

Chrome mask design for microfluidic fabrication

Abstract

This paper presents a simple and effective method to design chrome mask for microfluidic fabrication. Microfluidic fabrication involves 9 major step and mainly depends on the master mold template formation by SU-8 photoresists using conventional photolithography process. The chrome mask was design using AutoCAD software. Essentially, mask is a crucial element in a microfluidic fabrication in which resolution requirements and precise alignment are vital, each mask needs to be precisely aligned with original alignment mark. Otherwise, it can't successfully transfer the original pattern to the wafer surface causing microchannel formation failure. Thus, the initial design is compared with the fabricated chrome mask to achieved a better result during device fabrication.

Keywords

Mask design; Master template; Microfluidic; Negative photoresists and pattern transfer