

the first mother substrate **108a**, the transmissive conductive film made of ITO or the like and the low resistive metal film made of silver or the like are sequentially formed by the sputtering method or the deposition method. Then, the films are simultaneously etched and patterned in a combined shape of the planar electrode **12a** and the low resistive films **13**. Subsequently, the metal film disposed at the upper layer side is etched and patterned in the shape of each of the low resistive films **13**. The same is applied to the counter substrate. That is, first, on the surface of the second mother substrate **108b**, the transmissive conductive film made of ITO or the like and the low resistive film made of silver or the like are sequentially formed by the sputtering method or the deposition method. Then, the films are simultaneously etched and patterned in a combined shape of the planar electrode **12b**, the low resistive films **14**, the auxiliary electrodes **18**, and the terminal portion **16**. Subsequently, the metal film disposed at the upper layer is etched and patterned in the shape of each of the low resistive films **14**, the auxiliary electrodes **18**, and the terminal portion **16**.

[0088] By adopting such a process, a film structure having a low interfacial resistance between the planar electrode and the wiring portion can be obtained. Further, the wiring portion having a narrow frame can be formed by using photolithography techniques.

[0089] After the conductive films are formed in such a manner, the sealing material **9** is formed on a peripheral portion of each substrate region **8d** of the first mother substrate **108a** or the second mother substrate **108b** by a printing method. Here, an injecting inlet (not shown) for injecting the liquid material **15** is formed in a portion of the formed sealing material **9**. Further, on one of the mother substrates, a buffing member for relieving an impact applied to the front surface-side substrate is formed by using a soft material such as silicon or urethane. This buffing structure may be used as a spacer structure for gap control. Subsequently, the two mother substrates **108a** and **108b** are arranged, such that corresponding substrate regions **8d** face each other, and are bonded by pressing one mother substrate on the other mother substrate. FIG. 4A shows a case in which the mother substrates are bonded such that corresponding substrate regions **8d** face each other. Moreover, reference numeral **C1** denotes a cutting line when the mother substrates **108a** and **108b** are cut.

[0090] Next, as shown in FIG. 4B, the portion of each substrate region of the first mother substrate **108a** serving as the coordinate input surface is selectively reduced in thickness to form the concave portion (the thin-plate region) **H1**. In the present embodiment, after other portions than the portion serving as the coordinate input surface are masked with resist or the like, chemical etching is performed by using a fluoric acid-based etching solution, such that the thickness of the portion of the substrate where the concave portion **H1** is formed is in a range of from about 0.1 mm to 0.2 mm. At this time, in a step of FIG. 4C, in order to easily cut the substrates, an interval **d1** between the cutting line **C1** and the circumferential position **P1** of the concave portion **H1** (that is, a frame width of the thick-plate region arranged in a frame shape around the concave portion **H1**) is set to be equal to or more than 0.3 mm. Further, the circumferential position **P1** of the concave portion **H1** is arranged outside the internally circumferential position **P2** of the sealing material

9 (outside the coordinate input surface) and the thick-plate region is arranged on or outside the sealing material **9** provided in the ring shape.

[0091] Next, the first and second mother substrates **108a** and **108b** are cut along the peripheries of the respective substrate region **8d** to obtain a plurality of blank panels (touch panels before the liquid material **15** is injected) **4a** shown in FIG. 4C. Subsequently, as shown in FIG. 4D, the liquid material **15** is injected into the gap trough the injecting inlet of each blank panel **4a** in a vacuum manner. Then, a sealing material such as mold resin or the like is filled in the injecting inlet and hardened to seal the injecting inlet. In such a manner, the touch panel **4** is manufactured.

[0092] Moreover, the liquid material **15** is filled by using the vacuum injection method in the present embodiment, but the liquid material **15** may be filled by using other methods. First, the sealing material **9** is formed in a closed ring shape on one of the mother substrate and the liquid material **15** is disposed in liquid droplets on the one of the mother substrates or the other substrate in droplets. Then, under a vacuum condition, these mother substrates are bonded and the sealing member **9** is hardened. Finally, the first and second mother substrates **108a** and **108b** are cut to separate the plurality of touch panels **4** from each other.

[0093] Next, a manufacturing method of the liquid crystal panel **2** will be described with reference to FIGS. 5A to 5D. In the present embodiment, a method in which a plurality of liquid crystal panels **2** are formed in a lump with large mother substrates, each having a plurality of substrate regions, and the respective liquid crystal panels **2** are separated from each other by cutting is adopted.

[0094] In this method, first, as shown in FIG. 5A, a third mother substrate **124a** including a plurality of substrate regions, each serving as the front surface-side substrate **22a** of the liquid crystal panel **2**, and a fourth mother substrate **124b** including a plurality of substrate regions, each serving as the rear surface-side substrate **22b**, are prepared. Then, on each of the substrate regions **24d** of the third mother substrate **124a**, the front surface-side electrode **26a**, the liquid crystal alignment control layer having the alignment film (not shown) or the like, and the terminal pattern **33** are formed. Further, on each of the substrate regions **24d** of the fourth mother substrate **124b**, the rear surface-side electrodes **26b** and the liquid crystal alignment control layer having the alignment film (not shown) or the like are formed. Here, as the mother substrate **124a** or **124b**, a thick substrate having the thickness of 0.5 mm is used. If the two substrates **124a** and **124b** have the different thickness, in a step of FIG. 5C, when cutting the substrate, a stress is dispersed, such that cutting cannot be performed. Thus, both substrates **124a** and **124b** have the substantially same thickness.

[0095] Next, the sealing material **23** is formed in a ring shape on the peripheral portion of each substrate region of the third mother substrate **124a** or the fourth mother substrate **124b** by the printing method. Here, an injecting inlet (not shown) for injecting liquid crystal **32** is formed in a portion of the formed sealing material **23**. Further, on one of the mother substrates, spacers **29** for gap control are provided. Subsequently, the two mother substrates **124a** and **124b** are arranged, such that corresponding substrate regions **24d** face each other, and are bonded by pressing one mother