

in the specification and drawings of Japanese Patent Application 2007-149884, and the content of the touch panel 10 is described later.

[0058] The display device with a touch panel includes a display panel 22. The display panel 22 shown in FIG. 2 is a liquid crystal display panel (excluding a polarizing plate) which is constituted of a pair of substrates with liquid crystal not shown in the drawing sandwiched therebetween. The display panel 22 is mounted on the second substrate 14 of the touch panel 10 on a side opposite to the first substrate 12. A first polarizing plate 24 is adhered to a surface of the display panel 22 on a side opposite to the second substrate 14.

[0059] A resin film 26 is adhered to the first substrate 12 on a side opposite to the second substrate 14. The resin film 26 constitutes a second polarizing plate (linear polarizing plate). That is, the liquid crystal display panel (excluding polarizing plate) which constitutes the display panel 22 is arranged between the first polarizing plate 24 and the resin film 26 which constitutes the second polarizing plate. During transmission of light through the touch panel 10, even when the birefringence of light is generated due to the first electrode 16 and the second electrode 18 so that the polarization surfaces of light are not aligned, the resin film 26 which constitutes the second polarizing plate is arranged outside the touch panel 10 and hence, it is possible to align the polarization surfaces after light passes through the touch panel 10 thus realizing the liquid crystal display through the resin film 26.

[0060] In the touch panel 10 according to this embodiment, the first electrode 16 is constituted of the plurality of metal lines. Accordingly, when a user touches the outer surface of the first substrate 12 with his finger or a pen in a sliding manner, due to convex portions formed by the first electrode 16 and the second electrode 18 and concave portions each of which is formed between neighboring metal lines, a user feels the unevenness of the outer surface. However, the resin film 26 is adhered to the touch panel 10 and hence, the unevenness attributed to the first electrode 16 (also attributed to the second electrode 18) can be absorbed whereby the user can enjoy excellent touch feeling.

[0061] FIG. 3 is a cross-sectional view schematically showing a display device with a touch panel according to a modification 1 of the embodiment of the present invention. In the modification 1, a cushion layer 28 is arranged between the resin film 26 and the touch panel 10 (first substrate 12). The cushion layer 28 is softer than the resin film 26, and is made of silicone, for example. The cushion layer 28 is transparent. According to the modification 1, the user can enjoy smoother writing feeling due to the provision of the cushion layer 28.

[0062] FIG. 4 is a cross-sectional view schematically showing a display device with a touch panel according to a modification 2 of the embodiment of the present invention. In the modification 2, an air cushion layer 30 (that is, space) is formed between the touch panel 10 (first substrate 12) and the resin film 26. The first substrate 12 and the resin film 26 are arranged with a gap formed therebetween by way of a sealing material 32 so that the air cushion layer 30 is hermetically sealed. The sealing material 32 may have a cushion property. According to the modification 2, the user can enjoy smoother writing feeling due to the provision of the air cushion layer 30.

[0063] FIG. 5 is a plan view schematically showing a display device with a touch panel according to a modification 3 of the embodiment of the present invention. FIG. 6 is a cross-sectional view schematically showing the display device with a touch panel according to the modification 3 of the embodi-

ment. Although a display panel 122 shown in FIG. 6 is an organic electroluminescence display panel (hereinafter, referred to as an "organic EL display panel"), the display panel 122 may be a field emission display panel. The touch panel 10 is adhered to a display screen of the display panel 122, and a resin film 126 is adhered to the touch panel 10. The resin film 126 is a circular polarizing plate and hence, the resin film 126 can enhance the visibility by preventing the reflection of light.

[0064] FIG. 7 is a cross-sectional view schematically showing a display device with a touch panel according to a modification 4 of the embodiment of the present invention. Although the display panel 122 shown in FIG. 7 is an organic EL display panel, the display panel 122 may be a field emission display panel. In the modification 4, the cushion layer 28 is arranged between the display panel 122 and the touch panel 10 (second substrate 14). The cushion layer 28 is softer than the resin film 126. The cushion layer 28 is transparent. According to the modification 4, the feeling of unevenness that a user perceives is further alleviated by the cushion layer 28 arranged below the touch panel 10 so that the user can enjoy smooth writing feeling.

[0065] Here, a liquid crystal display panel may also be used as the display panel 122 shown in FIG. 7. In this case, in place of the organic EL display panel, a liquid crystal display panel to which the first polarizing plate 24 (see FIG. 3) is adhered on a side opposite to the cushion layer 28 is disposed, and the second polarizing plate is used as the resin film 126.

[0066] FIG. 8 is a cross-sectional view schematically showing a display device with a touch panel according to a modification 5 of the embodiment of the present invention. Although the display panel 122 shown in FIG. 8 is an organic EL display panel, the display panel 122 may be a field emission display panel. In the modification 5, the air cushion layer 30 (that is, space) is formed between the touch panel 10 (second substrate 14) and the display panel 122. The second substrate 14 and the display panel 122 are arranged with a gap formed therebetween by way of the sealing material 32 so that the air cushion layer 30 is hermetically sealed. The sealing material 32 may have a cushion property. According to the modification 5, the feeling of unevenness which a user perceives is further alleviated by the air cushion layer 30 arranged below the touch panel 10 so that the user can enjoy the smooth writing feeling.

[0067] Here, a liquid crystal display panel may also be used as the display panel 122 shown in FIG. 8. In this case, in place of the organic EL display panel, a liquid crystal display panel to which the first polarizing plate 24 (see FIG. 4) is adhered on a side opposite to the air cushion layer 30 is disposed, and the second polarizing plate is used as the resin film 126.

[Touch Panel]

[0068] The touch panel of present invention may combine with a touch panel described in the specification and drawings of Japanese Patent Application 2007-149884. The content of the touch panel is explained hereinafter.

[Wiring Layout Mode 1]

[0069] FIG. 9 is a schematic plan view of the touch panel of this mode which adopts the touch panel described in the specification and drawings of Japanese Patent Application 2007-149884. The touch panel of this embodiment includes: a first substrate SUB1 and a second substrate SUB2 which are