

WHAT IS CLAIMED IS:

1. A contact lens, comprising:
a body;
5 a filtering characteristic of blocking at least some light with wavelengths between 400 nanometers and 500 nanometers from transmitting through the body; and
a transmittance characteristic of transmitting at least some light with wavelengths above 500 nanometers through the body.
- 10 2. The contact lens of claim 1, wherein blocking at least some of the light with wavelengths between 400 nanometers and 500 nanometers includes blocking 100 percent of the light with wavelengths between 400 nanometers and 500 nanometers.
3. The contact lens of claim 1, wherein blocking at least some of the light with
15 wavelengths between 400 nanometers and 500 nanometers includes blocking at least 90 percent of the light with wavelengths between 400 nanometers and 500 nanometers.
4. The contact lens of claim 1, wherein blocking at least some of the light with wavelengths between 400 nanometers and 500 nanometers includes blocking at least 80
20 percent of the light with wavelengths between 400 nanometers and 500 nanometers.
5. The contact lens of claim 1, wherein blocking at least some of the light with wavelengths between 400 nanometers and 500 nanometers includes blocking at least 70 percent of the light with wavelengths between 400 nanometers and 500 nanometers.
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6. The contact lens of claim 1, wherein blocking at least some of the light with wavelengths between 400 nanometers and 500 nanometers includes blocking at least 50 percent of the light with wavelengths between 400 nanometers and 500 nanometers.
- 30 7. The contact lens of claim 1, wherein blocking at least some of the light with wavelengths between 400 nanometers and 500 nanometers includes blocking at least some of the light with wavelengths between 400 nanometers and 450 nanometers and transmitting at least some of the light between 450 nanometers and 500 nanometers.

8. The contact lens of claim 1, wherein blocking at least some of the light with wavelengths between 400 nanometers and 450 nanometers includes blocking 100 percent of the light with wavelengths between 400 nanometers and 450 nanometers.
- 5 9. The contact lens of claim 1, wherein blocking at least some of the light with wavelengths between 400 nanometers and 450 nanometers includes blocking at least 90 percent of the light with wavelengths between 400 nanometers and 450 nanometers.
- 10 10. The contact lens of claim 1, wherein blocking at least some of the light with wavelengths between 400 nanometers and 450 nanometers includes blocking at least 80 percent of the light with wavelengths between 400 nanometers and 450 nanometers.
- 15 11. The contact lens of claim 1, wherein blocking at least some of the light with wavelengths between 400 nanometers and 450 nanometers includes blocking at least 70 percent of the light with wavelengths between 400 nanometers and 450 nanometers.
- 20 12. The contact lens of claim 1, wherein blocking at least some of the light with wavelengths between 400 nanometers and 450 nanometers includes blocking at least 50 percent of the light with wavelengths between 400 nanometers and 450 nanometers.
13. The contact lens of claim 1, wherein the body is made, at least in part, of a polymer.
14. The contact lens of claim 13, further including:
a blocking agent is incorporated into the polymer;
wherein the blocking agent causes the filtering characteristic.
- 25 15. The contact lens of claim 14, wherein the blocking agent includes at least triphenylphosphine.
16. The contact lens of claim 14, wherein the blocking agent includes at least 2-[3-(2H-
30 Benzotriazol-2-yl)-4-hydroxyphenyl]ethyl methacrylate.
17. The contact lens of claim 15, wherein the blocking agent makes up at least 1.0 percent of the contact lens by weight.

18. The contact lens of claim 15, wherein the blocking agent makes up at least 5.0 percent of the contact lens by weight.
19. The contact lens of claim 15, wherein the blocking agent makes up at least 10.0 percent
5 of the contact lens by weight.
20. The contact lens of claim 15, wherein the blocking agent makes up at least 15.0 percent of the contact lens by weight.
- 10 21. The contact lens of claim 15, wherein the blocking agent makes up at least 25.0 percent of the contact lens by weight.
22. The contact lens of claim 14, further including:
an optic zone of the body;
15 wherein the blocking agent is located within the optic zone.
23. The contact lens of claim 14, further including:
a peripheral zone of the body;
wherein the blocking agent is located within the peripheral zone.
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24. The contact lens of claim 13, wherein the polymer includes a silicone material.
25. The contact lens of claim 13, wherein the polymer includes a hydrogel material.
- 25 26. The contact lens of claim 1, further including:
a second transmittance characteristic of transmitting at least some light with
wavelengths below 400 nanometers through the body.
27. The contact lens of claim 26, wherein the second transmittance characteristic includes
30 transmitting at least some of the light with wavelength ranges between 360 nanometers and 400 nanometers.

28. The contact lens of claim 26, wherein the second transmittance characteristic includes transmitting at least some of the light with wavelength ranges between 360 nanometers and 370 nanometers.

5 29. The contact lens of claim 26, wherein the second transmittance characteristic includes transmitting at least some of the light with wavelength ranges between 360 nanometers and 380 nanometers.

30. The contact lens of claim 26, wherein the second transmittance characteristic includes
10 transmitting at least some of the light with wavelength ranges between 370 nanometers and 380 nanometers.

31. The contact lens of claim 26, wherein the second transmittance characteristic includes transmitting at least some of the light with wavelength ranges between 380 nanometers and
15 390 nanometers.

32. The contact lens of claim 6, wherein the second transmittance characteristic includes transmitting at least some of the light with wavelength ranges between 390 nanometers and 400 nanometers.
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33. The contact lens of claim 26, wherein the second transmittance characteristic includes transmitting 100 percent of the light with wavelengths between 360 nanometers and 400 nanometers through the body.

25 34. The contact lens of claim 6, wherein the second transmittance characteristic includes transmitting at least 90 percent of the light with wavelengths between 360 nanometers and 400 nanometers through the body.

35. The contact lens of claim 26, wherein the second transmittance characteristic includes
30 transmitting at least 80 percent of the light with wavelengths between 360 nanometers and 400 nanometers through the body.

36. The contact lens of claim 26, wherein the second transmittance characteristic includes transmitting at least 70 percent of the light with wavelengths between 360 nanometers and 400 nanometers through the body.

5 37. The contact lens of claim 26, wherein the second transmittance characteristic includes transmitting at least 50 percent of the light with wavelengths between 360 nanometers and 400 nanometers through the body.

38. The contact lens of claim 26, wherein the second transmittance characteristic includes
10 transmitting 100 percent of the light with wavelengths between 360 nanometers and 380 nanometers through the body.

39. The contact lens of claim 26, wherein the second transmittance characteristic includes transmitting at least 90 percent of the light with wavelengths between 360 nanometers and 380
15 nanometers through the body.

40. The contact lens of claim 26, wherein the second transmittance characteristic includes transmitting at least 80 percent of the light with wavelengths between 360 nanometers and 380 nanometers through the body.
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41. The contact lens of claim 26, wherein the second transmittance characteristic includes transmitting at least 70 percent of the light with wavelengths between 360 nanometers and 380 nanometers through the body.

25 42. The contact lens of claim 26, wherein the second transmittance characteristic includes transmitting at least 50 percent of the light with wavelengths between 360 nanometers and 380 nanometers through the body.

43. The contact lens of claim 1, further including:
a third transmittance characteristic of enhancing light with wavelengths between 360
30 nanometers and 400 nanometers via absorption and fluorescence in the body.

44. The contact lens of claim 43, wherein the third transmittance characteristic includes absorbing at least some of the light with wavelength ranges below 360 nanometers and above 400 nanometers and emitting at least some light with wavelength ranges between 360 nanometers and 400 nanometers.

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45. The contact lens of claim 1, wherein the contact lens is an orthokeratology lens.

46. The contact lens of claim 1, wherein the contact lens is a rigid gas permeable lens.

10 47. The contact lens of claim 1, wherein the contact lens is a soft contact lens.

48. A method of controlling myopia progression/onset, comprising:

providing a contact lens;

instructing a user to wear the contact lens;

15 the contact lens including:

a filtering characteristic of blocking at least some light with wavelengths between 400 nanometers and 500 nanometers from transmitting through the contact lens;

20 a transmittance characteristic of transmitting at least some light with wavelengths above 500 nanometers through the contact lens; and

a second transmittance characteristic of transmitting at least some light with wavelengths below 400 nanometers through the contact lens.

25 49. The method of claim 48, wherein the second transmittance characteristic includes transmitting at least some of the light with wavelength ranges between 360 nanometers and 400 nanometers.

30 50. The method of claim 48, wherein the second transmittance characteristic includes transmitting at least some of the light with wavelength ranges between 360 nanometers and 370 nanometers.

51. The method of claim 48, wherein the second transmittance characteristic includes transmitting at least some of the light with wavelength ranges between 360 nanometers and 380 nanometers.

52. The method of claim 48, wherein the second transmittance characteristic includes transmitting at least some of the light with wavelength ranges between 370 nanometers and 380 nanometers.
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53. The method of claim 48, wherein the second transmittance characteristic includes transmitting at least some of the light with wavelength ranges between 380 nanometers and 390 nanometers.
- 10 54. The method of claim 48, wherein the second transmittance characteristic includes transmitting at least some of the light with wavelength ranges between 390 nanometers and 400 nanometers.
55. The method of claim 48, wherein the second transmittance characteristic includes transmitting at least 90 percent of the light with wavelengths between 360 nanometers and 400 nanometers through the contact lens.
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56. The method of claim 48, wherein the second transmittance characteristic includes transmitting at least 70 percent of the light with wavelengths between 360 nanometers and 400 nanometers through the contact lens.
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57. The method of claim 48, wherein the second transmittance characteristic includes transmitting at least 50 percent of the light with wavelengths between 360 nanometers and 400 nanometers through the contact lens.
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58. The method of claim 48, wherein the second transmittance characteristic includes transmitting at least 90 percent of the light with wavelengths between 360 nanometers and 380 nanometers through the contact lens.
- 30 59. The method of claim 48, wherein the second transmittance characteristic includes transmitting at least 70 percent of the light with wavelengths between 360 nanometers and 380 nanometers through the contact lens.

60. The method of claim 48, wherein the second transmittance characteristic includes transmitting at least 50 percent of the light with wavelengths between 360 nanometers and 380 nanometers through the contact lens.
- 5 61. The contact lens of claim 1, further including:
a third transmittance characteristic of enhancing light with wavelengths between 360 nanometers and 400 nanometers via absorption and fluorescence in the body.
- 10 62. The contact lens of claim 61, wherein the third transmittance characteristic includes absorbing at least some of the light with wavelength ranges below 360 nanometers and above 400 nanometers and emitting at least some light with wavelength ranges between 360 nanometers and 400 nanometers.
- 15 63. The method of claim 48, further including:
communicating to the user that wearing the contact lens has a potential to slow myopia progression;
wherein the user is diagnosed with myopia.
- 20 64. The method of claim 48, further including:
communicating to the user that wearing the contact lens has a potential to prevent myopia onset;
wherein the user is not diagnosed with myopia.
- 25 65. The method of claim 8, further including:
communicating to the user that wearing the contact lens has a potential to delay myopia onset;
wherein the user is not diagnosed with myopia.
- 30 66. The method of claim 48, wherein the user is under 5 years old.
67. The method of claim 48, wherein the user is between 3 years old and 12 years old.

68. The method of claim 48, wherein blocking at least some of the light with wavelengths between 400 nanometers and 500 nanometers includes blocking at least 90 percent of the light with wavelengths between 400 nanometers and 500 nanometers.

5 69. The method of claim 48, wherein blocking at least some of the light with wavelengths between 400 nanometers and 500 nanometers includes blocking at least 70 percent of the light with wavelengths between 400 nanometers and 500 nanometers.

70. The method of claim 48, wherein blocking at least some of the light with wavelengths
10 between 400 nanometers and 500 nanometers includes blocking at least 50 percent of the light with wavelengths between 400 nanometers and 500 nanometers.

71. The method of claim 48, wherein the contact lens is made, at least in part, of a polymer.

15 72. The method of claim 71, wherein the contact lens includes a blocking agent is incorporated into the polymer and the blocking agent causes the filtering characteristic.

73. The method of claim 72, wherein the blocking agent includes at least triphenylphosphine.

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74. The method of claim 71, wherein the blocking agent includes at least 2-[3-(2H-Benzotriazol-2-yl)-4-hydroxyphenyl]ethyl methacrylate.

75. The method of claim 51, wherein the blocking agent makes up at least 1.0 percent of
25 the contact lens by weight.

76. The method of claim 72, wherein the blocking agent makes up at least 5.0 percent of the contact lens by weight.

30 77. The method of claim 72, wherein the blocking agent makes up at least 10.0 percent of the contact lens by weight.

78. The method of claim 72, wherein the contact lens includes an optic zone of the contact lens and the blocking agent is located within the optic zone.

79. The contact lens of claim 72, wherein the contact lens includes a peripheral zone of the contact lens and the blocking agent is located within the peripheral zone.

5 80. The method of claim 48, wherein the contact lens is made of a polymer that includes a silicone material.

81. The method of claim 48, wherein the contact lens is made of a polymer that includes a hydrogel material.

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82. A method of making a contact lens, comprising:
applying a liquid lens material into a spin casting mold;
spinning the spin casting mold;
wherein the liquid lens material includes a blocking agent that has a characteristic of
15 blocking at least some light with wavelengths between 400 nanometers and 500 nanometers
from passing through the liquid lens material.

83. The method of claim 82, further including:
at least partially curing the liquid lens material to form the contact lens.

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84. The method of claim 83, wherein the contact lens has the characteristic of blocking at least some light with wavelengths between 400 nanometers and 500 nanometers from passing through the contact lens.

25 85. A method of making a contact lens, comprising:
applying a first liquid lens material into a spin casting mold;
spinning the spin casting mold;
at least partially curing the first liquid lens material; and
applying a second material to the first liquid lens material where the second material
30 includes a characteristic of blocking at least some light with wavelengths between 400
nanometers and 500 nanometers from passing through the first liquid lens material.

86. The method of claim 85, wherein the second material is a second liquid lens material.

87. The method of claim 85, wherein applying the second material to the first liquid lens material includes applying the second material in the spin casting mold.
88. The method of claim 85, wherein applying the second material to the first liquid lens material includes injecting the second material into the first liquid lens material.
89. The method of claim 85, wherein applying the second material to the first liquid lens material includes infiltrating the first liquid lens material through an atmospheric pressure.
90. The method of claim 85, wherein applying the second material to the first liquid lens material includes absorbing the second material into the first liquid lens material.
91. The method of claim 85, where the first liquid lens material is without a blocking agent.
92. The method of claim 85, further including curing the first liquid lens material and the second material together.
93. The method of claim 85, further including applying an additional liquid lens material to the second material to the first liquid lens material or the second material.
94. The method of claim 93, wherein the second material is between the first liquid lens material and the additional liquid lens material.
95. The method of claim 94, further including curing the additional liquid lens material.
96. The method of claim 93, wherein curing the additional liquid lens material cross links the additional liquid lens material to the first liquid lens material.
97. The method of claim 93, wherein curing the additional liquid lens material cross links the additional liquid lens material to the second material.
98. The method of claim 85, wherein at least partially curing the first liquid lens material includes exposing the first liquid lens material to actinic radiation.

99. A contact lens, comprising:
a cast body, the cast body including:
a filtering characteristic of blocking at least some light with wavelengths
between 400 nanometers and 500 nanometers from transmitting through the cast body;
5 a transmittance characteristic of transmitting at least some light with
wavelengths above 500 nanometers through the cast body; and
a second transmittance characteristic of transmitting at least some light with
wavelengths below 400 nanometers through the cast body.
- 10 100. The contact lens of claim 99, further including:
a blocking agent that causes the filtering characteristic.
101. The contact lens of claim 100, wherein the blocking agent is at least one of
triphenylphosphine or another blocking agent.
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102. The contact lens of claim 101, further including:
an optic zone of the cast body;
wherein the blocking agent is located within the optic zone.
- 20 103. The contact lens of claim 100, further including:
a peripheral zone of the cast body;
wherein the blocking agent is located within the peripheral zone.
104. The contact lens of claim 99, wherein the cast body includes a silicone material.
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105. The contact lens of claim 99, wherein the cast body includes a hydrogel material.
106. The contact lens of claim 99, wherein the cast body includes a second filtering
characteristic of blocking at least some light with wavelengths below 360 nanometers from
30 transmitting through the cast body.
107. The contact lens of claim 106, wherein the light with wavelengths below 360
nanometers includes ultraviolet light A light.

108. The contact lens of claim 106, wherein the light with wavelengths below 360 nanometers includes ultraviolet light B light.

109. The contact lens of claim 106, further including a second blocking agent that causes the
5 second filtering characteristic.

110. The contact lens of claim 109, wherein the second blocking agent includes titanium dioxide, oxybenzone, octyl salicylate, octocrylene, octyl methoxycinnamate, benzotriazoles, other blocking agents, or combinations thereof.

10 111. The contact lens of claim 99, further including:
a third transmittance characteristic of enhancing light with wavelengths between 360 nanometers and 400 nanometers via absorption and fluorescence in the body.

112. The contact lens of claim 110, wherein the third transmittance characteristic includes
15 absorbing at least some of the light with wavelength ranges below 360 nanometers and above 400 nanometers and emitting at least some light with wavelength ranges between 360 nanometers and 400 nanometers.