URN etd-0407109-183711-903
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Statistics This thesis had been viewed 56 times. Download 0 times.
Department
Year 2005
Semester 2
Degree Master
Type of Document Master's Thesis
Language zh-TW.Big5 Chinese
Title A Fabrication of Polymer Planar Waveguide Bragg Reflection Devices based on Soft Molding Process
Date of Defense 0000-00-00
Page Count 64

Keyword
grating
non-photolithographic
PDMS

Abstract
In this thesis, we proposed a novel process, which incorporates with the photolithography and soft molding techniques, to fabricate Bragg reflection devices. Such devices are based on the planar polymer optical waveguides.
For the Bragg reflection grating fabrication, the stamping transfer technique, incorporated with holographic interference technology, was used to transfer the grating from soft rubber mold to the OG polymer mold.
Furthermore, we use the PDMS mold, being with the grating on it, and the UV epoxy to fabricate the planar type Bragg reflection waveguide devices. Use soft molding techniques to fabricate the low loss polymer optical waveguides and Large Scale production. The optical transmission characteristics were measured in terms of optical spectrum analyzer (OSA). The grating profiles of the devices were observed using SEM and AFM system.
Advisory Committee Chang Wen-Chung - advisor

Files No Any Full Text File.
Date of Submission 2006-06-28