

### (12) United States Patent

Kawase et al.

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#### (54) METHOD OF DRIVING DISPLAY PANEL, LUMINANCE CORRECTION DEVICE FOR DISPLAY PANEL, AND DRIVING DEVICE FOR DISPLAY PANEL

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(51) Int. Cl.

G09G 3/30 (2006.01)

Field of Classification Search .............. 345/74.1, 345/75.1, 75.2, 76, 77, 78, 89, 82, 83, 904;348/180-189; 324/121 R

See application file for complete search history.

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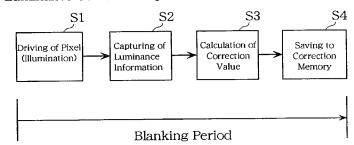
Primary Examiner—Kevin M. Nguyen (74) Attorney, Agent, or Firm—Steptoe & Johnson LLP

#### (57)**ABSTRACT**

In conventional methods of correction luminance in displays, it has been necessary to interrupt video display during use in order to carry out correction. This is a problem in that interruptions are not good for workability from the perspective of the user of the image display device. In consideration of this, the present invention realizes a display without non-uniformity in illumination with respect to both initial characteristics and change over time by measuring anode current of an FED and creating a luminance correction memory. In addition, by illuminating arbitrary pixels during video idle periods, capturing the luminance information from the pixels, and renewing a correction memory based on this luminance information, correction for change over time is possible without interrupting video display. Thus, a display device that can maintain high quality images is provided.

#### 66 Claims, 52 Drawing Sheets

#### Luminance Correction Operation





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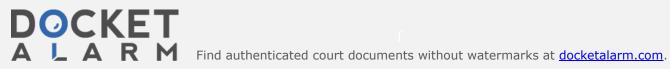


Fig. 1

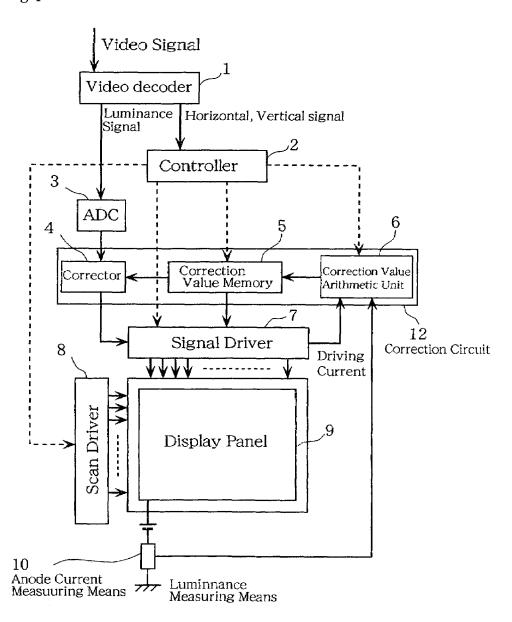


Fig. 2

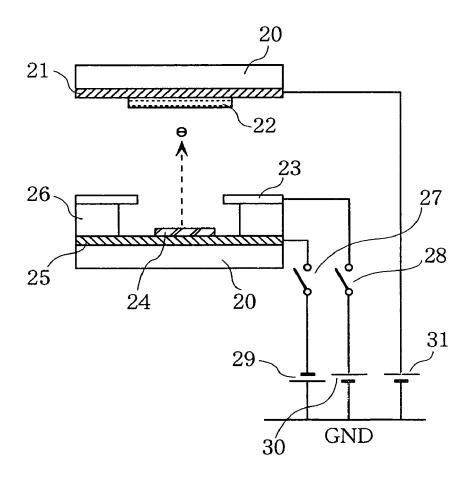
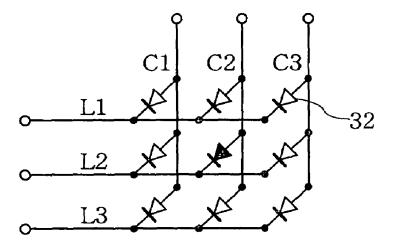




Fig. 3



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