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A Solution of Backlight Bleed Drawback of LCDs can be seen by Long Range Ordered Nematic Domain of Liquid Crystal 8CB DIPTI SHARMA, Wentworth Institute of Technology, Boston, MA — Most common liquid crystal device (LCD) uses nematic to isotropic phase transition of the liquid crystal to get more vibrant images and better contrast ratios in terms of how deep their blacks are. A contrast ratio is the difference between a completely on and off pixel, and LCDs can have "backlight bleed" where light (usually seen around corners of the screen) leaks out and turns black into gray. Completely on and off pixel can be related to the orientation of liquid crystal domain from nematic to Isotropic transition. This research focuses how long range ordered nematic domains can affect the nematic to isotropic phase transition of aligned 8CB liquid crystal and brings a quicker and early occurrence of nematic to isotropic phase transition with smaller wing tales.

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