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Kuratomi et al.

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(54) **IMAGE DISPLAY DEVICE**

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(51) **Int. Cl.**⁷ **G09G 5/00**

(52) **U.S. Cl.** **345/589**; 345/204; 345/44;
345/690; 348/678

(58) **Field of Search** 345/102, 204-207,
345/87, 10-11, 210, 19-21, 697, 699, 44,
47, 49, 51, 62, 75.2, 82-83, 589, 690; 348/68-69,
70-71, 377, 582, 609, 615, 678, 677

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(57) **ABSTRACT**

In a display device according to a first aspect of the invention, luminance is not made substantially uniform over the entire display screen but rather imparted a luminance gradient such that luminance substantially monotonously decreases from the center of the screen towards the peripheral portion using a luminance gradient forming means, whereby power consumption is reduced compared to cases in which the entire screen shows substantially uniform luminance. In a second aspect of the invention, by optimizing gray level characteristics and thereby improving a viewer's impression of brightness, luminance gradient is made even less perceivable without increasing power consumption. These configurations provide large screen, low power consumption display devices.

43 Claims, 34 Drawing Sheets

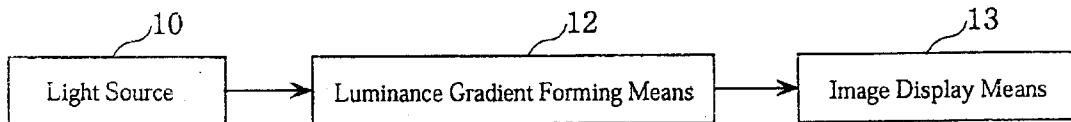


FIG. 1

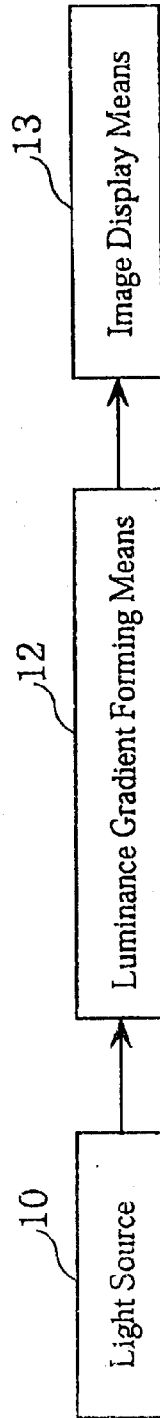


FIG. 2

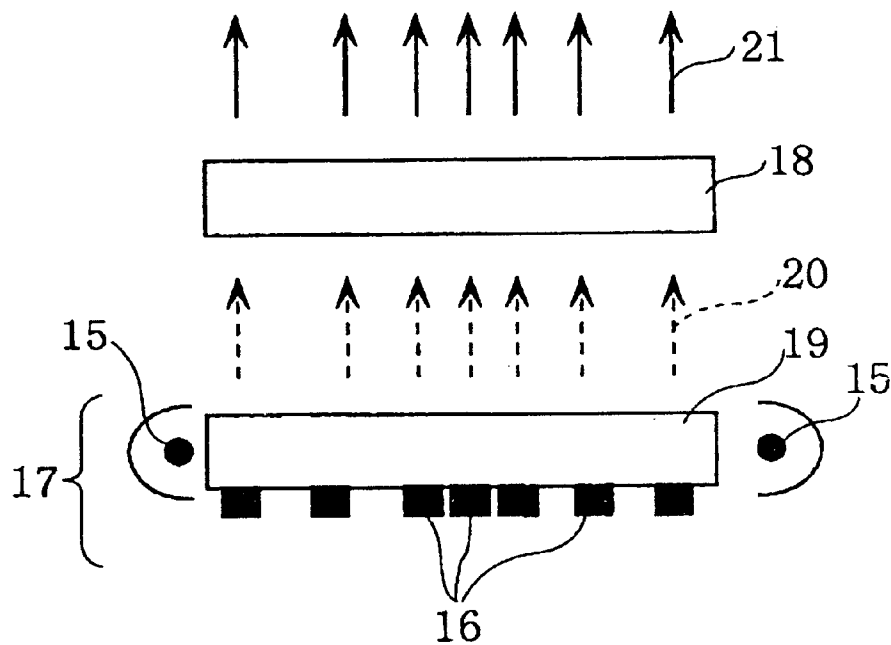


FIG. 3

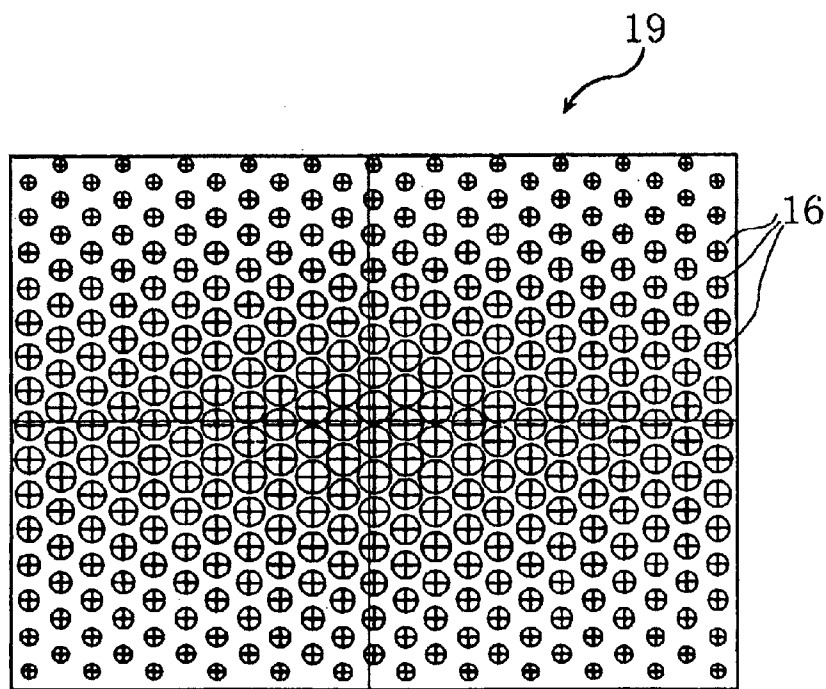
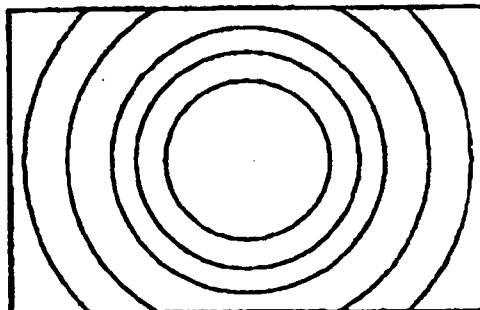


FIG. 4

$$r=(x^2+y^2)^{1/2}$$



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