CLAIMS

1. A black curable composition for a wafer level lens, comprising (A) titanium black, (B) a polymerization initiator, and (C) a polymerizable compound, and (D) an organic pigment, wherein the (D) organic pigment is at least one selected from the group consisting of a red pigment, an orange pigment and a violet pigment.

2. The black curable composition for a wafer level lens according to claim 1, wherein the particle diameter of the (A) titanium black is from 10 nm to 1 μm.

3. The black curable composition for a wafer level lens according to claim 1 or 2, wherein the content of the (A) titanium black is from 5 to 70% by mass relative to the total mass of the composition.

4. The black curable composition for a wafer level lens according to any one of claims 1 to 3, further comprising a binder polymer.

5. The black curable composition for a wafer level lens according to claim 4, wherein the content of the binder polymer is from 1.0 to 5.0% by mass relative to the total solid amount of the composition.

6. The black curable composition for a wafer level lens according to any one of claims 1 to 5, wherein the (C) polymerizable compound is selected from the group consisting of a monofunctional acrylate, a monofunctional methacrylate, a polyfunctional acrylate, and a polyfunctional methacrylate.

7. The black curable composition for a wafer level lens according to any one of claims 1 to 6, wherein the (C) polymerizable compound is at least one selected from the group consisting of dipentaerythritol penta(meth)acrylate, dipentaerythritol hexa(meth)acrylate, and dipentaerythritol having 5 or 6 chains each of which is composed of at least one ethyleneglycol residue or propyleneglycol residue and has a (meth)acryloyl group at a terminal thereof.

8. The black curable composition for a wafer level lens according to any one of claims 1 to 7, wherein the (B) polymerization initiator is an oxime ester compound.

9. A wafer level lens comprising a light-shielding section obtained by curing the black curable composition for a wafer level lens according to any one of claims 1 to 8.

10. A method of forming a light-shielding pattern including:

forming a black curable layer containing the black curable composition for a wafer level lens of any one of claims 1 to 8 on a substrate on which a plurality of lenses are provided; and

patternwise exposing the black curable layer to light and developing the black curable layer, thereby forming, at peripheral regions of the plurality of lenses, light-shielding portions containing a cured product of the black curable composition for a wafer level lens.

11. Use of the black curable composition according to any one of claims 1 to 8 for the manufacture of a wafer level lens.

12. The black curable composition for a wafer level lens according to any one of claims 1 to 8, wherein the (D) organic pigment is a red pigment.