formed in a predetermined pattern on the surface of the anchor layer **36**. A filler **37**, similar to that described above, of particles that are distributed and aligned substantially uniformly in a layer is provided within the curing resin **39** of the anchor layer **36**, and the Ra of the anchor layer **36** is 0.1 μm to 0.01 μm. The arithmetic particle roughnesses (Ra's) on the front and rear surfaces of the touch panel film **44** are 1/2000th to 1/4000th of the pixel pitch of the display to which the touch panel is] attached.

[0034] The touch panel of the present invention is not limited to the above-described embodiments, and a number of methods for forming surface roughness may be selected as appropriate. In addition to the above-described use of a filler or of mold transfer, etching, sandblasting, embossing, and the like may also be used to process the layer surfaces to achieve the desired Ra's. Moreover, the surface coarseness of the anchor layer can be set appropriately according to the pixel pitch of the display being used. In addition to ITO films, indium-zinc oxide (IZO) or other transparent electrode material may be used for the transparent electrode film. The thickness and qualities of the film substrate and other materials may also be set appropriately

What is claimed is:

1. A touch panel comprising:

a transparent film substrate and a transparent electrode film formed on one surface thereof; wherein

an arithmetic particle roughness (Ra) of 0.1 μm to 0.01 μm is formed on a surface of the film substrate opposite to another surface on which the transparent electrode is formed, and the arithmetic particle roughness (Ra) is formed to 1/2000th to 1/4000th of the pixel pitch of a display to be attached to the touch panel.

2. A touch panel comprising:

a transparent film substrate;

a transparent electrode film formed on one surface of the transparent film substrate;

a coating layer provided on another surface of the transparent film substrate, and

a filler of fine particles distributed and aligned substantially uniformly in a layer within resin in the coating layer; wherein the filler has an average particle size of 0.1 μm to 0.01 μm, a surface of the coating layer is formed to exhibit an arithmetic particle roughness (Ra) of 0.1 μm to 0.01 μm, and the Ra is formed to 1/2000th to 1/4000th of the pixel pitch of the display to be attached to the touch panel.

3. A touch panel comprising:

a transparent film substrate and a transparent electrode film formed on one surface of the transparent film substrate; wherein

a mold formed to have an arithmetic particle roughness (Ra) of 0.1 μm to 0.01 μm is pressed against the other surface of the film substrate on the side opposite that on which the transparent electrode is formed, thereby forming the other surface of the film substrate such the it exhibits arithmetic particle roughness (Ra) of 0.1 μm to 0.01 μm, the Ra being selected to be 1/2000th to 1/4000th of the pixel pitch of a display to be attached to the touch panel.

4. A touch panel film according to claim **1** wherein an anchor layer is disposed between one surface of the film substrate and the transparent electrode, and a filler of fine particles is distributed and aligned substantially uniformly in a layer within resin in the anchor layer; the filler having an average particle size of 0.1 μm to 0.01 μm, thereby forming an arithmetic particle roughness (Ra) of 0.1 μm to 0.01 μm on a surface of the anchor layer, the Ra being formed between 1/2000th to 1/4000th of the pixel pitch of the display to be attached to the touch panel.

5. A method for forming a touch panel, comprising the steps of:

forming a transparent electrode film on a transparent film substrate; and

forming a surface of the transparent film substrate opposite to another surface on which the transparent electrode is formed, wherein the formed surface has an arithmetic particle roughness (Ra) of 0.1 μm to 0.01 μm, and wherein the Ra is selected to be between 1/2000th to 1/4000th of the pixel pitch of a display to be attached to the touch panel.

6. A method for forming a touch panel, comprising the steps of:

forming a transparent electrode film formed on one surface of a transparent film substrate;

forming a coating layer provided on another surface of the transparent film substrate, and

a filler of fine particles distributed and aligned substantially uniformly in a layer within resin in the coating layer; wherein the filler has an average particle size of 0.1 μm to 0.01 μm, a surface of the coating layer is formed to exhibit an arithmetic particle roughness (Ra) of 0.1 μm to 0.01 μm, and the Ra is formed to 1/2000th to 1/4000th of the pixel pitch of the display to be attached to the touch panel.

7. A method for forming a touch panel, comprising the steps of:

forming a transparent electrode film formed on one surface of a transparent film substrate;

forming a mold having an arithmetic particle roughness (Ra) of 0.1 μm to 0.01 μm;

pressing the mold against the other surface of the film substrate on the side opposite that on which the transparent electrode is formed, thereby forming the other surface of the film substrate such the it an Ra of 0.1 μm to 0.01 μm, the Ra being selected to be 1/2000th to 1/4000th of the pixel pitch of a display to be attached to the touch panel

8. A touch panel film according to claim **2** wherein an anchor layer is disposed between one surface of the film substrate and the transparent electrode, and a filler of fine particles is distributed and aligned substantially uniformly in a layer within resin in the anchor layer; the filler having an average particle size of 0.1 μm to 0.01 μm, thereby forming an arithmetic particle roughness (Ra) of 0.1 μm to 0.01 μm on a surface of the anchor layer, the Ra being formed between 1/2000th to 1/4000th of the pixel pitch of the display to be attached to the touch panel.

9. A touch panel film according to claim **3** wherein an anchor layer is disposed between one surface of the film substrate and the transparent electrode, and a filler of fine particles is distributed and aligned substantially uniformly in a layer within resin in the anchor layer; the filler having an average particle size of 0.1 μm to 0.01 μm, thereby forming an arithmetic particle roughness (Ra) of 0.1 μm to 0.01 μm on a surface of the anchor layer, the Ra being formed between 1/2000th to 1/4000th of the pixel pitch of the display to be attached to the touch panel.

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