[0018] FIG. **3** is a schematic cross section drawing of yet another touch panel consistent with the principles of the present invention.

[0019] FIG. **4** is a schematic cross section drawing of a typical conventional touch panel.

[0020] In the figures, elements that are repeatedly illustrated are consistently identified by a single reference numeral.

DETAILED DESCRIPTION OF THE INVENTION

[0021] The following table provides a key to the reference numerals and elements depicted in the drawings:

10	Touch panel
12	Film substrate
14	Touch panel film
16	Anchor layer
18a	Transparent electrode film
18b	Transparent electrode film
20	Touch panel substrate
22	Housing part
24	Display
26	Coating layer

[0022] Embodiments of the present invention are described below with reference to the drawings. FIG. **1** shows a first embodiment of the present invention wherein a touch panel **10** is provided with a touch panel film **14** comprising a film substrate **12** made of PET or the like and having a thickness of approximately 180 to 200 μm, for example. A transparent electrode **18***a* made of ITO film or the like is formed in a predetermined pattern on the rear surface of the touch panel film **14** with an anchor layer **16** disposed therebetween. The touch panel film **14** is affixed to the film substrate **12**, which faces a touch panel substrate **20** on which a transparent electrode **18***a* and an opposing transparent electrode **18***b* are formed with a small gap therebetween. Then, the touch panel substrate **20** is affixed to the display surface of a liquid crystal or other display **22** formed from glass or transparent resin.

[0023] The film substrate **12** of the touch panel film **14** may be formed, for example, of polyethylene terephthalate (PET), or a transparent polymer such as a polyester polymer, a polycarbonate polymer, diacetyl cellulose, an acrylic polymer and so on. Moreover, a styrene polymer such as polystyrene, polyethylene, an olefin polymer such as polypropylene, a polyvinyl chloride polymer, or an amid polymer typified by nylon or aromatic polyimide and the like having excellent transparency may also be used. Additionally, an imide polymer, a sulfone polymer, a vinyl alcohol polymer, a vinylidene chloride polymer, an arylate polymer, and the like having excellent appropriate transparency may be used according to the application.

[0024] The transparent electrode **18** is formed by vacuum-based thin film formation technology such as sputtering, and the anchor layer **16** is coated with a material and formation method similar to that of a curing resin **25** of a coating layer **24**, as further described herein below.

[0025] On the rear surface of the film substrate **12** of the touch panel film **14** is formed a coating layer **24**, and in the coating layer **24** is dispersed a filler **26** of particles that are distributed and aligned substantially uniformly in a layer within the curing resin **25**. The filler **26** has an average particle size of 0.1 μm to 0.01 μm, and the arithmetic particle roughness Ra of the coating layer is 0.1 μm to 0.01 μm. Additionally, the Ra of the coating layer **24** is $1/2000^{th}$ to $1/4000^{th}$ of the pixel pitch of the display **22** to which the touch panel is attached.

[0026] As examples of the curing resin **25** of the coating layer **24**, a UV curing resin is preferable, and monofunctional acrylate or multifunctional acrylate is used.

[0027] For the filler **26** in the curing resin **25** of the coating layer **24**, a substance comprising a metallic oxide or a metallic fluoride such as Al_2O_3, Bi_2O_3, CeO_2, In_2O_3, $In_2O_3.SnO_2$, MgF_2, Sb_2O_5, $Sb_2O_5.SnO_2$, SiO_2, SnO_2, TiO_2, Y_2O_3, ZnO, or ZrO_2 may be used. Moreover, two or more substances comprising a metallic oxide or a metallic fluoride may be combined to produce the filler **26**.

[0028] The coating layer **24** may be formed using, for example, a roll coater, doctor knife, bar coater, gravure roll coater, curtain coater, spin coater or the like. Conventional spray or dipping methods or the like may also be used.

[0029] Antiglare processing is performed on the touch panel **10** of this embodiment to form a roughness finer than the corresponding pixel pitch of the display **22**, so that even when using an ultra-high resolution display **22** having a pixel pitch of 0.2 mm or smaller, glare from extraneous light and reflections is suppressed, display glare and color separation do not occur, and the visibility is good.

[0030] Next, a second embodiment of the touch panel of the present invention is explained with reference to FIG. **2**. Configurations that are the same as in the above-described first embodiment are assigned the same reference numerals, and their descriptions are omitted herein.

[0031] A touch panel **30** is provided with a touch panel film **34** comprising a film substrate **32** made of PET or the like, and having a thickness of approximately 180 to 200 μm, for example. An anchor layer **36** is provided on the touch panel substrate side surface of the film substrate **32**, and a transparent electrode **38***a* is formed in a predetermined pattern on the front surface of the anchor layer **36**. A filler **37** of particles are distributed and aligned substantially uniformly in a layer of curing resin **39** of the anchor layer **36**. The filler has an average particle size of 0.1 μm to 0.01 μm, and an Ra of the anchor layer **36** is 0.1 μm to 0.01 μm. Additionally, the Ra of the anchor layer **36** is $1/2000^{th}$ to $1/4000^{th}$ of the pixel pitch of the display to which the touch panel is attached. The curing resin **39** of the anchor layer **36** may comprise the same material as the curing resin **25** of the coating layer **24**.

[0032] A third embodiment of the touch panel of the present invention is explained with reference to FIG. **3**. Configurations that are the same as in the above-described embodiments are assigned the same reference numerals, and their descriptions are omitted herein. A touch panel **40** is provided with a touch panel film **44** comprising a film substrate **42** made of PET or the like, and having a thickness of approximately 180 to 200 μm, for example. A surface having an Ra of 0.1 μm to 0.01 μm is formed on a side of the touch panel film **44** opposite that on which a transparent electrode **38***a* similar to that of the above-described second embodiment is formed. The surface of the touch panel film **44** is formed by heating and then pressing thereto a mold **43** of metal or the like having a surface on which is formed a pattern having an Ra of 0.1 μm to 0.01 μm. The surface of the mold **43** may be treated, for example, with a TEFLON treatment or other mold release process.

[0033] Similar to the second embodiment, an anchor layer **36** is also provided on the surface of the film substrate **42** on the touch panel side, and a transparent electrode **38***a* is