# A Novel Fabrication Method for Mold Insert of Injection Molded Microlens Array

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## Abstract

This paper reports a simple and novel procedure for mold insert of microlens array. The micro injection molding (MIM) and micro injection-compression molding (MICM) are used to replicate the microlens array. The 200 X 200 arrays of molded microlens, with a diameter of 150 mu m, a pitch of 200 mu m and a sag height of 11.236 mu m have been successfully fabricated. The average surface roughness of the Ni mold insert is 6.916 nm. The average surface roughness of the molded microlens array is 4.608 nm for MIM and 4.555 nm for MICM. The complete fabrication process of mold insert is executed at room temperature and low pressure for this paper.).