

CLAIMS

1. A device for altering vergence of light to improve and/or correct human vision of an electronic display, the device comprising:
 - 5 a refractive element that refracts rays, emitted from a pixel of an electronic display, at a predetermined vergence,
wherein the refractive element is located directly adjacent or on the electronic display.
- 10 2. The device of claim 1, wherein the refractive element comprises a convex structure.
3. The device of claim 1, wherein the refractive element comprises a plano-convex structure.
- 15 4. The device of claim 3, wherein the plano-convex structure has a radius that collimates the rays emitted from the pixel.
5. The device of claim 3, wherein a thickness of the plano-convex structure
20 is between about 100 μm and about 250 μm .
6. The device of claim 5, wherein the thickness of the plano-convex structure is between about 180 μm and about 190 μm .
- 25 7. The device of claim 3, wherein a radius of curvature of the plano-convex structure is between about 50 μm and about 200 μm .
8. The device of claim 7, wherein the radius of curvature of the plano-convex structure is between about 130 μm and about 140 μm .
- 30 9. The device of claim 1 wherein the refractive element collimates rays emitted from the pixel at a predetermined angle.

10. The device of claim 1, wherein refracted rays are substantially parallel.

11. The device of claim 1, wherein the refractive element is formed of a clear polymer.

5

12. The device of claim 11, wherein the clear polymer has a refractive index of between about 1.5 and about 1.8.

10 13. The device of claim 1, wherein the device is housed or located in a film, housing or casing.

14. A plurality of devices as defined in claim 1, wherein the devices are arranged in a film, housing or casing in an array.

15 15. A method of improving and/or correcting human vision of an electronic display, the method including the steps of:

refracting rays, emitted from a pixel of the electronic display, through a refractive element at a predetermined vergence;

20 wherein the refractive element is located directly adjacent or on the electronic display,

to improve and/or correct human vision of an electronic display.

25 16. A method of forming a device for altering vergence of light to improve and/or correct human vision of an electronic display, the method including the steps of:

forming at least one refractive element that refracts rays, emitted from a pixel of an electronic display, at a predetermined vergence,

wherein the refractive element is located directly adjacent or on the electronic display.

30