110 formed on it is bonded to an intermediate substrate 602 made of, e.g., glass or plastic, via a temporary adhesion layer 601. As this temporary adhesion layer 601, it is possible to use, e.g., a water-soluble photo-setting adhesive, or wax or a hot-melt adhesive which softens when heated or cooled. The temporary adhesion layer 601 may be a pressure-sensitive adhesive or a film base having two surfaces coated with a pressure-sensitive adhesive. It is also possible to use a PET film or the like as the intermediate substrate 602, and a self-adhesive tape coated with a pressure-sensitive adhesive as the temporary adhesion layer 601. As the intermediate substrate 602, the same material and thickness as in the first embodiment can be used. In this embodiment, a glass substrate is used as the intermediate substrate 602, and an ultraviolet ray curable, pressure-sensitive adhesive is used as the temporary adhesion layer 601.

[0168] As shown in FIG. 22, the first non-alkaline glass substrate 201 is polished by, e.g., mechanical polishing, chemical polishing, or chemical mechanical polishing, thereby forming a first thin glass layer 101. The film thickness of this first thin glass layer 101 is favorably about 5 μm to 30 μm.

[0169] As shown in FIG. 23, the first thin glass layer 101 is bonded to a first plastic substrate 104 via a first adhesion layer 103. In this first adhesion layer 103, the characteristics of a peripheral region adhesion layer 1001 outside a seal 108 are different from those of a pixel region adhesion layer 1002. As in the first embodiment, the glass transition temperature of the pixel region adhesion layer 1002 is 30° C. (inclusive) to 80° C. (inclusive), and the glass transition temperature of the peripheral region adhesion layer 1001 is higher by 10° C. ore more than that of the pixel region adhesion layer 1002, and is about 80° C. (exclusive) to 200° C. (inclusive).

[0170] As shown in FIGS. 24A and 24B, ultraviolet rays are radiated from the intermediate substrate side to lower the adhesion properties of the temporary adhesion layer 601, thereby removing this temporary adhesion layer 601. The result is a structure including the first plastic substrate 104, the first adhesion layer 103 (made up of the peripheral region adhesion layer 1001 and pixel region adhesion layer 1002) on the first plastic substrate 104, the first thin glass layer 101 on the first adhesion layer 103, the active element circuit region 102 on the first thin glass layer 101, and the connecting pad electrode 110 on the first thin glass layer 101.

[0171] Subsequently, in positions indicated by the dotted lines in FIG. 24A and the arrows in FIG. 24B, a portion from the first thin glass layer 101 to the first plastic substrate 104 is cut to extract a portion serving as a display device as shown in FIGS. 25A and 25B.

[0172] As shown in FIGS. 26A and 26B, a seal 502 is applied by a dispenser or the like so as to surround a region in which pixels are present. At the same time, a liquid crystal injection hole 204 is formed. The seal 502 can be, e.g., an ultraviolet ray curable adhesive or thermosetting adhesive, and is preferably a material which hardens at low temperatures.

[0173] As shown in FIGS. 27A and 27B, a plastic substrate 501 on which a common electrode 205 is formed and the first non-alkaline glass substrate 201 on which the active element circuit region 102 and connecting pad electrode 110 are formed are coupled and bonded by hardening the seal 502, such that the common electrode 205 and active element circuit region 102 oppose each other. Although the materials of the first plastic substrate 104 and plastic substrate 501 are preferably the same, they may be different. The film thickness of the plastic substrate 501 is favorably about 10 μm to 200 μm. This plastic substrate 501 can be made of, e.g., an inorganic film such as a silicon oxide film or an organic coating film such as an epoxy-based resin, and is preferably coated. When coating the plastic substrate 501 effectively functions as a barrier against water and gas such as oxygen. Either one or both of the surfaces of this plastic substrate 501 can be coated. In this embodiment, PES is used as the plastic substrate 501, and its surface opposing the common electrode 205 is coated with a silicon oxide film about 50 nm to 500 nm thick.

[0174] A liquid crystal layer 109 is formed by injecting the liquid crystal from the injection hole 204 shown in FIGS. 28A and 28B, and this injection hole 204 is sealed with a resin 203 as shown in FIGS. 29A and 29B. In this structure shown in FIGS. 29A and 29B, polarizers 206 are bonded to the first plastic substrate 104 and plastic substrate 501. However, these polarizers need not be directly bonded to these substrates.

[0175] The active matrix type display device of this embodiment can achieve the same effects as in the first embodiment. Also, only the common electrode 205 is formed, and the plastic substrate 501 is used as a substrate which is not subjected to a high-temperature process. Since this further increases the strength, the display device can be bent with a small radius of curvature. Furthermore, the number of steps can be reduced because the plastic substrate 501 can be directly formed without any steps of thinning and bonding a glass substrate.

[0176] (Seventh Embodiment)

[0177] As shown in FIGS. 30A and 30B, an active matrix type display device of the seventh embodiment differs from the first embodiment in that a plurality of adhesive resin members 701 are formed between an active element circuit region 102 and common electrode 205. These adhesive resin members 701 are formed so that a first plastic substrate 104 having the active element circuit region 102 formed on it and a second plastic substrate 107 having the common electrode 205 formed on it are bonded not only on the perimeters of these substrates but also on their inside surfaces. The adhesive resin members 701 are scattered at predetermined intervals in the pixel region.

[0178] More specifically, before the first plastic substrate 104 on which the active element circuit region 102 is formed and the second plastic substrate 107 on which the common electrode 205 is formed are coupled, a plurality of adhesive resin members are formed in appropriate positions on the active element circuit region 102. When these adhesive resin members 701 are formed on the active element circuit region 102 by using a thermoplastic resin, the active element circuit region 102 and common electrode 205 are bonded by heat and pressure when the two substrates are coupled.

[0179] Pillars 311 formed in the first embodiment keep the distance between the two substrates, and these pillars 311 and the adhesive resin members 701 can be independently formed. That is, both the pillars 311 and adhesive resin