

# Polarized Sunglasses



## WHAT ARE THEY... AND DO I NEED THEM?

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**Y**ou already know that when you buy prescription sunglasses to protect your eyes and to improve your vision at the same time, you want lenses that block 100 percent of the sun's harmful UV rays. You may also want to consider another option closely related to providing safer and better vision: polarized sunglasses.

Polarized lenses in eyewear first became popular with fishermen and boaters, who needed something to protect them from the sun's glare from the surface of the water. As time went on, others became aware of the benefits of polarized lenses and their popularity grew. How can polarized lenses benefit you?

### What is Glare?

Here's an example. We all know that when light bounces off objects, that's reflection, and this is how we are able to see those objects. On most surfaces, the light scatters as it bounces, because most surfaces are uneven; for example, a gravelly driveway, or the face of a building. However, when sun bounces off a shiny car hood, or the smooth surface of a calm

body of water, more of the light remains aligned together and all reflects off that surface at the same angle. If this angle happens to send the light straight into your eyes as you are driving or fishing, you experience an intense light, called glare, preventing you from seeing anything else at that moment.

### Polarization

Polarized lenses have an embedded chemical film in which the molecules are physically lined up to create "slots" through which light can pass. Think of a Venetian blind hanging in front of a window—the blinds will block all light except that which can pass through the openings.

On polarized sunglasses, these openings are horizontal, so the lens only allows in approaching rays of light that are already positioned to fit through those openings; in other words, in the same horizontal orientation themselves. Assuming you are holding your head upright, your eyeglass lenses will block out the vertically-aligned waves coming at you off that shiny car hood, or the water's surface.

### The Benefits of Polarized Sunglasses

If you want to see the difference polarization makes, simply go out on a sunny day and hold out two pairs of sunglasses (one polarized, one not) and compare the view through the lenses of each pair. You'll see that the polarized sunglasses provide increased clarity, allowing you to see details better. The view will be somewhat darker through polarized lenses but the image will look less washed out.

Prescription polarized sunglasses carry a double benefit for you as a member, providing the protection from glare while outside or while driving, along with the visual correction you needed for optimal vision. In addition, many drivers have reported they no longer experience the fatigue they usually encounter while driving on a sunny day, caused by fighting off the sun's glare coming at them for hours at a time.



One cautionary note, however: polarized lenses may reduce the visibility of images produced by LCD (liquid crystal display) screens found on your car or boat's dashboard controls, your cell phone or watch, or other places such as the screens on ATM cash machines.

### In conclusion...

Polarized sunglasses do cost more than plain sunglasses, due to increased costs in the manufacturing process. However, it's a sound investment that will protect an irreplaceable asset. So, whether you drive, fish, navigate, or just spend a lot of time in the sun, polarized sunglasses could increase your comfort, while protecting your sight.

You can read about polarized sunglasses and other sunglass options on this page of The American Optometric Association's website at:

<http://www.aoa.org/documents/SunglassShoppingGuide0810.pdf>.