WHAT IS CLAIMED IS:

1. A lens blank for a fluid lens, the lens blank comprising:

a rigid lens; and

a semi-flexible inflatable membrane attached to the rigid lens,

wherein the lens blank is divided into at least two zones, the zones comprising:

a cavity zone extending radially outward from a central area of the lens blank, forming a cavity between the membrane and the rigid lens in the cavity zone, and

a bonded zone extending radially outward from the cavity zone, wherein the membrane is bonded and fluidly sealed to the rigid lens throughout the bonded zone,

wherein the bonded zone is dimensioned to be trimmed to accommodate a plurality of frame shapes and sizes.

2. The lens blank of claim 1, wherein the plurality of frame shapes and sizes includes every frame shape and size ranging in width from about 20 mm to about 60 mm and ranging in height from about 10 mm to about 30 mm.

3. The lens blank of claim 1, wherein the lens blank is divided into at least three zones, the third zone comprising:

an outer zone extending radially outward from a peripheral edge of the membrane to a peripheral edge of the rigid lens.

4. The lens blank of claim 1, wherein the membrane is sealed directly to the rigid lens.

5. The lens blank of claim 1,

wherein the cavity zone is sub-divided into an aspheric sub-zone extending radially outward from a central area of the cavity zone, and a spherical sub-zone extending radially outward from the aspheric sub-zone to the bonded zone,

wherein the curvature of the rigid lens within the aspheric sub-zone is aspheric and the curvature of the rigid lens within the spherical sub-zone is spherical, and

wherein the thickness of the membrane within the aspheric sub-zone is contoured such that the contour offsets the asphericity of the rigid lens within the aspheric sub-zone.

6. The lens blank of claim 5, wherein the aspheric sub-zone is in the shape of an oval.

7. The lens blank of claim 1, wherein the inner peripheral edge of the bonded zone is in the shape of an oval.

8. The lens blank of claim 1, wherein the optical power of the cavity zone ranges from about -1.0D in an uninflated state to about +1.0D in an inflated state.

9. The lens blank of claim 1, wherein the optical power of the variable portion ranges from about +0.25D in an uninflated state to about +4.0D in an inflated state.

10. The lens blank of claim 1, wherein a refractive index of the rigid lens and a refractive index of the membrane do not differ by more than 0.01 units.

11. The lens blank of claim 1, wherein the cavity is at least partially filled with fluid comprising at least one photochromic additive.

12. The lens blank of claim 1, wherein the lens blank further comprises:

a channel formed within the rigid lens, wherein the channel is configured to allow fluid to enter or exit the cavity to inflate or uninflate the membrane.

13. The lens blank of claim 1, wherein the lens blank further comprises:

a tube disposed between the membrane and rigid lens, wherein the tube is configured to allow fluid to enter or exit the cavity to inflate or uninflate the membrane.

14. The lens blank of claim 1, wherein the membrane is bonded to the rigid lens via adhesive.

15. The lens blank of claim 14, wherein a refractive index of the adhesive and a refractive index of the rigid lens do not differ by more than 0.01 units.

16. The lens blank of claim 14, wherein a refractive index of the adhesive and a refractive index of the membrane do not differ by more than 0.01 units.

17. The lens blank of claim 14, wherein a refractive index of the adhesive and a refractive index of fluid disposed within the cavity do not differ by more than 0.01 units.

18. A method of manufacturing a fluid lens assembly from a lens blank including a semi-flexible inflatable membrane and a rigid lens, the method comprising:

bonding a portion of the membrane to the rigid lens so that the bonded area of the membrane is fluidly sealed to the rigid lens, wherein the bonded zone is dimensioned to be trimmed to accommodate a plurality of frame shapes and sizes; and

trimming the lens blank to form a trimmed lens.

19. The method of claim 18, further comprising:

forming a channel within the rigid lens, wherein the channel is configured to allow fluid to enter or exit the cavity to inflate or uninflate the membrane.

20. The method of claim 18, further comprising:

placing a tube between the membrane and rigid lens before the membrane is bonded to the rigid lens, wherein the tube is configured to allow fluid to enter or exit the cavity to inflate or uninflate the membrane.

21. An array of lens blanks, the array comprising:

a plurality of lens blanks according to claim 1.

22. The array of lens blanks of claim 21, wherein the plurality of rigid lenses is formed from a single sheet of material.

23. The array of lens blanks of claim 21, wherein one or more of the plurality of lens blanks have different optical properties with respect to one or more of the other lens blanks within the array.

24. An array of fluid lenses, the array comprising:

a plurality of fluid lenses comprising:

a rigid lens; and

a semi-flexible inflatable membrane attached to the rigid lens,

wherein the fluid lens is divided into at least two zones, the zones comprising:

a cavity zone extending radially outward from a central area of the lens blank, forming a cavity between the membrane and the rigid lens in the cavity zone, and

a bonded zone extending radially outward from the cavity zone, wherein the membrane is bonded and fluidly sealed to the rigid lens throughout the bonded zone,

wherein one or more of the plurality of lens blanks are fluidly connected to one or more of the other fluid lenses within the array.

25. They array of claim 24, wherein the one or more of the plurality of fluid lenses are fluidly connected to one or more of the other lens blanks within the array through a fluid channel formed between the fluid lenses.

26. They array of claim 24, wherein one or more of the fluid lenses comprises a valve controllable to fluidly seal one or more of the fluid channel.

WHAT IS CLAIMED IS:

1. An array of fluid lens blanks, comprising:

a plurality of fluid lens blanks, wherein each fluid lens blank of the plurality of fluid lens blanks, comprising:

a rigid lens, and

a semi-flexible inflatable membrane directly attached to a front face of the rigid lens,

wherein each fluid lens blank is divided into at least two zones, the zones comprising:

a first zone extending radially outward from a central area of each fluid lens blank, forming a cavity between the membrane and the front face of the rigid lens in the cavity zone, and

a second zone extending radially outward from the first zone toward an edge of each fluid lens blank,

wherein the membrane is fluidly sealed to the front face of the rigid lens throughout the second zone, and

wherein the second zone is dimensioned so that each fluid lens blank is configured to:

i) accommodate a plurality of frame shapes and sizes, and

ii) maintain the membrane to be fluidly sealed to the front face of the rigid lens.

2. The array of fluid lens blanks of claim 1, wherein each fluid lens blank is divided into at least three zones, a third zone comprising: an outer zone extending radially outward from a peripheral edge of the membrane to a peripheral edge of the front face of the rigid lens.

3. The array of fluid lens blanks of claim 1, wherein the membrane is sealed directly to the front face of the rigid lens.

4. The array of fluid lens blanks of claim 1, wherein the first zone is sub-divided into an aspheric sub-zone extending radially outward from a central area of the first-zone, and a spherical sub-zone extending radially outward from the aspheric sub-zone to the second zone, wherein the curvature of the rigid lens within the aspheric sub-zone is aspheric and the curvature of the rigid lens within the spherical sub-zone is spherical, and wherein the thickness of the membrane within the aspheric sub-zone is contoured such that the contour offsets the asphericity of the rigid lens within the aspheric sub-zone.

5. The array of fluid lens blanks of claim 4, wherein the aspheric sub-zone is in the shape of an oval.

6. The array of fluid lens blanks of claim 1, wherein the inner peripheral edge of the second zone is in the shape of an oval.

7. The array of fluid lens blanks of claim 1, wherein the optical power of the first zone ranges from about -1.0 D in an uninflated state to about +1.0 D in an inflated state.

8. The array of fluid lens blanks of claim 1, wherein the optical power of the variable portion ranges from about +0.25 D in an uninflated state to about +4.0 D in an inflated state.

9. The array of fluid lens blanks of claim 1, wherein a refractive index of the rigid lens and a refractive index of the membrane do not differ by more than 0.01 units.

10. The array of fluid lens blanks of claim 1, wherein the cavity is at least partially filled with fluid comprising at least one photochromic additive.

11. The array of fluid lens blanks of claim 1, wherein each fluid lens blank further comprises: a channel formed within the rigid lens, wherein the channel is configured to allow fluid to enter or exit the cavity to inflate or uninflate the membrane.

12. The array of fluid lens blanks of claim 1, wherein each fluid lens blank further comprises: a tube disposed between the membrane and rigid lens, wherein the tube is configured to allow fluid to enter or exit the cavity to inflate or uninflate the membrane.

13. The array of fluid lens blanks of claim 1, wherein a refractive index of adhesive and a refractive index of the rigid lens do not differ by more than 0.01 units.

14. The array of fluid lens blanks of claim 1, wherein a refractive index of adhesive and a refractive index of the membrane do not differ by more than 0.01 units.

15. The array of fluid lens blanks of claim 1, wherein a refractive index of adhesive and a refractive index of fluid disposed within the cavity do not differ by more than 0.01 units.

16. The array of fluid lens blanks of claim 1, wherein at least one first fluid lens blank of the plurality of fluid lens blanks has at least one different optical property with respect to at least one second fluid lens blank of the plurality of fluid lens blanks within the array.

17. The array of fluid lens blanks of claim 1, wherein the plurality of frame shapes and sizes include a plurality of frame shape and size combinations, wherein each frame shape and size combination has:

a width being within a range of from 20 mm to 60 mm and

a height being within a range of from 10 mm to 30 mm.