METHOD AND APPARATUS FOR CONTACT HOLE UNIT CELL FORMATION

ABSTRACT

A method for forming a contact hole unit cell is provided. A light transparent contact hole region of a first phase is positioned at a first plane. A light transparent phase-shifting region of a second phase is positioned at the first plane, the second phase being substantially out of phase with the first phase. The phase-shifting region substantially surrounds the contact hole region. A light transparent border region is positioned at the first plane outside and substantially surrounding the phase-shifting region. The border region has a phase substantially the same as that of the contact hole region. The contact hole region, the phase-shifting region, and the border region are positioned to cause light from the first plane to be reinforcing in a target contact hole configuration on a second plane and to be substantially neutralizing outside the target contact hole configuration on the second plane.

FIG 1