CLAIMS

Claim 1. A display panel in which one pixel is formed by a plurality of sub-pixels, wherein:

when a region including one pixel is divided into a plurality of rectangular regions, at least one of the rectangular regions includes two or more sub-pixels; and

in each of the sub-pixels, the length of the side in parallel with the short side of the rectangular region is substantially the same, and in at least one of the sub-pixels, the length of the side in parallel with the long side of the rectangular region is different.

Claim 2. The display panel according to claim 1, wherein:

in the display panel, each of the plurality of sub-pixels has a rectangular shape, and the long sides of the rectangular shapes are arranged side by side in the same direction; and

in the sub-pixels, the lengths of the short sides of the rectangular shapes are substantially the same as each other, and in at least one of the sub-pixels, the length of the long side of the rectangular shape is different.

Claim 3. The display panel according to claim 1 or 2, wherein:

in the display panel, each of the plurality of sub-pixels is formed by a sub-pixel electrode having alignment regulation means, and at least one of the sub-pixels includes two or more sub-pixel electrodes; and

in plan view of the pixel in the display panel, the distance between the alignment regulation means and the edge of the sub-pixel electrode is substantially the same for the sub-pixel electrodes in two or more sub-pixels in the same pixel.

Claim 4. The display panel according to claim 1 or 2, wherein:

in the display panel, each of the plurality of sub-pixels is formed by a sub-pixel electrode having two or more kinds of alignment regulation means; and

in plan view of the pixel in the display panel, the distance between one kind of the alignment regulation means and the other kind of the alignment regulation means is substantially the same for sub-pixel electrodes in two or more sub-pixels in the same pixel.

Claim 5. The display panel according to any of claims 1 to 4, wherein: in plan view of the main surface of the panel, the pixel includes a rectangular light shielding region in a region that is included in the display region and is other than the region in which the sub-pixel is arranged.

Claim 6. The display panel according to claim 5, wherein a thin-film transistor is arranged in the light shielding region.

Claim 7. The display panel according to claim 5 or 6, wherein a columnar spacer is arranged in the light shielding region.

Claim 8. The display panel according to any of claims 5 to 7, wherein a sub-pixel electrode and/or a storage capacitance wiring are/is arranged in the light shielding region.

Claim 9. The display panel according to any of claims 1 to 8, wherein in the display panel, the polarity of the potential of the sub-pixel electrode for display of each

color is reversed at every natural number multiple of the number of sub-pixels included in one pixel in the same row direction.

Claim 10. The display panel according to any of claims 1 to 9, wherein:

one of the pair of substrates includes scanning lines, signal lines, storage capacitance wirings, a thin-film transistor connected to each of the scanning lines and each of the signal lines, and a sub-pixel electrode connected to the thin-film transistor;

the other of the pair of substrates includes a common electrode;

the sub-pixel electrode is arranged in correspondence with one sub-pixel; and

at least one of the size of the switching element and the value of the storage capacitance of the sub-pixel having the large area is larger than at least one of the size of the switching element and the value of the storage capacitance of the sub-pixel having the small area.

Claim 11. The display panel according to any of claims 1 to 10, wherein: the display panel is a liquid crystal display panel using a liquid crystal layer as a display element.

Claim 12. A display device comprising the display panel according to any of claims 1 to 11.

CLAIMS

1. A display panel in which one pixel is formed by a plurality of sub-pixels, wherein:

when a region including one pixel is divided into a plurality of rectangular regions, at least one of the rectangular regions includes two or more sub-pixels; and

in each of the sub-pixels, the length of the side in parallel with the short side of the rectangular region is substantially the same, and in at least one of the sub-pixels, the length of the side in parallel with the long side of the rectangular region is different; and

a region, that is other than the region in which each of the sub-pixels is arranged, is arranged in a space that is formed in correspondence with the reduced length of the side in parallel with the long side of the rectangular region, a light shielding region is arranged in the region that is other than the region in which each of the sub-pixels is arranged, thin-film transistors and/or contact holes of the sub-pixels having longer length of the side in parallel with the long side of the rectangular region are arranged in the light shielding region.

2. The display panel according to claim 1, wherein:

in the display panel, each of the plurality of sub-pixels has a rectangular shape, and the long sides of the rectangular shapes are arranged side by side in the same direction; and

in the sub-pixels, the lengths of the short sides of the rectangular shapes are substantially the same as each other, and in at least one of the sub-pixels, the length of the long side of the rectangular shape is different.

3. The display panel according to claim 1 or 2, wherein:

in the display panel, each of the plurality of sub-pixels is formed by a sub-pixel electrode having alignment regulation means, and at least one of the sub-pixels includes two or more sub-pixel electrodes; and

in plan view of the pixel in the display panel, the distance between the alignment regulation means and the edge of the sub-pixel electrode is substantially the same for the sub-pixel electrodes in two or more sub-pixels in the same pixel.

4. The display panel according to claim 1 or 2, wherein:

in the display panel, each of the plurality of sub-pixels is formed by a sub-pixel electrode having two or more kinds of alignment regulation means; and

in plan view of the pixel in the display panel, the distance between one kind of the alignment regulation means and the other kind of the alignment regulation means is substantially the same for sub-pixel electrodes in two or more sub-pixels in the same pixel.

5. The display panel according to any of claims 1 to 4, wherein: in plan view of the main surface of the panel, the pixel includes a rectangular light shielding region in a region that is included in the display region and is other than the region in which the sub-pixel is arranged.

6. The display panel according to claim 5, wherein a thin-film transistor is arranged in the light shielding region.

7. The display panel according to claim 5 or 6, wherein a columnar spacer is arranged in the light shielding region.

8. The display panel according to any of claims 5 to 7, wherein a sub-pixel electrode and/or a storage capacitance wiring are/is arranged in the light shielding region.

9. The display panel according to any of claims 1 to 8, wherein in the display panel, the polarity of the potential of the sub-pixel electrode for display of each color is reversed at every natural number multiple of the number of sub-pixels included in one pixel in the same row direction.

10. The display panel according to any of claims 1 to 9, wherein:

one of the pair of substrates includes scanning lines, signal lines, storage capacitance wirings, a thin-film transistor connected to each of the scanning lines and each of the signal lines, and a sub-pixel electrode connected to the thin-film transistor;

the other of the pair of substrates includes a common electrode; the sub-pixel electrode is arranged in correspondence with one sub-pixel; and

at least one of the size of the switching element and the value of the storage capacitance of the sub-pixel having the large area is larger than at least one of the size of the switching element and the value of the storage capacitance of the sub-pixel having the small area.

11. The display panel according to any of claims 1 to 10, wherein: the display panel is a liquid crystal display panel using a liquid crystal layer as a display element.

12. A display device comprising the display panel according to any of claims 1 to 11.