

Nano-laminate Precious Metal Coatings for Optical Mold
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Abstract

The glass molding process is considered to have a great potential for the mass production of aspherical or freeform optical components with high precision and lower cost. However, the glass molding has a serious problem of mold wear and sticking with glass which needs to be solved. The problems of mold wear can be improved by the deposition of nano-laminate precious metal coatings due to the interface strengthening mechanisms provided by nano-laminated interfaces. The precious metal based multilayers also give an excellent glass anti-sticking effects. The nano-laminated precious metal coated optical molds can significantly extend the service life of mold and also improve the surface qualities of molded glass lenses.

Keyword : Nano-laminate. Optical