

World's first* "hydrophilic film mirror" is developed which does not get clouded by reacting to room light.

*According to our investigation as of June 8, 2000.

Ichikoh Industries, Ltd., a leading supplier of lamps and mirrors for automobile, successfully developed a "hydrophilic mirror" which does not get clouded by reacting to the room light in cooperation with Mr. Shin-ichi Kuroda (Gunma University) of Gunma Prefectural Industrial Research Institute, and jointly held a press conference on June 8 of this year at Gunma Prefectural Office.

While a hydrophilic film mirror, which does not get clouded by reacting to outside light such as ultraviolet, has already been productized, the new technology developed this time enhances anti-clouding performance by adding a specially processed layer to the hydrophilic film mirror to make the mirror easier to react to low energy room light such as fluorescent light.

This new technology is expected to be used in wide variety of fields such as living items in addition to vehicle indoor items, such as inside mirror of an automobile, and mirror at the sink in bath rooms. We plan to continue our joint research effort aiming at actual application to products in 2 years.

We, as a mirror supplier, have been engaged for a long time in development of door mirror which rejects hindrance to safe driving such as water drops and cloud due to rain or fog. And in July 1997, we entered into an agreement with Gunma Prefectural Industrial Research Institute, with whom we had relationship for some time for the research on thin film, for joint development of "ultra hydrophilic film using titanium dioxide photocatalyst thin film" and started our development effort.

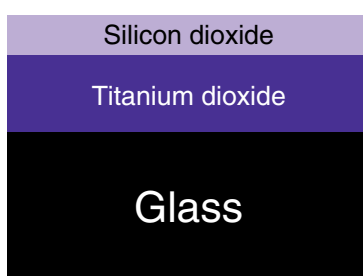
As a result of this joint study, hydrophilic film mirror having superiority in both the hydrophilic performance and the maintenance of hydrophilicity is realized by coating glass surface with titanium dioxide photocatalyst thin film and silicon dioxide film. Using such a mirror, when sunlight including a small percentage of ultraviolet hits the mirror, hydrophilic film surface activates by the effect of photocatalyst to dissolve oil stain and changes the surface characteristics to a one friendly to water, thus it becomes difficult for fine water drops, which causes clouding, to be developed. Productization of the mirror was successfully completed in August of last year, and the mirror has been selected by major auto manufacturers for use as door mirrors for their popular models, and production is under way.

It should be noted, however, that light with relatively short wavelength and high energy, such as ultraviolet, needs to hit this hydrophilic mirror in order to maintain clouding prevention effect. The cloud prevention effect was found to be not so effective in case of continuous cloudy days or under room light. Because of such limitation, we went forward with this joint development in cooperation with Mr. Kuroda of Gunma University, and finally reached success of the development of the new technology based on the new film structure.

Attached material

"Structure of the newly developed hydrophilic film"

Current hydrophilic film



Hydrophilic film developed this time

