WHAT IS CLAIMED IS:

1. A display device, comprising:

a substrate;

a first light emitting diode, located on the substrate;

an encapsulant, covering the first light emitting diode; and

a first Fresnel lens, located on the encapsulant and overlapping with the first light emitting diode, wherein a width of the first Fresnel lens is 4 to 10 times a width of the first light emitting diode, and a radius of curvature of the first Fresnel lens is 45%-55% of the width of the first Fresnel lens.

2. The display device of claim 1, wherein the encapsulant encapsulates the first light emitting diode, and the first Fresnel lens is located on a surface of the encapsulant.

3. The display device of claim 1, wherein the first Fresnel lens and the encapsulant have a same material, and the refractive index of the first Fresnel lens is 1.5.

4. The display device of claim 1, further comprising:

a second light emitting diode, located on the substrate, and the encapsulant covers the second light emitting diode;

a second Fresnel lens, located on the encapsulant and overlapping with the second light emitting diode, wherein a width of the second Fresnel lens is 4 to 10 times a width of the second light emitting diode, and the second Fresnel lens is separated from the first Fresnel lens; and

a black matrix, located on the substrate and surrounding the first light emitting

diode and the second light emitting diode, wherein the black matrix is not overlapping with the first Fresnel lens and the second Fresnel lens.

5. The display device of claim 4, wherein the encapsulant covers the black matrix.

6. The display device of claim 1, wherein the width of the first light emitting diode is 18 micrometers to 381 micrometers.

7. The display device of claim 1, wherein a distance from a top surface of the first Fresnel lens to the first light emitting diode is 8 micrometers to 500 micrometers.

8. The display device of claim 1, wherein in a direction perpendicular to the substrate, a center of the first Fresnel lens is overlapping with a center of the first light emitting diode.

9. The display device of claim 1, wherein a top surface of the first Fresnel lens includes a circular protrusion at the center, a first annular protrusion surrounding the circular protrusion, a second annular protrusion surrounding the first annular protrusion, and a third annular protrusion surrounding the second annular protrusion, wherein a width of the circular protrusion is greater than the width of the first light emitting diode.

10. The display device of claim 1, further comprises:

a supporting structure; and

a cover lens, overlapping with the substrate, and the supporting structure is

located between the substrate and the cover lens, wherein a top surface of the supporting structure is closer to the cover lens than a top surface of the first Fresnel lens.

11. The display device of claim 1, further comprises:

a bank structure, surrounding the first light emitting diode, wherein the encapsulant fills an opening of the bank structure and covers the first light emitting diode, wherein in a direction perpendicular to the substrate, a top surface of the first Fresnel lens is overlapping with a side wall of the opening of the bank structure and a part of a top surface of the bank structure.