

ELECTRICAL FRIEDERICKSZ TRANSITION  
IN A NEMATIC CELL WITH PERIODIC  
POLAR ANCHORING ENERGY

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S u m m a r y

The threshold value for the electrical Friedericksz transition in a nematic liquid crystal cell with the periodic energy of director anchoring with the cell surface has been derived, and the above-threshold spatial distribution of the director in the applied electric field has been determined. The threshold value was shown to depend nonmonotonously on the number  $s$  of anchoring energy periods across the cell length. The above-threshold distribution of the director at integer  $s$  traces a periodic variation of the anchoring energy. The amplitude of the director's periodic deviation grows with the reduction of the ratio between the cell thickness and the anchoring energy period.