

Improvements on Maskless Grayscale Lithography in thick positive photoresist

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Maskless Grayscale lithography is a key technology to create structured surfaces in photoresist, especially for micro-optic applications. Processes of low-contrast positive resist are well known and used for thicknesses up to 60 μm . The possibility to fabricate higher structures, i.e. 80 μm , 100 μm high and beyond, are of great interest in the micro-optic world. With some double- and triple-coated layers of an experimental resist, we could make structures 83 μm and 100 μm tall. The triple-coated layer showed some limitations that we plan to overcome to go beyond 100 μm .