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Stuart et al.

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(54) **LASER BACKLIGHTING FOR DISPLAYS**

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(52) **U.S. Cl.** **349/64; 372/39; 372/96; 345/102**

(58) **Field of Classification Search** None
See application file for complete search history.

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(57) **ABSTRACT**

Displays such as LCD panels are illuminated using frequency-doubled vertical extended cavity surface emitting lasers (VECSELs) as efficient light sources. Visible light from the VECSELs are directed to an illuminating panel using optical fibers and/or optical gratings to provide substantially uniform illumination of the illuminating panel. Visible light from the illuminating panel, which can be provided at a particular number of primary wavelengths by the VECSELs, is then used to illuminate the display.

20 Claims, 15 Drawing Sheets

