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Nippon Electric Glass Co., Ltd.

**Nippon Electric Glass introduces the world's largest
highly efficient solar reflector with dielectric film
for solar thermal energy power generation**

Nippon Electric Glass Co., Ltd. (head office: Otsu, Shiga, Japan; President: Yuzo Izutsu) announces the introduction of a new highly efficient solar reflector.

<Overview>

Since 2003, Nippon Electric Glass (NEG) has been conducting the development and sale of special multi-layer reflectors that are manufactured using sputtering technology. Applying this technique to the area of environmental products, the company has been able to introduce a highly efficient solar reflector. At a size of 1.3 m × 1.0 m, it is the world's largest solar reflector with dielectric film, and it is expected to be used widely at solar thermal energy power generation facilities.

The sunlight contains light rays of various wavelengths, both visible and invisible. The new solar reflector is capable of efficiently reflecting light rays over a wide wavelength range, from visible to infrared rays.

<Features>

Compared with reflectors with metal film, reflectors with dielectric film excel in reflectance and thermal resistance. They are more capable of withstanding harsh environmental conditions, such as those in a desert (a typical site for solar thermal energy power generation facilities), over a long period of time. The solar reflector will maintain a high reflectance ratio even at the ambient temperature of 500°C, and it has a hard surface that resists sand particles and dust.

By forming films on both sides of the extremely smooth surfaces of the sheet glass with about 100 layers of dielectric film, NEG has been able to minimize mirror warpage and the diffusion of light, ensuring efficient reflecting of solar rays.

The glass has a low thermal expansion coefficient, high thermal resistance and high light transmittance. The optimum finishing of edge surfaces allows for high thermal shock resistance.

<Product specifications>

Average reflectance: 97% (at 400-2,500 nm wavelengths)

Maximum dimensions: 1,300 mm (W) x 1,000 mm (H)

Since the product is extremely durable, it can also be used for purposes other than solar thermal energy power generation—for example, as a thermal or light reflector.

The dimensions and the supported wavelengths are adjustable according to application.