Claims

1. A contact lens for use in preventing or slowing the development or progression of myopia, the lens including an optic zone comprising:

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

    an annular region, wherein the annular region surrounds the central region, is tilted relative to the central region, and comprises:

        at least one maximum add power meridian having a curvature providing a maximum add power and centred on a centre of curvature that is a first distance from the first optical axis; and

        at least one intermediate add power meridian having a curvature providing an intermediate add power of between zero dioptres of add power and the maximum add power and centred on a centre of curvature that is at a different distance from the optical axis than the first distance, wherein the add power of the annular region varies continuously between the at least one add power meridian and the at least one intermediate add power meridian.

2. The contact lens according to claim 1, wherein the annular region further comprises at least one base-power meridian, having the curvature providing the base power and centred on the centre of curvature of the central region.

3. The contact lens according to any preceding claim, wherein the curvatures providing the base power, the maximum add power, and the intermediate add power are curvatures of the anterior surface of the lens.

4. The contact lens according to any preceding claim, wherein the annular region is tilted relative to the central region such that the lens has a sagittal, i.e., slope-based power at the midpoint of the at least one maximum add power meridian that matches the power that the central region would have if it were extended out to that midpoint.

5. The contact lens according to claim any preceding claim wherein the annular region comprises a periodic arrangement of maximum add power meridians separated by intermediate add power meridians.

6. The contact lens according to claim 5 wherein the power of the annular region varies in a sinusoidal, stepwise, triangular or sawtooth manner around the circumference of the annular region.

7. The contact lens according to any preceding claim, wherein the central region is substantially circular in shape and has a diameter of between 2 and 7 mm.

8. The contact lens according to any preceding claim, wherein the annular region extends radially outwards from a perimeter of the central region by between 0.5 and 1.5 mm.

9. The contact lens according to any preceding claim, wherein the base power is between 0.5 and -15.0 diopters.

10. The contact lens according to any preceding claim, wherein the maximum add power meridian of the annular region has an add power of between +0.5 and +10.0 diopters.

11. The contact lens according to any preceding claim, comprising at least two concentric annular regions, wherein each of the annular regions comprises at least one maximum add power meridian having a curvature providing a maximum add power and centred on a centre of curvature that is a first distance from the optical axis, and at least one intermediate add power meridian having a curvature providing an intermediate add power of between zero dioptres of add power and the maximum add power and centred on a centre of curvature that is at a different distance from the optical axis than the first distance.

12. 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.

13. The contact lens according to any preceding claim, wherein the lens is a molded contact lens.

14. The method of manufacturing a contact lens according to any preceding claim, the method comprising:

forming a contact lens, wherein the lens comprises:

a central region, the central region having a base power; and

an annular region, wherein the annular region surrounds the central region, is tilted radially relative to the central region, and comprises:

at least one maximum add power meridian having a curvature providing a maximum add power and centred on a centre of curvature that is a first distance from the first optical axis; and

at least one intermediate add power meridian having a curvature providing an intermediate add power of between zero dioptres of add power and the maximum add power and centred on a centre of curvature that is at a different distance from the optical axis than the first distance, wherein the add power of the annular region varies continuously between the at least one add power meridian and the at least one intermediate add power meridian.