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Abstract
In this thesis, we proposed a novel process, which incorporates with the photolithography and soft molding techniques. For the Bragg grating fabrication, the stamping transfer technique, incorporated with holographic interference technology, was used to transfer the grating from soft rubber mold to the PDMS polymer mold. Then, we use the PDMS polymer mold to obtain the Bragg reflection waveguide on the OG polymer by using of the photolithography and soft molding techniques. This technique has the advantages such as simple treatment, low loss and fabrication cost. In the meanwhile, a Bragg reflection waveguide is applied for optical add/drop multiplexing (OADM) systems. Optical waveguide and grating were observed throgh SEM and AFM system. The observed results show the good performances of our devices. The optical transmission characteristics were measured in terms of optical spectrum analyzer (OSA).
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