What is claimed is:

1. A micro light emitting diode having a high light extraction efficiency comprising:

a bottom conductive layer;

a light emitting layer on the bottom conductive layer;

a top conductive structure on the light emitting layer;

a bottom dielectric layer positioned between the bottom conductive layer and the light emitting layer; and

a conductive side arm connecting a sidewall of a bottom layer of the light emitting layer and the bottom conductive layer.

2. The micro light emitting diode according to claim 1, further comprising an ohmic contact layer positioned between the top conductive structure and the light emitting layer.

3. The micro light emitting diode according to claim 2, wherein lateral width of the ohmic contact layer is much narrower than that of the light emitting layer.

4. The micro light emitting diode according to claim 2, wherein the top conductive structure directly covers the ohmic contact layer and a substantial portion of the light emitting layer is unshielded by the ohmic contact layer.

5. The micro light emitting diode according to claim 2, wherein the ohmic contact layer is a metal film.

6. The micro light emitting diode according to claim 3, wherein thickness of the ohmic contact layer is less than 20 nm, and the lateral width of the ohmic contact layer is less than 0.5 μm.

7. The micro light emitting diode according to claim 2, wherein material of the ohmic contact layer includes at least one or more selected from of the group consisting of group I, group II, group III, group IV, group VI, and group VIII of metals from a periodic table.

8. The micro light emitting diode according to claim 2, wherein the top conductive structure is transparent and the ohmic contact layer is transparent.

9. The micro light emitting diode according to claim 1, wherein the bottom dielectric layer is a composite reflective layer.

10. The micro light emitting diode according to claim 9, wherein the composite reflective layer includes multiple layers comprising at least an insulating reflective dielectric layer and a composite metal reflective layer, and the composite metal reflective layer is positioned at bottom of the insulating reflective dielectric layer and contacts the bottom conductive layer.

11. The micro light emitting diode according to claim 10, wherein the composite metal reflective layer has multiple layers.

12. The micro light emitting diode according to claim 10, wherein the insulating reflective dielectric layer further comprises a top insulating dielectric layer and a bottom Bragg mirror.

13. The micro light emitting diode according to claim 12, wherein the top insulating dielectric layer has no less than three layers.

14. The micro light emitting diode according to claim 12, wherein material of the top insulating dielectric layer is metal oxide.

15. The micro light emitting diode according to claim 1, wherein lateral width of the bottom conductive layer is larger than that of the bottom dielectric layer, so that the bottom conductive layer has a protruded top extending outside of the bottom dielectric layer; and one end of the conductive side arm is connected to a bottom layer of the light emitting layer and at least part of another end of the conductive side arm is connected to and supported on the protruded top of the bottom conductive layer.

16. The micro light emitting diode according to claim 1, wherein lateral width of the bottom dielectric layer is not less than width of bottom of the light emitting layer.

17. The micro light emitting diode according to claim 1, wherein the conductive side arm has an inverted L shape.

18. The micro light emitting diode according to claim 1, wherein the conductive side arm is attached and connected to a sidewall of the bottom dielectric layer.

19. The micro light emitting diode according to claim 1, wherein the micro light emitting diode has a light extraction efficiency of at least 20%.

20. The micro light emitting diode according to claim 1, wherein the micro light emitting diode has a light extraction efficiency of at least 40%.