

March 31, 2022 OHARA INC.

Impact resistant, high strength, clear glass-ceramics "NANOCERAM™" will be used as the Camera Protector in the KITSUNE microsatellite



OHARA INC. (Headquarters: Sagamihara-shi, Kanagawa; President Chief Executive Officer: Hirokazu Saito) is pleased to announce that a camera protector made of shock resistant, high strength, clear, glass-ceramics "NANOCERAM™" has been selected for use in the "KITSUNE" microsatellite. This microsatellite is manufactured by a consortium (the "HAK Consortium") consisting of Harada Seiki Kogyo Inc. (Hamamatsu-shi, Shizuoka), Addnics Corp. (Hachioji-shi, Tokyo), and Kyushu Institute of Technology (Kitakyushu-shi, Fukuoka).

As the International Space Station (ISS) handles satellites in a zero gravity space, it is necessary to minimize the risk to the astronauts and equipment of glass shattering inside the space station. "NANOCERAM™" was selected as the camera protector for this satellite after various tests demonstrated its extremely high strength and impact resistance values.

The microsatellite "KITSUNE" was launched on February 20, 2022 by a U.S. Antares rocket, and is currently being transported to the International Space Station (ISS) laboratory module "Kibo". The lab module is expected to be released into space around the end of March 2022, where it will conduct several demonstration tests, including ground imaging with a resolution of 5 meters from an altitude of approximately 400 km, and high-speed communications using a C-band communicator.

OHARA has a proven track record of using our optical glass and "CLEARCERAM™-Z" products in the space



industry, which requires strict quality standards, and now we have demonstrated that "NANOCERAM™" is also of "space quality".

OHARA will continue to evolve our materials by responding to the demands of cutting-edge technologies, applications and markets with "space quality" advanced materials.

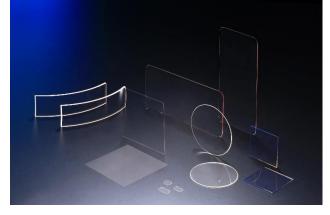
[Features of NANOCERAM™]

"NANOCERAM"" is a glass-ceramics with a two-phase structure consisting of a glass phase and a crystalline phase, which offers excellent impact resistance, high strength, and high transmittance.

"NANOCERAM"" can be used for all kinds of applications that require high durability and high transmittance, such as the cover glasses for optical and mobile devices.

In addition to its use as a camera protector for this

project, "NANOCERAM™" is suitable for use in other applications that cannot be realized with sapphire crystal glass or chemically strengthened glass.



(About us)

Since our founding in 1935, OHARA INC., been a leading optical glass company, developing and supplying glass materials for digital cameras and various other optical devices.

We have also developed various glass-ceramics materials based on the use of nanotechnology in optical glass. In addition to our impact resistant, high strength, clear, glass-ceramics "NANOCERAM™", we are also producing a zero-expansion glass-ceramics called "CLEARCERAM™-Z", a lithium-ion conducting glass-ceramics called "LICGC™", and others.

[Company Profile] (As of October 31, 2021)

Company Name: OHARA INC.

Head Office: 1-15-30, Oyama, Chuo-ku, Sagamihara-shi, Kanagawa, 252-5286, Japan

Representative: President Chief Executive Officer Hirokazu Saito

Business content: Manufacture and sale of glass materials for optical and electronics applications

Capital: 5,855 million yen

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