News Release

Dec. 2, 2025

Nippon Electric Glass Co., Ltd.

Launch of “D2 Fiber,” NEG’s New Low Dielectric Glass Fiber

Nippon Electric Glass Co., Ltd. (Head Office: Otsu, Shiga, Japan; President: Akira Kishimoto; “NEG”) has developed and begun sales of D2 Fiber, a new low dielectric glass fiber essential for advanced semiconductors that enable high-speed, high-capacity communications in AI servers and data centers.
D2 Fiber significantly reduces signal transmission loss and power consumption.

Low dielectric glass fiber, D2 Fiber

Demand for substrate materials that support high-speed, high-capacity communications for AI servers and datacenters is rapidly increasing, making the strengthening of supply capacity an urgent challenge. In response to this strong demand, NEG leveraged its long-standing expertise in glass composition to develop D2 Fiber and has now commenced sales.
We have already supplied a large number of specialty glass products to the rapidly growing high-performance semiconductor field, and we will meet the vigorous demand for glass fibers from various angles by providing our products to the market.

Features of D2 fiber

NEG's D2 Fiber achieves the world's lowest dielectric loss tangent—0.0017 tanδ at 10GHz (NEG in-house measurement)—among so-called "second-generation" low-dielectric glass fibers and offers the following features.

- **Low dielectric properties (Low dielectric loss tangent)**
  D2 Fiber reduces transmission loss and enables high-speed, high-capacity communications, contributing to improved performance in AI servers and data centers.

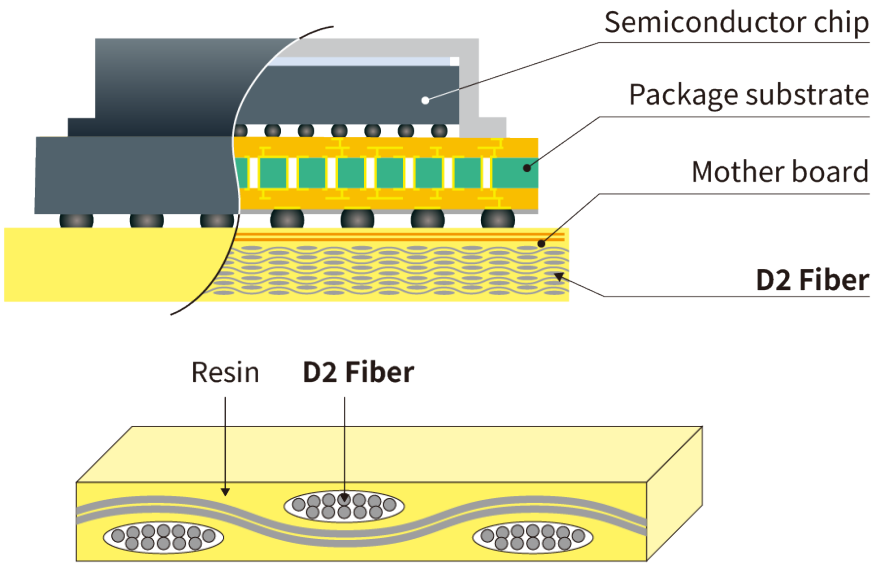
- **Heat reduction and energy saving**

  D2 fiber reduces heat generation caused by communication loss, thereby lowering cooling loads and power consumption. It supports sustainable operations for electric energy-intensive AI infrastructures.

Applications

- AI server motherboards
- Substrates for high-frequency communication equipment
- Semiconductor package substrates, etc.

Applications of D2 Fiber



■ Future development

NEG will supply as yarn to glass-cloth manufacturers, ensuring stable availability to meet growing global demand. The product evaluations by customers have already been completed, and NEG will continue collaborating with them to expand market adoption. In addition, NEG will pursue the development of lower dielectric and lower-expansion glass fibers in line with market trends.

D2 Fiber will be exhibited at SEMICON Japan 2025, held at Tokyo Big Sight from December 17 (Wed.) to 19 (Fri.), 2025, at Booth E5432 (East Hall 5).

[Glossary]

Yarn:

A general term for threads made by twisting fibers such as cotton, silk, wool, or nylon. Glass yarns are produced by melting glass into extremely fine monofilaments and twisting them into threads. They are used as materials for printed circuit boards.

D2 Fiber

Derived from 'Dielectric.' The dielectric loss tangent is lower than that of E glass fiber used in general-purpose printed wiring board applications, and the signal loss is suppressed. D2 means this "D" combined with the second generation.

[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.

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Founded: December 1, 1949
Business details: Production and sale of special glass products; manufacture and sale of glassmaking machinery
URL: https://www.neg.co.jp/en/

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