

ABSTRACT**AN OPTICAL INTERFERENCE DEVICE**

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An optical interference device 100 is disclosed herein. In a described embodiment, the optical interference device 100 comprises a phase shifter array 108 for receiving a collimated beam of light. The phase shifter array 108 includes an array of cells 128 for producing optical light channels from
10 respective rays of the collimated beam of light, with at least some of the optical light channels having varying phase shifts. The optical interference device 100 further includes a focusing lens 110 having a focal distance and arranged to simultaneously produce, from the optical light channels, a focused beam of light in its focal plane and an image downstream the phase shifter array 108 for
15 detection by an optical detector 116. The optical interference device 100 also includes an optical spatial filter 112 arranged at the focal distance of the focusing lens 110 and arranged to filter the focused beam of light to produce a spatially distributed interference light pattern in zeroth order for detection by the optical detector 116. A method for producing a spatially distributed interference
20 light pattern is also disclosed.

Figure 1

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