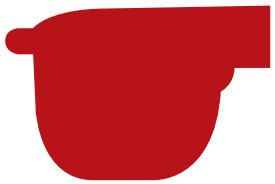
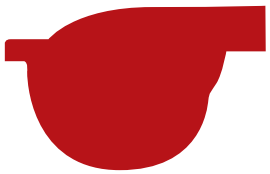
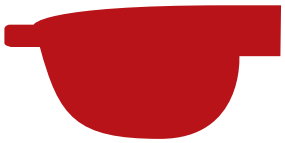
Achromatopsia 650nm Red Slip-behind Filters



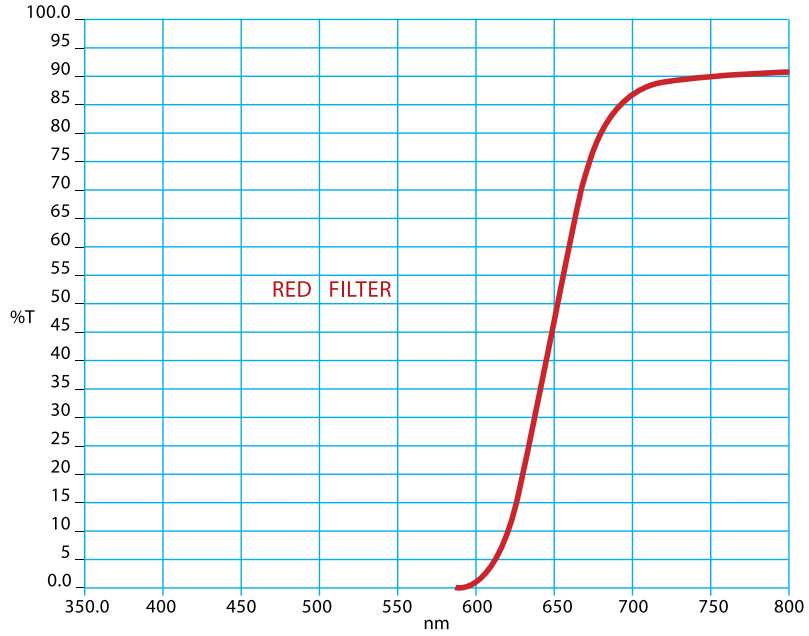
VES K *Shape*
(Large and small)



Unisex *Shape*
(One size)



Sleek *Shape*
(Large and small)



Actual transmission curve through OCUTECH® 650nm Red Filter

Why Red Filters for Achromatopsia?

The photoreceptors in the retina include both rod and cone cells. Cones provide color and detail vision and function most well in bright light (photopic vision), while rods function best in low light (scotopic vision) and are most sensitive to detecting motion. In achromatopsia, cones have either incomplete or no function, and as a result the rod receptors provide virtually the only retinal response. Rod cells, however, bleach quickly (saturate) in bright light, significantly reducing their ability to provide useful vision. The brighter the light, the faster and more severely the rods will bleach and the more delayed their recovery. Thus, to improve and maintain maximum vision for individuals with achromatopsia in bright light, retinal illumination must be reduced and the spatial frequency of the light 'tuned' to the sensitivity range of the rods.

While any dark filter will reduce the light intensity reaching the retina, not all filters are equally effective in Achromatopsia. Since the longer wavelength red color contains only 1/15 the energy of the shorter wavelength blue color, red filters minimize the bleaching of the rod photo-pigments, hence maximizing their visual function during periods of bright illumination.

For a further discussion of the benefit of Red filters for Achromatopsia visit www.achromatopsia.org.

OCUTECH® also offers polarized slip-behind sunfilters in four standard colors:
(Also available for VES-II frames)

GRAY

BROWN

BLUE BLOCKER

YELLOW

OCUTECH®
Vision Enhancing Systems

109 Conner Drive, Chapel Hill, NC 27514 USA • (800) 326-6460 (919) 967-6460 • fax (919) 967-8146 • www.ocutech.com