Example of semi-dome shaped SSG® product >



< Overview of process for semi-dome shaped SSG® product >




SSG® (Slurry cast Silica Glass)

* SSG®: SSG is a registered trademark of Kohoku Kogyo Co., Ltd.

SSG® refers to high purity silica glass products manufactured using a technology established by Kohoku Kogyo Co., Ltd. The manufacturing process involves the preparation of liquid silica (slurry) by mixing silica powder and additives, using molds to shape-form the material at room temperatures, and sintering of the material for vitrification. The finished product offers purity and properties equivalent to synthetic silica. This method boasts very high shape-forming flexibility and allows the production of high purity silica glass products with complex shapes not possible with conventional grinding processes.

< Overview of Kohoku Kogyo Co., Ltd. >

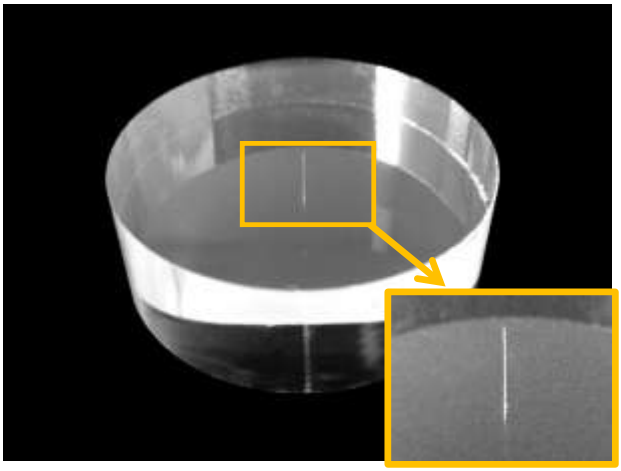
Founded in 1959 as a manufacturer of lead terminals for aluminum electrolytic capacitors, Kohoku Kogyo proceeded in 2000 to venture into the optical components and devices business. Today, 53% of its sales involves the lead terminal business, while 47% involves the optical components and devices business. In the optical components and devices business, the Company holds a 50% market share for optical isolators for submarine cables, which makes it a leading company in this field. As a third growth pillar, the Company is seeking to establish a high-purity silica glass business based on technologies that enable pre-forming of special shapes by the slurry casting method.

< For inquiries related to this news release >
Kohoku Kogyo Co., Ltd., Investor Relations and Public Relations Department
TEL: (+81)749-85-3211, E-Mail: ir@kohokukogyo.co.jp

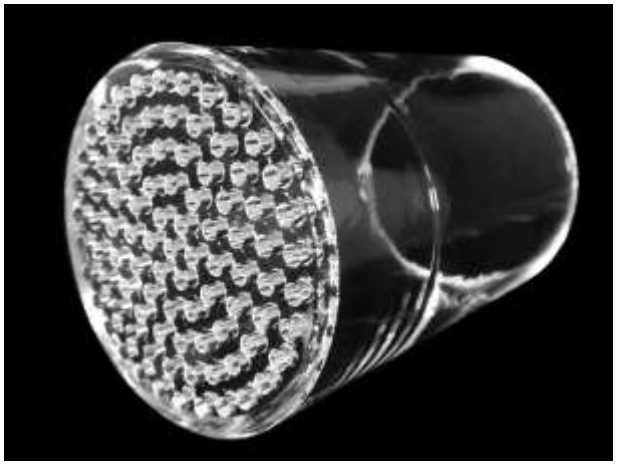
(Reference)
＜A lineup of various shapes of high-purity silica glass using SSG®＞



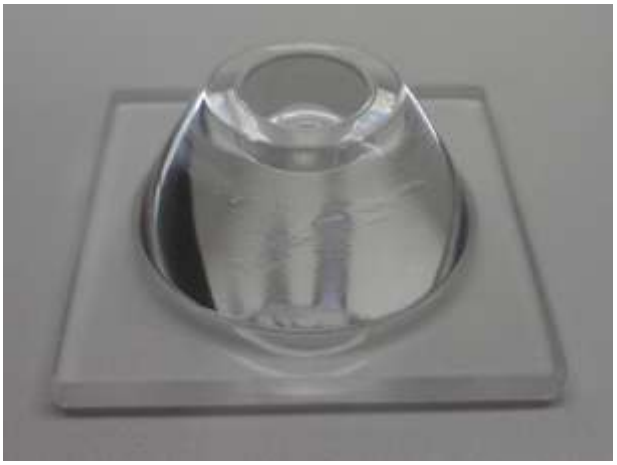
Silica glass ring



Φ50μm micro hole



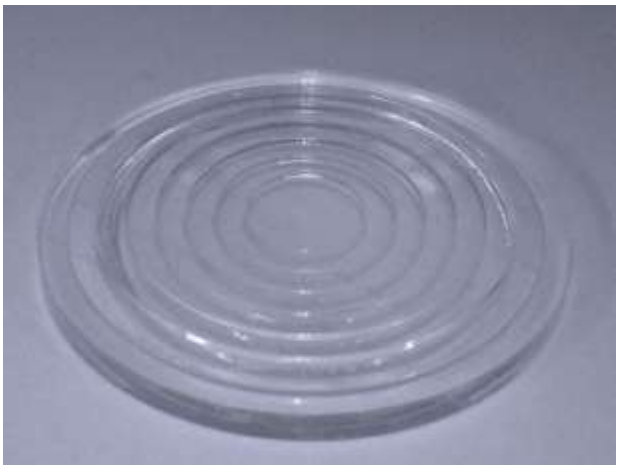
Nozzle for industrial use



TIR lens



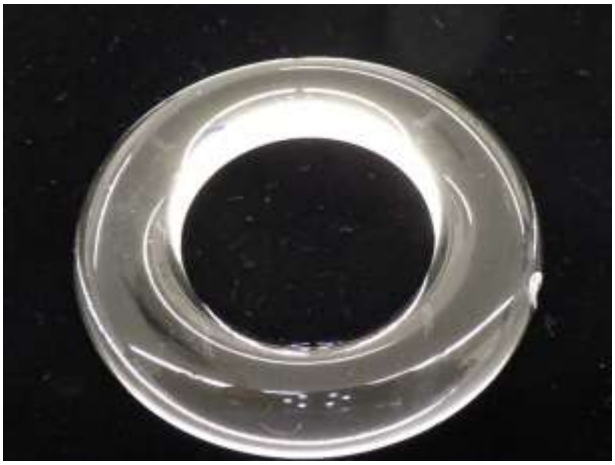
Aspheric lens



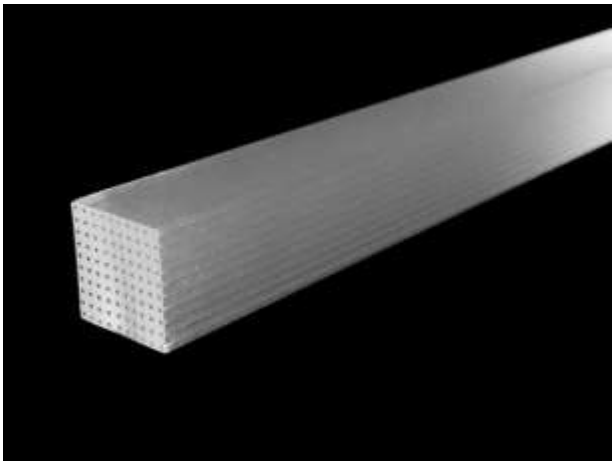
Fresnel lens



Fly-eye Lens



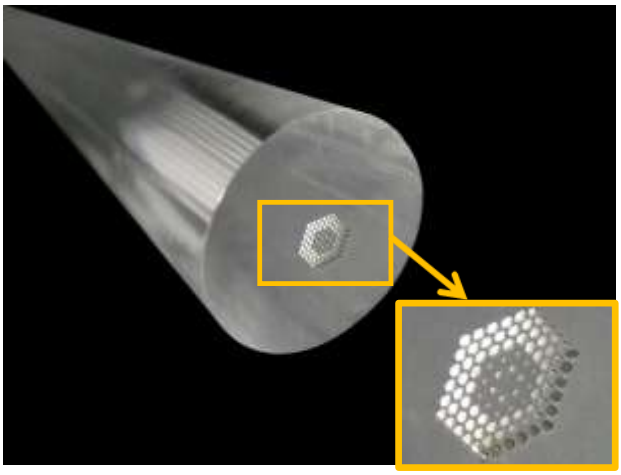
Ring lens



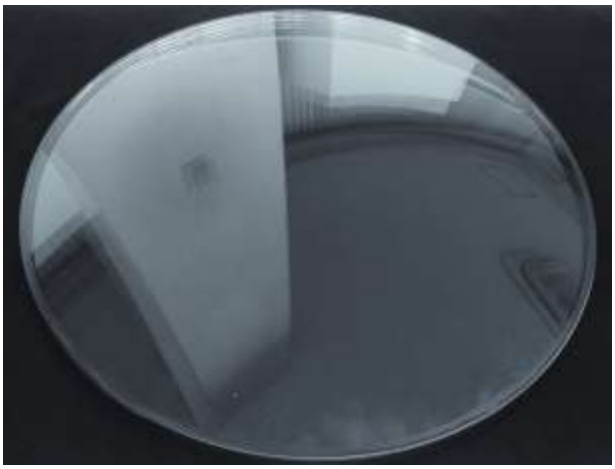
Perforated rectangular preform



Various special shaped preforms



Φ50μm micro hole



Semi-dome molded products