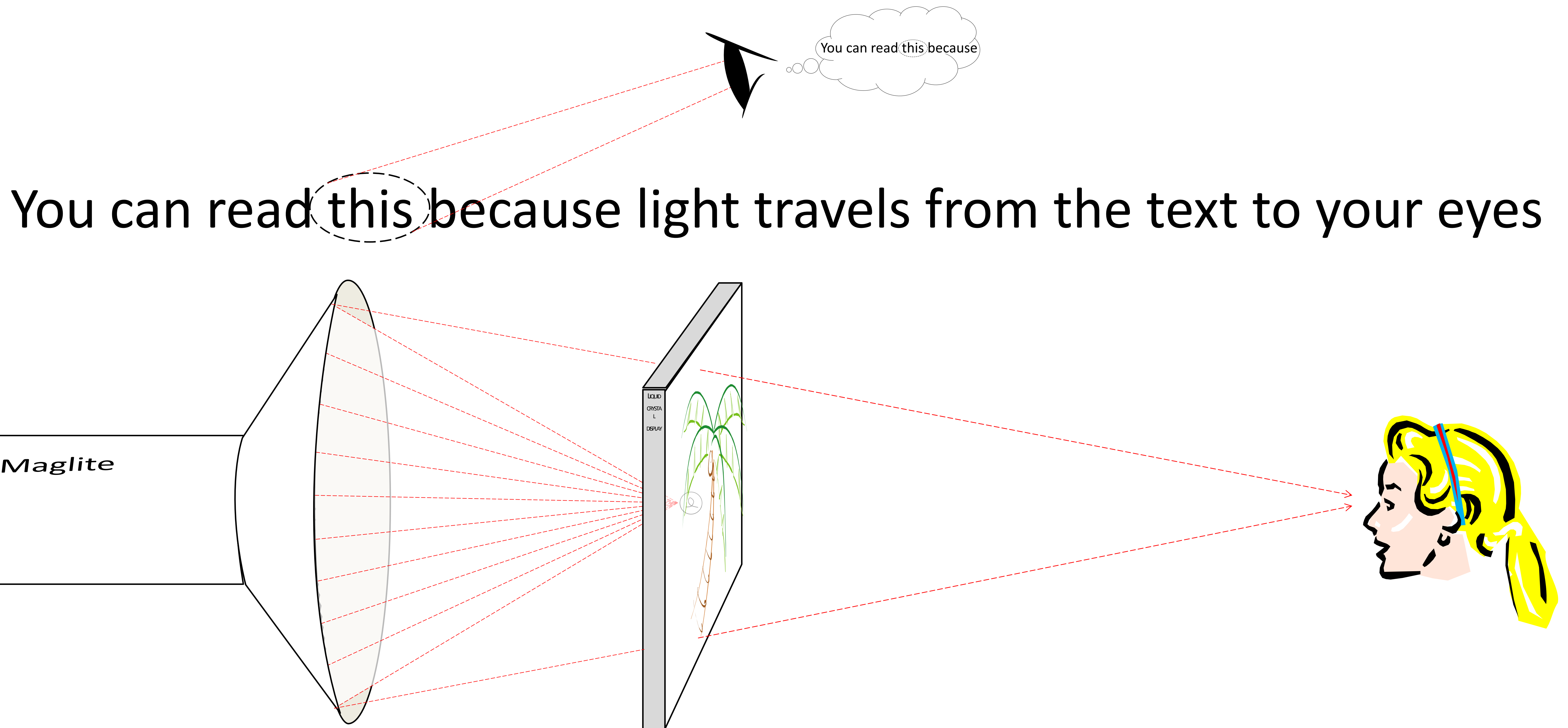


A waveguide for 3D

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In order to create a three dimensional image on a flat screen, some kind of projection is needed to establish the extra dimension. That is why ideas for 3D television often need a lens, but the space required between a conventional lens and its focal plane prevents the screen being flat. Recently, we have created a waveguide whose thickness linearly decreases from one end to the other. Rays from a spot source of light enter the waveguide at the thick end and emerge in parallel from one surface of the guide. The waveguide therefore acts like a lens so that many ideas for 3D television can be made flat. We have demonstrated two ways of creating a 3D image: scanning the illumination of an LCD and the combination of multiple projectors.



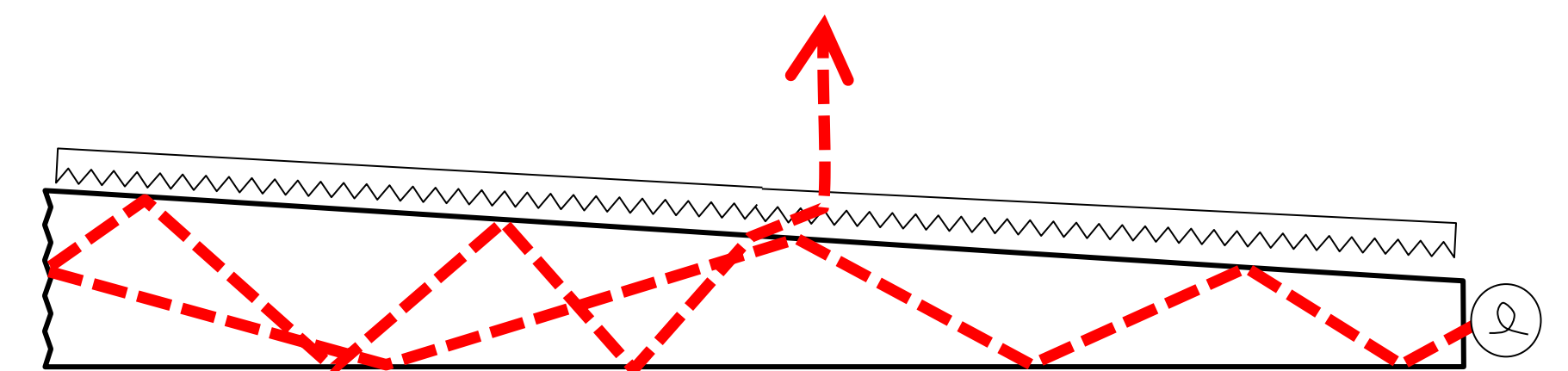
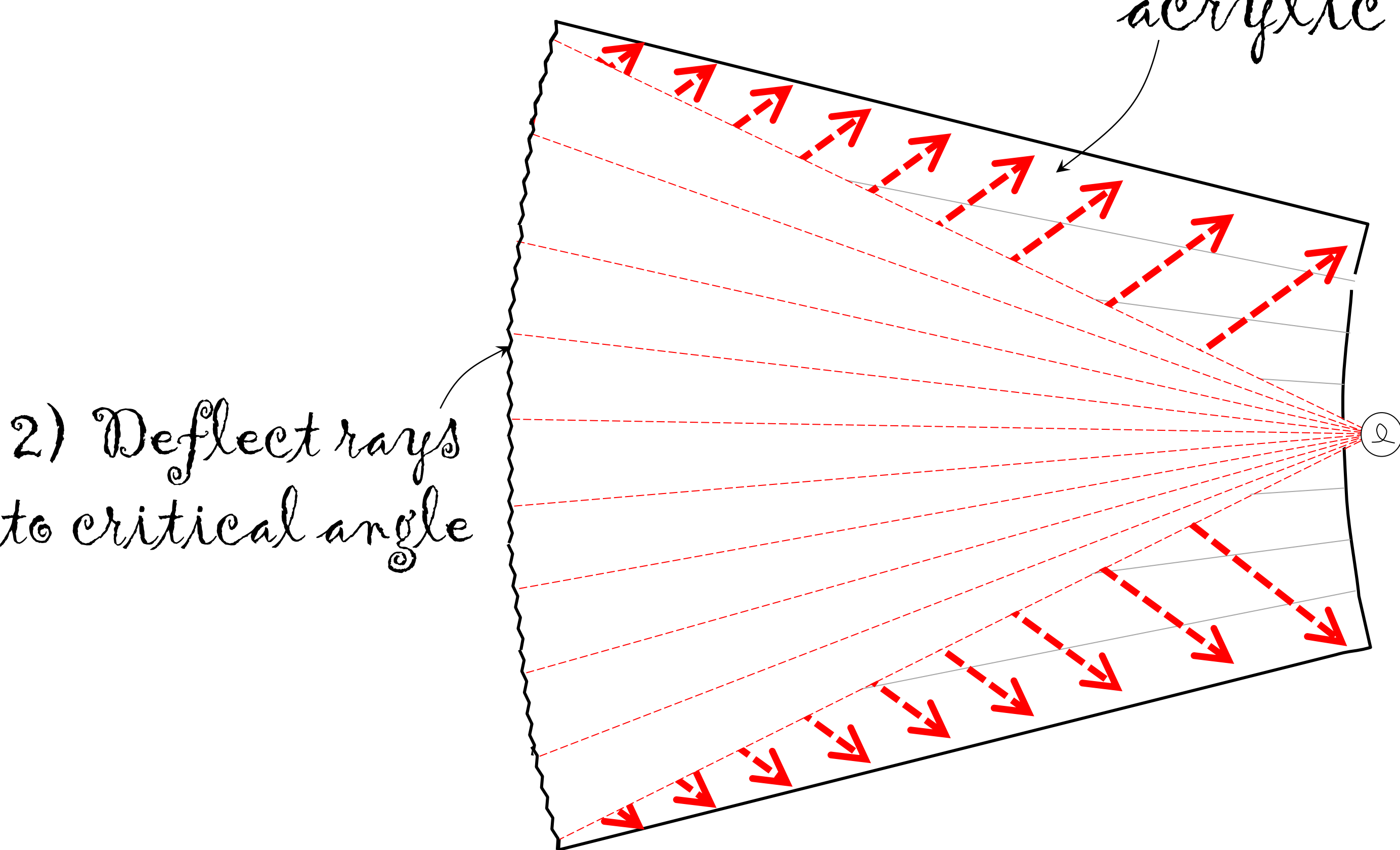
You can read this because light travels from the text to your eyes

For 3D, direct the illumination of an LCD to each eye in turn

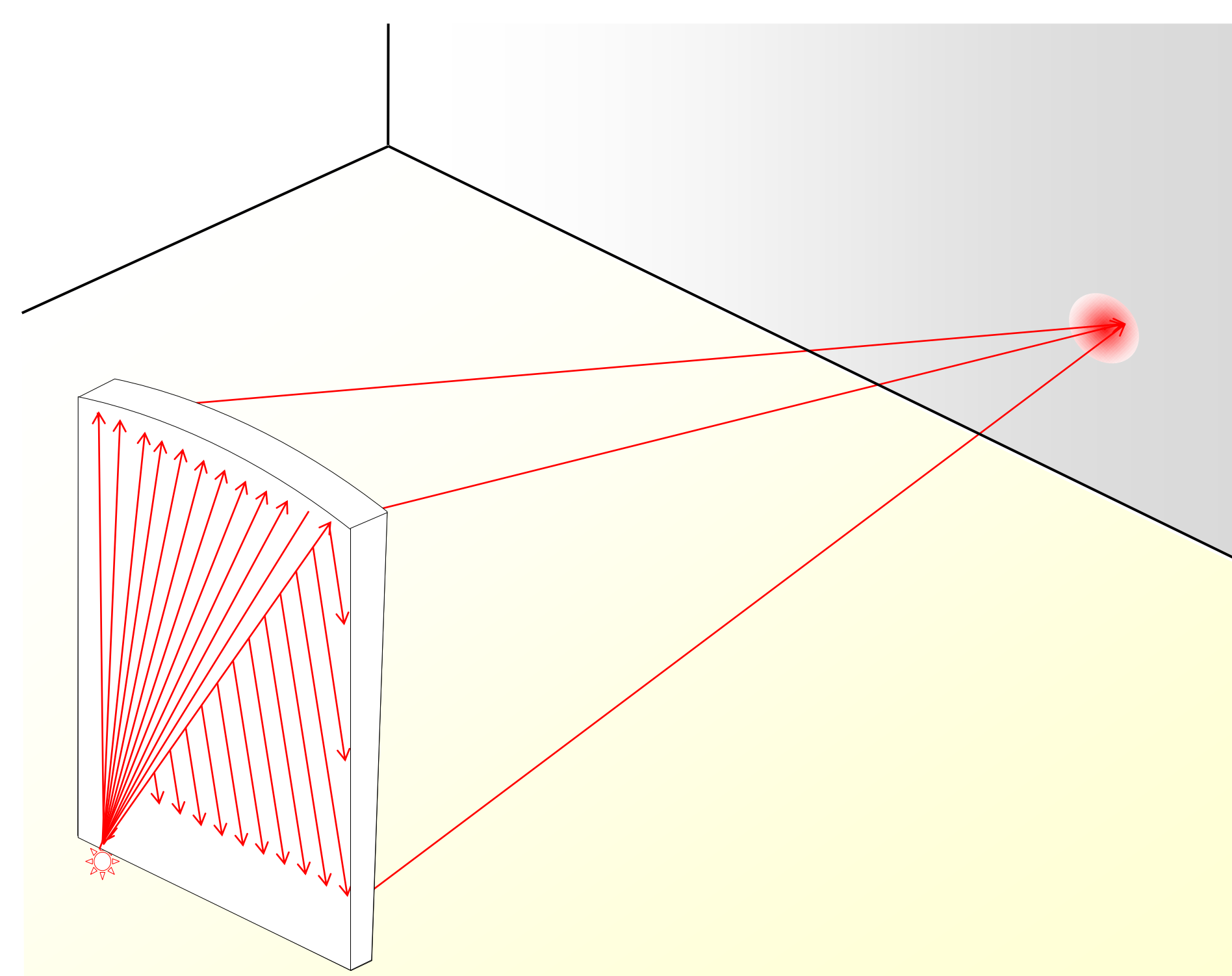
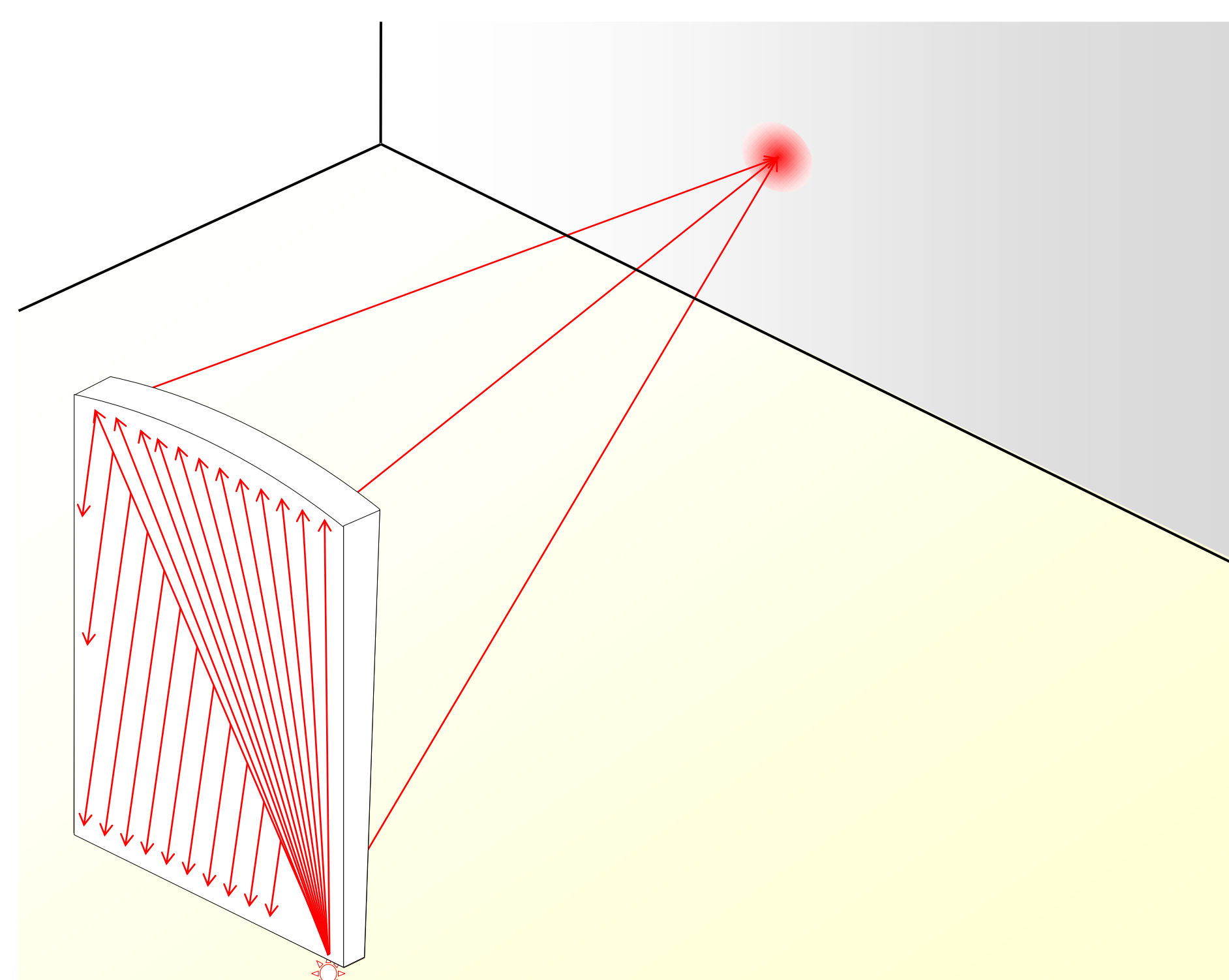
prepare to fold

1) fill space with acrylic

fold



Our backlight is like a flashlight, folded up by total internal reflection



We scan the viewing point by moving the LED