URN etd-0407109-183702-92
Author Chiung-Cheng Wang
Author's Email Address No Public.
Statistics This thesis had been viewed 58 times. Download 0 times.
Department
Year 2006
Semester 2
Degree Master
Type of Document Master's Thesis
Language zh-TW.Big5 Chinese
Title Implementation of nano-polymer grating component through blue light laser
Date of Defense 0000-00-00
Page Count 47

Keyword
Blue Laser
He-Cd Laser
Grating

Abstract
In this research, it composed of photolithography and soft molding to create a novel fabrication technology. And then it associated with holographic interference lithography to produce a Nano-polymer Bragg grating component.

In this fabrication, we primarily utilize blue light laser and He-Cd laser along with the photolithography and holographic interference lithography to produce diffraction grating components. Moreover, the formed diffraction grating component would combine with micro-contact printing of non-photolithographic, micro-molding in capillaries and replica molding to fabricate the molding of a polymer grating component.

In the research, we measured and recorded the experiment results of polymer OG grating molding by AFM. The optical characteristics of grating are measured by blue light laser and He-Cd laser. The highest diffraction efficiency of blue light laser in single side of the first order has achieved 2%. The highest diffraction efficiency of He-Cd laser in single side of the first order has achieved 10%. Both of them inferred transmission rate of component are already reached 98%.
Advisory Committee Wen-Chung Chang - advisor

Files No Any Full Text File.
Date of Submission 2007-07-16