

US007956978B2

(12) United States Patent Zhang

(54) LIQUID-CRYSTAL DISPLAY DEVICE HAVING A PARTICULAR CONDUCTIVE LAYER

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- (*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.
- (21) Appl. No.: 12/165,783
- (22) Filed: Jul. 1, 2008

(65) **Prior Publication Data**

US 2009/0021684 A1 Jan. 22, 2009

Related U.S. Application Data

(62) Division of application No. 10/811,920, filed on Mar. 30, 2004, now Pat. No. 7,394,516, which is a division of application No. 09/316,697, filed on May 21, 1999, now Pat. No. 7,333,172, which is a division of application No. 08/768,066, filed on Dec. 16, 1996, now Pat. No. 5,995,189.

(30)**Foreign Application Priority Data**

Dec. 21, 1995 (JP) 7-350229

- (51) Int. Cl. G02F 1/1339 (2006.01)G02F 1/1333 (2006.01)
- (52)
- (58)Field of Classification Search 349/153, 349/158, 190

See application file for complete search history.

US 7,956,978 B2 (10) Patent No.:

Jun. 7, 2011 (45) Date of Patent:

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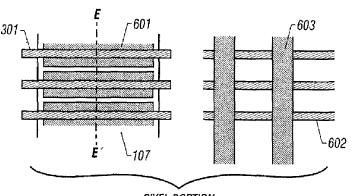
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(57)ABSTRACT

Techniques are provided for unifying steps of sealing material so that the yield and the reliability of a liquid-crystal display device become high. A starting film of scanning lines is patterned so that prismatic dummy wirings 301 for the first layer which are not electrically connected are formed in regions R1 and R2, and wirings 302 extending from the pixel section are formed in a region R3, and wirings 303 having connection end portions 303a are formed in a region R4. After an interlayer insulation film is formed, the starting film of the signal lines is patterned so that the dummy wirings 304 for the second layer are formed to embed the gaps between the wirings 301 to 303, and also the wirings 305 and the wirings 303 which extend from the pixel portion are connected to each other. This permits unification of the cross-sectional structure of the sealing material formation region.

50 Claims, 12 Drawing Sheets



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