Molding Plano-convex Lenses Using A Through-Hole WC/Co Plate as The Mold

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Abstract

This study aims to fabricate the plano-convex lens by glass molding process using a through-hole WC/Co plate as the mold. The effects of temperature, applied loadand arc chamfer on the surface morphology, curvature, and peak height of plano-convex lenses were investigated. The through-hole mold with arc chamfer favors stress release and avoids cracks and surface mark. A higher temperature favors glass material flowing outwards rather than downwards, which results in the molded lens with a smaller curvature and bigger size.

Keyword：plano-convex glass lens, molding. through hole mold