CLAIMS

What is claimed is:

1. A light emitting diode (LED) display panel, comprising:

a back plate; and

a pixel structure comprising a plurality of pixels, wherein each of the pixels comprises:

a reflector structure disposed on the back plate, the reflector structure having a first reflective bank structure and a second reflective bank structure, the first reflective bank structure having a first bank opening, and the second reflective bank structure having a second bank opening, wherein the first bank opening has a first shape, the second bank opening has a second shape, and the second shape is a mirror shape of the first shape or a 180° symmetrical shape of the first shape; and

a first LED and a second LED disposed on the back plate and emitting light of a same color, wherein the first LED is disposed within the first bank opening of the first reflective bank structure, and the second LED is disposed within the second bank opening of the second reflective bank structure;

wherein for each of the pixels, the first shape is a polygonal shape, and at least two corners of the first shape have an included angle less than 90°, and

wherein for each of the pixels in a first row, the first bank opening and the second bank opening are disposed to mirror each other along a first direction, and for each of the pixels in a second row adjacent to the first row, the first bank opening and the second bank opening are disposed to mirror each other along a second direction different from the first direction.

2. The LED display panel of claim 1, wherein for each of the pixels, the first bank opening and the second bank opening are disposed to mirror each other along a same direction.

3. The LED display panel of claim 1, wherein for each of the pixels, the first shape of the first bank opening is a triangle.

4. The LED display panel of claim 3, wherein for each of the pixels, the first LED is disposed within an LED area in the first bank opening, the LED area has a similar triangular shape to the triangle forming the first shape, and vertices of the similar triangular shape of the LED area are located at midpoints of median lines connecting vertices of the first shape to a centroid of the first shape.

5. The LED display panel of claim 4, wherein for each of the pixels, the first LED is located at the centroid of the first shape, and the second LED is correspondingly located at a centroid of the second shape.

6. The LED display panel of claim 3, wherein the first shapes of the first bank openings of all of the pixels are identical.

7. The LED display panel of claim 1, wherein for each of the pixels, the first shape of the first bank opening is a parallelogram or a trapezoid.

8. The LED display panel of claim 1, wherein for each of the pixels, the first reflective bank structure has two first sidewalls located at two sides of the first bank opening, and along a sectional plane perpendicular to the back plate and crossing the first LED, each of the first sidewalls extends slantly outward from the back plate to define an acute angle α between the back plate and each of the first sidewalls, wherein the acute angle α is in a range between 20° and 80°.

9. The LED display panel of claim 1, wherein the pixels comprise a plurality of red (R)

pixels, a plurality of green (G) pixels, and a plurality of blue (B) pixels.

10. The LED display panel of claim 9, wherein an area of the first bank opening of each of the B pixels is greater than an area of the first bank opening of each of the R pixels, and an area of the first bank opening of each of the B pixels is greater than the area of the first bank opening of each of the G pixels.

11. The LED display panel of claim 10, wherein the area of the first bank opening of each of the R pixels is greater than the area of the first bank opening of each of the G pixels.

12. The LED display panel of claim 10, wherein the area of the first bank opening of each of the G pixels is greater than the area of the first bank opening of each of the R pixels.

13. The LED display panel of claim 9, wherein the first shapes of the first bank opening of the R pixels are identical, the first shapes of the first bank opening of the G pixels are identical, and the first shapes of the first bank opening of the B pixels are identical.

14. The LED display panel of claim 9, wherein the first shapes of the first bank openings of at least two of the R pixels are different from each other, the first shapes of the first bank openings of at least two of the G pixels are different from each other, and the first shapes of the first bank openings of at least two of the B pixels are different from each other.

15. The LED display panel of claim 1, wherein for each of the pixels, the first reflective bank structure and the second reflective bank structure are connected to each other.

16. The LED display panel of claim 1, wherein for each of the pixels, the first reflective bank structure and the second reflective bank structure are separated from each other.

17. The LED display panel of claim 1, further comprising an active driving layer having a plurality of driving units, wherein each of the driving units is configured to drive a corresponding one of the pixels, and each of the driving units has a shape different from a combination of the first shape of the first bank opening and the second shape of the second bank opening of the corresponding one of the pixels.

18. The LED display panel of claim 17, wherein the shape of each of the driving units is a rectangle, a square, a triangle, or a combination thereof.