MATSUNAMI's Technology (12 times in total)

Episode 10: Imprinting technology

Matsunami has imprint technology to form a fine structure on the glass surface. Using an ultra-high-definition mold, it is possible to directly mold nano/micro order resin microstructures on various glass substrates with high precision. Also, by adopting our original optical resin, it is possible to reach various optical characteristics and reliability.





• Fusion of the features of glass and resin

1) Glass-Resin complex structure; combination of environmental resistance / thermal stability of glass and easy molding of resin.

- 2) 1/10 or less on dimensional change; compare to All-Resin products, Glass-Resin are stable.
- 3) 1/5 or less on cost; compare to All-Glass products, Glass-Resin are cheaper.
- 4) Stability even in 85°C × 85%_1000hr、85°C⇔-40°C_1000cycle environmental test.

Realization of ultra precision microstructure

- 1) Fine structure with high dimensional accuracy is achieved by ultra-high-definition mold.
- 2) Various shapes including cylindrical, hexagon, square, circle, convex and concave, etc.
- 3) Applications including aspherical lenses, Toroidal lenses, Fresnel lenses, gratings, moss eyes, etc.



Specification

- 1) Maximum Size: 400*400mm
- 2) Substrate: various glass, film (0.1mm~2.0mm thickness)
- 3) Refractive index: 1.4~1.7
- 4) Single/double side molding, various coatings, and irregular shapes/drilling, etc.

Application

- · Sensing, imaging, optical communication components, light field display
- Refractive lenses, diffusion screen, anti-reflection, etc.



Lenticular lenses



Micro lenses array



Micro lenses