# CLAIMS

1. An eyeglass lens configured to cause rays that have entered from an object-side surface to be emitted from an eyeball-side surface, and cause the emitted rays to converge at a predetermined position A, the eyeglass lens comprising:

a lens base material having a plurality of base material convex portions on at least one of the object-side surface and the eyeball-side surface; and

a coating film covering the surface provided with the base material convex portions,

wherein a shape of convex portions present on the outermost surface of the eyeglass lens located on a side on which the base material convex portions are provided is an approximate shape of the base material convex portions configured to cause rays that have entered the eyeglass lens to converge at a position B that is closer to the object than the predetermined position A is.

2. The eyeglass lens according to claim 1,

wherein a shape of the outermost surface of the coating film includes a coating film convex portion originating from the base material convex portions,

the coating film convex portion is configured to cause rays that have entered the eyeglass lens to converge at the position B that is closer to the object than the predetermined position A is, and

the maximum absolute value of differences in a lens thickness direction between a spherical surface that is optimally approximated to a shape of the coating film convex portion and the shape of the actual coating film convex portion is 0.1 μm or less.

3. The eyeglass lens according to claim 2,

wherein the coating film convex portion is configured to cause rays that have entered the eyeglass lens to converge at the position B that is closer to the object than the predetermined position A is by an amount in a range of more than

0 mm and 10 mm or less.

4. The eyeglass lens according to claim 2 or 3,

wherein, out of a large number of rays that can be obtained by ray tracing calculation, evenly enter a predetermined range of the object-side surface of the eyeglass lens, and pass through the coating film, the number of stray light rays that do not pass through the vicinity of the predetermined position A or the vicinity of the position B that is closer to the object is less than or equal to 30% of the number of incident rays.

5. The eyeglass lens according to any of claims 2 to 4,

wherein the full width at half maximum of a profile curve of astigmatism at a base of the coating film convex portion in an astigmatism distribution for the shape of the outermost surface of the coating film is 0.20 mm or less.

6. The eyeglass lens according to any of claims 1 to 5,

wherein the coating film includes a λ/4 film that is in contact with the lens base material, a hard coating film formed on the λ/4 film, and an antireflection film formed on the hard coating film.

7. The eyeglass lens according to claim 6,

wherein a refractive index of the lens base material is higher than that of the λ/4 film, and a refractive index of the λ/4 film is higher than that of the hard coating film.

Claims

1. An eyeglass lens configured to cause rays that have entered from an object-side surface to be emitted from an eyeball-side surface, and cause the emitted rays to converge at a predetermined position A which is a wearer's retina, the eyeglass lens comprising:

a lens base material having a plurality of base material convex portions on at least one of the object-side surface and the eyeball-side surface; and

a coating film covering the surface provided with the base material convex portions,

wherein

a height of the base material convex portions is in a range of 0.1 to 10 μm,

a radius of curvature of a surface of the base material convex portions is in a range of 50 to 250 mmR,

the coating film includes a hard coating film,

convex portions present on the outermost surface of the eyeglass lens on a side on which the base material convex portions are provided are coating film convex portions originating from the base material convex portions,

the maximum absolute value of differences in a lens thickness direction between a spherical surface that is approximated to a shape of the coating film convex portion and the shape of the coating film convex portion is 0.1 μm or less,

either of the following (1) or (2) is satisfied,

a base portion which is other than the coating film convex portions on the outermost surface of the eyeglass lens on the side on which the base material convex portions are provided causes rays that have entered the eyeglass lens to converge at the predetermined position A,

the coating film convex portions on the outermost surface of the eyeglass lens on the side on which the base material convex portions are provided causes rays that have entered the eyeglass lens to converge at a position B that is closer to the object than the predetermined position A is,

(1) the shape of the spherical surface that is approximated to the shape of the coating film convex portions is a spherical surface shape which minimizes sum of square of differences in the lens thickness

direction between the shape of the coating film convex portions and the spherical surface shape when the spherical surface shape is disposed to overlap the shape of the coating film convex portions, and protrusions start from the base portion on the outermost surface of the eyeglass lens and end at the base portion through the vertex,

(2) the shape of the spherical surface that is approximated to the shape of the coating film convex portions is a spherical surface shape when a vertex of the shape of the spherical surface that is approximated to the shape of the coating film convex portions and a vertex of the coating film convex portions are matched.

2. The eyeglass lens according to claim 1,
wherein the (1) is satisfied.

3. The eyeglass lens according to claim 1 or 2,
wherein the coating film convex portions are configured to cause rays that have entered the eyeglass lens to converge at the position B that is closer to the object than the predetermined position A is by an amount in a range of more than 0 mm and 10 mm or less.

4. The eyeglass lens according to any of claims 1 to 3,
wherein the coating film includes a λ/4 film that is in contact with the lens base material, a hard coating film formed on the λ/4 film, and an antireflection film formed on the hard coating film.

5. The eyeglass lens according to claim 4,
wherein a refractive index of the lens base material is higher than that of the λ/4 film, and a refractive index of the λ/4 film is higher than that of the hard coating film.

6. The eyeglass lens according to any of claims 1 to 5,
wherein the thickness of the hard coat film is 1.5 to 1.9 μm.