CLAIMS

1. Method for manufacturing a lens element intended to be worn in front of an eye of a wearer, the method comprising:

- obtaining a lens member comprising a holographic recording medium disposed on a first surface of the lens member, the holographic recording medium being configured to be able to convert an interference pattern into a holographic optical element;
- obtaining wearer prescription data relating at least to the prescription of the wearer;
- manufacturing a second surface of the lens member based on the wearer prescription data;
- recording a holographic optical element within the holographic recording medium so as to provide an additional optical power of opposite sign to the prescribed optical power so as to slow down the progression of the abnormal refraction of the eye, wherein the step of manufacturing the second optical surface of the lens member is performed before the step of recording the holographic optical element.

2. The method according to the preceding claim, wherein the first optical surface corresponds to the front surface of the lens member and/or the back surface of the lens member and/or a surface comprised between the front and the back surfaces.

~~3. The method according to any of the preceding claims, wherein the step of manufacturing the second surface of the lens member is performed before the step of recording the holographic optical element.~~

43. The method according to any of claims 1 to ~~3~~2, wherein the abnormal refraction of the eye of the wearer corresponds to myopia, the additional optical power is positive and the holographic optical element is recorded to provide the effect of a refractive converging lens on the light coming from at least one object.

54. The method according to any of claims 1 to ~~3~~2, wherein the abnormal refraction of the eye of the wearer corresponds to hypermetropia, the additional optical power is negative and the holographic optical element is recorded to provide the effect of a refractive divergent lens on the light coming from at least one object.

~~6~~5. The method according to claim ~~4~~ 3 or ~~5~~4, wherein the at least one object is located at a finite distance of the holographic optical element.

~~7~~6. The method according to claim ~~4~~ 3 or ~~5~~4, wherein the at least one object is located at infinite distance of the holographic optical element.

~~8~~7. The method according to any of the preceding claims, wherein the step of recording a holographic optical element comprises at least recording a first holographic optical element, the first holographic optical element being configured to provide the effect of a refractive lens on the light coming from an object at a finite distance of the holographic optical element, and recording a second holographic optical element, the second holographic optical element being configured to provide the effect of a refractive lens on the light coming from an object at infinite distance of the holographic optical element.

~~9~~8. The method according to any of the preceding claims, wherein the step of recording a holographic optical element comprises at least recording a first holographic optical element and recording at least a second holographic optical element, the holographic optical elements being recorded to have different portion of effective visible spectrum and/or angular band.

~~10~~9. The method according to the preceding claim, wherein at least two holographic optical elements are recorded to provide the same additional optical power.

~~11~~10. The method according to any of the preceding claims, wherein the lens member comprises a near vision reference point and the at least one holographic optical element is recorded to extend over said near vision reference point.

11. A lens element intended to be worn in front of an eye of a wearer comprising:

- a refractive element configured to provide to the wearer, for example in standard wearing conditions and for foveal vision, a first optical power based on a

prescription of the wearer for correcting an abnormal refraction of said eye of the wearer;

- a plurality of holographic optical elements providing an additional optical power of opposite sign to the prescribed optical power so as to slow down the progression of the abnormal refraction of the eye,

wherein the holographic optical elements ate positioned along a set of concentric rings on the refractive element.

12. The lens element according to the previous claim, wherein optical power of the holographic optical elements is different depending on their position along the concentric rings.

13. The lens element according to any of claims 11 or 12, wherein the cylinder of the holographic optical elements is different depending on their position along the concentric rings.

~~12. A lens member comprising:~~

~~- a first optical surface having a surface design,~~

~~- a second optical surface to be manufactured, and~~

~~- a holographic recording medium configured to be able to convert an interference pattern into a holographic optical element.~~

~~13. The lens member according to claim 12, wherein the holographic recording medium extends over the geometrical center of the first optical surface.~~

~~14. The lens member according to any of claims 12 or 13, wherein the holographic recording medium is disposed on the first optical surface.~~

~~15. The lens member according to any of claims 12 or 13, wherein the holographic recorded medium is disposed between the first and the second surfaces.~~