Opti 380A – Intermediate Optics Lab I – Fall 2009

Post-Lab Questions for Lab 7: Waveplates and Stokes Vectors

Post-lab questions are due at the beginning of lecture on the Monday following your lab.

1.) Is it possible to obtain Vd=1 for the light transmitted through an interface at Brewster's angle if the illuminating beam is unpolarized? Explain your answer.

2.) In 150 words or less and one figure, explain the polarization principles of a liquid crystal display (LCD). A starting point may be http://en.wikipedia.org/wiki/Liquid_crystal_display.

3.) Assuming I use a polarizing beam splitter (PBS) with an extinction ratio of 100:1 and a perfect quarter-wave-plate, what is the best isolation ratio that can be achieved in an optical isolator?