CONTACT LENS WITH SHADOW EFFECT

BACKGROUND

Contact lenses can be colored or tinted to provide a variety of effects to the appearance of the eye. This can be done to correct a problem with the appearance of the eye or for cosmetic purposes. Such contact lenses can be used to enhance a particular aspect of one's appearance or even one's overall appearance. The invention is directed to contact lenses that perform these functions through a shadow effect.

It is desirable to retain the cosmetic lenses of the invention in a particular position on the eye, keep the lenses within a range of positions on eye, or return the lens to a particular position or range of positions after movement of the lens. This maintenance of the on-eye orientation of a lens typically is accomplished by altering the mechanical characteristics of the lens. Prism stabilization including decentering of the lens' front surface relative to the back surface, thickening of the inferior lens periphery, forming depressions or elevations on the lens' surface, and truncating the lens edge are examples of stabilization approaches. Additionally, dynamic stabilization has been used in which the lens is stabilized by the use of thin zones, or areas in which the thickness of the lens' periphery is reduced. Typically, the thin zones are located at two regions that are symmetric about either the vertical or horizontal axis of the lens from the vantage point of its on-eye placement.

SUMMARY OF THE INVENTION

The invention is a contact lens with a central portion and a peripheral portion disposed about the central portion. The peripheral portion contains a cosmetic pattern consisting of a colored or tinted portion (dark arc) that provides a shadow effect. This cosmetic pattern is located on the superior half of the lens, above the horizontal meridian. The peripheral portion can be colored white in areas other than the dark arc and can have a pattern that graduates to transparent towards the outer diameter of the lens. The invention is also a method of providing a shadow effect by providing a contact lens which contains a cosmetic pattern consisting of a colored or tinted portion.

Claims

1. A contact lens comprising a central zone, an iris zone about the central zone, a peripheral zone about the iris zone, a rotational stabilization feature, a horizontal bisector, a vertical bisector, and a cosmetic pattern located superior to the horizontal bisector, and in the iris zone designed to provide a shadow effect, wherein the lens is rotationally stabilized with thin zones located in the iris or peripheral zones.

2. The lens according to claim 1, wherein the cosmetic pattern is arcuate.

3. The lens according to claim 1, further comprising a limbal ring pattern.

4. The lens according to claim 1, wherein the peripheral zone is tinted white.

5. The lens according to claim 1, wherein the cosmetic pattern is asymmetrical around the vertical meridian.

6. A method of manufacturing a contact lens comprising a central zone, an iris zone about the central zone, a peripheral zone about the iris zone, a rotational stabilization feature, a horizontal bisector, a vertical bisector, and a cosmetic pattern located superior to the horizontal bisector and in the iris zone, designed to provide a shadow effect, wherein the lens is rotationally stabilized with thin zones located in the iris or peripheral zones, and wherein the cosmetic pattern is printed or lithographed by ink jet printing or photolithography respectively.

7. A method of enhancing the appearance of a wearer's eyes by providing a contact lens comprising a central zone, an iris zone about the central zone, a peripheral zone about the iris zone, a rotational stabilization feature, a horizontal bisector, a vertical bisector, and a shadow cosmetic pattern located superior to the horizontal bisector.

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It is desirable to retain the cosmetic lenses of the invention in a particular position on the eye, keep the lenses within a range of positions on eye, or return the lens to a particular position or range of positions after movement of the lens. This maintenance of the on-eye orientation of a lens typically is accomplished by altering the mechanical characteristics of the lens. Prism stabilization including decentering of the lens' front surface relative to the back surface, thickening of the inferior lens periphery, forming depressions or elevations on the lens' surface, and truncating the lens edge are examples of stabilization approaches. Additionally, dynamic stabilization has been used in which the lens is stabilized by the use of thin zones, or areas in which the thickness of the lens' periphery is reduced. Typically, the thin zones are located at two regions that are symmetric about either the vertical or horizontal axis of the lens from the vantage point of its on-eye placement.

SUMMARY OF THE INVENTION

The invention is a contact lens with a central portion and a peripheral portion disposed about the central portion. The peripheral portion contains a cosmetic pattern consisting of a colored or tinted portion (dark arc) that provides a shadow effect. This cosmetic pattern is located on the superior half of the lens, above the horizontal line defining a bisector. The peripheral portion can be colored white in areas other than the dark arc and can have a pattern that graduates to transparent towards the outer diameter of the lens. The invention is also a method of providing a shadow effect by providing a contact lens which contains a cosmetic pattern consisting of a colored or tinted portion.

Claims

1. A contact lens comprising a central zone, an iris zone about the central zone, a peripheral zone about the iris zone, a rotational stabilization feature, a horizontal bisector, a vertical bisector, and a cosmetic pattern located superior to the horizontal bisector, and in the iris zone designed to provide a shadow effect, wherein:
   a) the lens is rotationally stabilized with thin zones located in the iris or peripheral zones;
   b) the most superior portion of the cosmetic pattern is substantially equidistant from both ends of the horizontal bisector;
   c) the cosmetic pattern is arcuate; and
   d) the peripheral zone is tinted white.

2. The lens according to claim 1, further comprising a limbal ring pattern.

3. The lens according to claim 1, wherein the cosmetic pattern is asymmetrical around the vertical line defining the bisector.

4. A method of manufacturing a contact lens comprising a central zone, an iris zone about the central zone, a peripheral zone about the iris zone, a rotational stabilization feature, a horizontal bisector, a vertical bisector, and a cosmetic pattern located superior to the horizontal bisector and in the iris zone, which is arcuate and designed to provide a shadow effect, wherein the lens is rotationally stabilized with thin zones located in the iris or peripheral zones, and wherein the shadow cosmetic pattern is printed or lithographed by ink jet printing or photolithography respectively, wherein the most superior portion of the cosmetic pattern is substantially equidistant from both ends of the horizontal bisector and the peripheral zone is tinted white.

5. A method of enhancing the appearance of a wearer's eyes by providing a contact lens as claimed in claim 1.