

Global Speaker Unit Manufacturer SEAS Adopts Ultra-thin Glass Diaphragm

Nippon Electric Glass Co., Ltd. (Headquarters: Otsu, Shiga, Japan; President: Akira Kishimoto; "NEG") is pleased to announce that the ultra-thin glass diaphragm jointly developed with GAIT, a glass processing company in Taiwan, has been officially adopted for the new glass dome tweeter (T27GL001 DXT) released by SEAS, a world-renowned speaker unit manufacturer based in Norway.

Our ultra-thin glass diaphragms are increasingly being adopted by a growing number of audio brands, with more implementation cases steadily emerging.



SEAS's new glass dome tweeter (T27GL001 DXT)

■About SEAS

SEAS is a specialized speaker unit manufacturer established in Norway in 1950. With over 60 years of achievements in the high-end audio market, SEAS products are widely used by top audio brands. Their precise engineering and transparent sound quality continue to earn high praise from audio engineers and critics around the world.



■Key Features of the Glass dome Tweeter “T27GL001 DXT”

A glass dome tweeter is a speaker component that reproduces high frequency sound using a dome shaped glass diaphragm. The T27GL001 DXT is the first SEAS model to incorporate a glass diaphragm and utilizes NEG’s ultra-thin glass, which is extremely thin and lightweight while offering exceptional strength. Thanks to these material properties, the tweeter delivers extremely fast sound attack^{※1} and clearly reproduces even subtle sonic details. Glass is also resistant to humidity and deterioration over time, enabling long term stability in sound quality. Furthermore, the combination of SEAS’s proprietary DXT[®]※2 technology and its precision-machined aluminum faceplate enhances sound dispersion and structural stability.

【SEAS Press Release】

• [Glass Tweeter Release](#)

■Regarding the Ultra-thin Glass diaphragm

Ultra-thin Glass (UTG™) is among the world's thinnest glass, with a thickness ranging from 25μm to 200μm. By 3D forming this glass and strengthening its surface through special chemical treatment, it has been evolved into a diaphragm. As a diaphragm, it exhibits the following acoustic characteristics:

- Compared to materials such as paper or metal, it offers faster sound attack and decay^{※1}, delivering clearer, more precise sound with minimal distortion.
- The material inherently has high internal loss with low self-resonance, resulting in very little coloration.
- Lightweight and highly responsive, capable of accurately reproducing the subtle nuances of delicate sounds.
- The glass surface is strengthened with a special chemical treatment, enabling it to withstand intense vibrations from heavy bass.
- Resistant to environmental changes such as temperature and humidity, and less prone to aging over time.



Ultra-thin Glass Diaphragm

※1 "Sound attack" refers to the time or speed of response from when a sound begins to its peak. A fast attack time results in clear sound contours, allowing the attack of percussion and string instruments to be reproduced distinctly. Conversely, "sound decay" indicates how quickly the sound fades after it has finished sounding. A fast decay prevents unwanted lingering sound, allowing the next note to be heard clearly. This results in a tighter, overall sound with less distortion.

※2 DXT® is a registered trademark of SEAS Fabrikker AS.

【Related Articles on Our Website】

- [Ultra-thin Glass Diaphragms, the Key to Next-Generation Quality Sound Speakers | Nippon Electric Glass \(NEG\)](#)
- [Que UTG—World-first Earphones Incorporating Ultra-thin Glass Diaphragms Launched | Nippon Electric Glass \(NEG\)](#)

■ About GAIT (Glass Acoustic Innovations Co., Ltd.)

GAIT is the world's only glass processing company capable of precise 3D processing of Ultra-thin Glass, and the inventor of glass diaphragm technology. Founded in 2020, this startup is headquartered in Taipei, Taiwan.

In April 2024, we entered a strategic partnership with NEG to jointly advance the development, manufacturing, and market deployment of Ultra-thin Glass diaphragms for the audio industry.

【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: Production and sale of special glass products; manufacture and sale of glassmaking machinery

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

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<Contact regarding products>

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