

Optimum Sunlight Protection

Protecting the eyes from short wavelength light is not only an issue when sitting in front of a screen. The intensity of sunlight exceeds that of every artificial light source many times over. Since sunlight contains both visible and invisible components, there are circumstances when it is sensible to efficiently protect the eyes. In the mountains, at the waterside, but also in the concrete deserts of our big cities, it is often indispensable to wear sunglasses in order to optimally protect sight in the long term. Innovative Eyewear has taken on this task and has developed a line of products that focus especially on sun protection.

The most common sunglasses are supposed to darken the sunlight and ideally look cool at the same time. We at PRISMA, however, emphasize the inner values, since we have intensively contemplated filtering properties beyond the UV spectrum. Our long experience with efficient protection from blue light as well as our knowledge of the physiology of vision in natural light are important key elements for optimum sunlight protection.

Our sunglasses take the following requirements into account:

1. optimum visual comfort
2. best color rendering despite efficient filtering
3. adaptive blue light protection (depending on the model)
4. efficient glare reduction
5. SunnyMood silvering

Functions	SunProtect	TenderSun
High light intensity protection	***	*
High level blue light protection	***	*
High level UV-protection	***	***
Support of circadian rhythms	*	***
Anti-myopic effect	*	***
Suitable for kids	*	***
Polarization	*	*
Scratch proof	*	*
Color rendering	***	*
SunnyMood Functions	BLUE-Intuition / GREEN-Balance	RED-Energy

1. Optimum visual comfort

Optimum visual comfort is reached by a tint which is suitable for most situations: The filtering effect is neither too weak nor too strong! Here, we deliberately refrain from using self coloring lenses (photochromic lenses), to avoid interfering with the natural light adaptation of the human eye.

2. Best color rendering despite efficient filtering

Sunglasses, in order to reach the desired effect, have to filter out a large portion of the incoming light. It is important, however, which specific parts of the light are filtered out. We define our filter properties in a way that allows for maximum protection from UV and short wavelength light on the one hand, and on the other hand keeps up the best possible color rendering. Is is necessary, for example, to be able to experience the surroundings in natural colors, even when wearing sunglasses.

3. Adaptive blue light protection

Adaptive blue light protection means that you can choose the strengths of the blue light filtering effect. All SunProtect glasses have a high level of UV protection, as well as blue light protection, and are recommended for high intensity sunlight. Since blue light plays an important role in the chronobiological functions it may be advisable NOT to filter it out completely. Our SunTender glasses have a lower level of filtering for the short wavelengths and allows for the best of the sunlight to shine through. They are recommended for days with lower intensity sunlight, as well as for users wishing to stabilize their chronobiological rhythms. Since the blue light components are vital for a healthy eye development in growing children, they should use SunTender glasses for preference.

4. Efficient glare reduction

When it comes to the reduction of glare, there are two main factors: silvering and polarization. Our PRISMA sunglasses use both technologies for maximum visual comfort in any situation. The high quality blooming minimizes disturbing reflections. The linear polarization filter reduces the reflections that can occur on shiny surfaces or a wet street.

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5. SunnyMood silvering

PRISMA is not only the pioneer in blue light protection, we are also specialized in the effects of all the other colors. Or competence, for which the SpectroChrom glasses are the best example, is also incorporated into the design of our sunglasses – by way of the SunnyMood function! Sunlight lifts the spirit... signal your mood with the SunnyMood function. Use SunnyMood Energy if you want to show that you are full of power and vigor: The world is your oyster.

With the SunnyMood Balance you convey harmony and nonchalance. The SunnyMood Intuition is a good choice if you want to demonstrate clarity and intensity.

Glossary/Definitions

TenderSun: High level of UV-protection, moderate level of blue light protection, allowing for increased chronobiological adaptation to circadian rhythms and an anti-myopic effect. Efficient protection from glare and reflections through high quality blooming and using linear polar filters. High transmissibility for regenerating wavelengths. Very good color rendering.

SunProtect: High level of UV-protection. High level of blue light protection. Efficient protection from glare and reflections through high quality blooming and using linear polar filters. High transmissibility for regenerating wavelengths. Optimum color rendering.

SunnyMood-Silvering:

PRISMA sunglasses are available in different color versions. Colors are a strong expression of emotions, and therefore ideal to signal one's mood to other people. The reddish SunnyMood-Silvering is called Energy. The greenish SunnyMood-Silvering is called Balance. The blueish SunnyMood-Silvering is called Intuition.

Chronobiology:

Chronobiology describes time-dependent functions of the human organism with its circadian rhythms. Depending on the time of the day or night, the body has different tasks to perform: in the daytime, the focus is on performance and activity, by night we are more set to sleep, rest and regeneration. Light is considered the strongest signal for the synchronization of the organism with outer rhythms, with a particular emphasis on the blue light components. In nature, high blue light contents are only seen in daylight, at night they are non-existent. This is why artificial light sources are such a problem by night, and an efficient blue light protection is of paramount importance.

Anti-myopic effect:

Myopia is short-sightedness. For the past few years, scientists have been discussing different factors that could support the development of myopia in children. When kids spend all their time indoors, it seems that the developing eye adapts to the main task of focusing in the near field, which results in myopia. Another factor seems to be the lack of daylight. When children spend at least one hour outdoors every day, the risk of developing myopia is reduced. It seems plausible that the blue light components of natural daylight are important in this mechanism. In contrast to blue light from artificial light sources, the blue light content of natural daylight, at the right dosage, is conducive to a healthy development of the child's organism.

Filter category	Description	Symbol
0	Light tint sunglasses	
1		
2	General purpose sunglasses	
3		
4	Very dark special purpose sunglasses, very high sunglare reduction	

These glasses comply with EC Guideline 89/686/EWG and meet the requirements of DIN EN ISO 12312-1:2015-12. 100% UV protection. Filter category 3.

Clean: With a soft cloth or warm water and washing-up liquid if necessary. Then dry them with a soft cloth. Please take care not to exert too much pressure on the lens surface. Do not use paper towels or any other material containing wood fibre.

Warning: Not for direct observation of the sun. Not for protection against artificial light sources, e.g. solarium. Not for use as eye protection against mechanical impact hazards. For lenses of cat. 1, 2 and 3: not suitable for driving at night or under condition of dull light. For lenses of cat. 4: not suitable for driving at all. You can find the appropriate filter category in the inside of the frame.