Modes measurement in optically induced liquid crystal waveguide

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Method for creation of optically induced waveguide and waveguides coupler in liquid crystal cell has been shortly presented. Modes structure in such waveguide has been investigated by m-line method to explain how and why such waveguides can be obtained.
Liquid crystals of high optical birefringence were exploited in the presented device, and modes analysis in such case has been done. Theoretical model in regime of Ericksen-Leslie equation has been presented as well. Finally theoretical and experimental proof as well as modes structure in the case of optically induced liquid crystal waveguides are completed.
Analysed device seems to open new possibilities in optical-optical switch in teletransmission.

References

(1) A. Walczak, E. Nowinowki-Kruszelnicki, *Optical Engineering* **2008***, vol.47, No.3*, 035402