Claims

1. A contact lens, the lens including an optic zone comprising:

   a central region, the central region having a first optical axis, a base power, a centre of curvature that is on the first optical axis and a first radius of curvature; and

   an annular region, wherein the annular region is tilted relative to the central region and has a radial curvature add power that is greater than the base power, wherein

   light rays passing through the central region form a focused image at a distal focal surface, and light rays passing through the annular region do not form a spot of light at a distal focal surface; and

   wherein there is an increase in radial sagittal power at a boundary between the central region and the annular region, and the radial sagittal power increases with increasing radial distance towards the outer edge of the annular region.

2. A contact lens according to claim 1, wherein the increase in radial sagittal power at the boundary between the central region and the annular region is more than +2.0D.

3. A contact lens according to claim 1 or claim 2, wherein the base power of the central region results from a curvature of an anterior surface and/or a posterior surface of the lens.

4. A contact lens according to any preceding claim, wherein the radial curvature power of the annular region results from a curvature of an anterior surface and/or a posterior surface of the lens.

5. A contact lens according to any preceding claim, wherein at a point halfway across the radial width of the annular region, the annular region has a radial curvature power that is about +10.0 D greater than the base power.

6. A contact lens according to claim 1 or any of claims 3 to 5, wherein at a point halfway across the radial width of the annular region, the annular region has a radial sagittal power that is +2.0 D greater than the base power.

7. A contact lens according to any of claims 1 to 4, wherein at a point halfway across the radial width of the annular region, the annular region has a radial sagittal power that is +4.0 D greater than the base power, and a radial curvature power that is +12.0 D greater than the base power.

8. A contact lens according to any preceding claim, wherein the base power of the lens is between 0.5 D and -15.0 D.

9. The contact lens according to any preceding claim, wherein the lens comprises an elastomer material, a silicone elastomer material, a hydrogel material, or a silicone hydrogel material, or mixtures thereof.

10. The contact lens according to any preceding claim, wherein the lens is formed using a lathing process or a cast molding process.

11. A method of manufacturing a contact lens, the method comprising:

forming a contact lens according to any preceding claim using a lathing or cast molding process.

12. A method according to claim 11, including a step of designing the contact lens, wherein designing the contact lens comprises:

(a) modelling a first contact lens, the first contact lens having:

a central region, wherein the central region has a base power and a centre of curvature that is on a first optical axis; and

an annular region that surrounds the central region, the annular region having a radius of curvature that is centred on the first optical axis, wherein a curvature of the annular region gives rise to a first add-power that is greater than the base power;

(b) modelling a second contact lens, wherein the second contact lens has the same central region as the first contact lens, and an annular region that surrounds the central region, wherein the annular region has a radius of curvature that is centred on the optical axis, and the annular region gives rise to a second add-power that is greater than the first add power of the first contact lens;

(c) within the model, tilting the annular region of the second contact lens, such that an outer edge of the annular region matches an outer edge of the annular region of the first lens, thereby generating a third contact lens, wherein the annular region of the third lens has the second add-power of the annular region of the second contact lens, but a centre of curvature that is a first distance from the first optical axis.

13. A method according to claim 12, comprising manufacturing a lens based on the modelled third contact lens.