Sunlenses

Fashion + Function = Fantistic

The who, what, when, where, and why of how regular tints, photochromic, polarized, lens treatments, and lens colors work in outdoors environments.

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Sunlenses today offer improved performance, boosted comfort, and higher fashion appeal with a number of features providing a bevy of fresh options for sun protection. Following is a roundup of the latest lenses.

TINTS

Some patients opt for sunlenses that are a standard tint. Reasons may include control or customization of tint density and/or color, a polarization alternative, or a lower cost choice to more premium sunlenses. Solid tints offer uniform density performance throughout the lens. Sunlens tints should block 75 to 90 percent of visible light in order to be effective.

Different materials and treatments affect tints' absorption and hard coatings, directly impacting how lenses tint. For example, some polycarbonate lenses are untintable due to their extra-tough hard coat. A general rule of thumb: the lower the index, the better the tint is absorbed. The best way to tint any lens is to utilize manufacturer guidelines.

SOLID VS. GRADIENT

Gradient tints are purported to enhance performance by offering one density and/or color at the top with a different density and/or color at the bottom of the lens. Gradient lenses are typically darker at the top and lighter at the bottom.

For example, at least one manufacturer's polarized gray upper zone offers 70 percent transmission to manage glare and maintain accurate distance perception, while the amber lower zone with 60 percent transmission is designed to increase contrast to better read topography, making them ideal for golf.

PHOTOCHROMIC

Some choose to wear photochromic lenses as sunwear, opting for the convenience of not having to take eyewear on and off. They enjoy the color choice (typically gray for natural color vision or brown for contrast sensitivity) and density, which adjusts to various environments, indoors and out.

Photochromic polarized is another option that offers the capabilities of a changeable photochromic combined with the glare reduction of polarization. Proponents of this sunlens modality are pleased with how the lenses adapt to the light with the bonus of reducing glare. At press time, photochromic polarized lenses are options for outdoor use only.

Another way to get changeable lenses is to change them yourself. In addition to clip-ons, several companies offer both Rx and plano sunwear styles that feature multiple lens options that can be removed and inserted into the frame, with a case adapted to hold the lenses safely when not in use. This allows wearers to switch their own lenses depending on the task and environment.

POLARIZED

Polarized lenses, the premium sunlens option, are recognized by consumers, especially sports-men and women, as the best choice for reducing glare outdoors to increase visual comfort and performance.

The density of the polarized film, not the density of the tint, is how polarization achieves its effectiveness. The filter basically acts like venetian blinds, using parallel alignment to block polarized light that causes glare. This helps tame distracting to disabling glare in situations as mild as early morning haze on a fishing trip to driving into full sun in the late afternoon, resulting in safer, more productive and comfortable wear.

MIRRORS

Mirrors offer not only cool style, but additional reduction of glare as well as heat that reaches the eye. This can bring better daylong performance and comfort to wearers. Mirror coatings can be applied over lenses in any color or color density, but are typically showcased on darker sunlens tints and color-matched for style.

For example, a silver mirror with a gray tint or a gold mirror with a brown tint. Reflex mirrors, a series of coating layers, are applied to a tint (50 percent or higher) and are the most common types of mirrors. Flash mirrors reduce the density of reflex mirrors for a refined result. Dielectric mirrors are created using multiple coating layers and offer a luminous effect.

ANTI-FOG

Typically a lens coating, anti-fog properties can also be applied as a spray or wipe-on lens cleaner would be. While the coating continuously offers anti-fogging, the application type must be consistently reapplied. Anti-fogging can enhance sports performance and be helpful for those who change environments frequently.

With the popularity of wrap eyewear, which fits close to the face, fogging is more likely, so anti-fogging properties can be a good choice in these styles.

ANTI-REFLECTIVE

AR increases sunlens performance by virtually eliminating reflections, including ghost images and halos. These types of reflections are more common on sunwear, as darker tints combined with the sun at side or back-side angles can cause them.

Anti-reflection is typically recommended on the back side of sunlenses to help cut back-side glare, and some sunlenses offer both front- and back-side AR for overall anti-reflective effectiveness. Each option enhances wearer vision, providing comfort and performance.

Eyecare Business Magazine April 2009

Colorful Characters

Sports enthusiasts come in as many variations as the color of the lenses they prefer to wear. These colors are what's generally recommended for specific sports; however, it's usually best to let patients try different options before purchase if possible.

Gray:	100 percent natural color recognition. Best overall choice.
Green:	Softly heightens contrast while keeping neutral color vision. Tennis, golf, driving, general use.
Blue:	Lets in the maximum amount of blue light. Tennis, green targets.
Brown:	Blocks blue light, heightens contrast. Golf, fishing, water sports, snow sports.
Copper:	Maximizes contrast. Hunting, fishing, golf, driving.
Vermillion/rose:	Good for contrast in low-light conditions. Skiers, water sports.
Amber/yellow:	Maximum light transmission, increases contrast in low light conditions. Driving, shooting sports.