Essential Blue Series®

PROTECT WITH Crizal® SHIELD*

EVERYDAY UV PROTECTION AND BLUE-VIOLET LIGHT FILTERING(1), IN A CLEAR LENS.(2)

essilor

* Crizal® coating is Essilor® lenses treatment that acts as an invisible shield of protection.
(1) Essential Blue Series® lens feature filters at least 20% of blue-violet light (between 400 and 455nm as stated by ISO TR 20772:2018).
For Polycarbonate concave lenses, the blue-violet light filtering percentage might be slightly lower.
(2) Extremely low residual tint resulting from absorbing blue-violet light.

EVERYDAY
BLUE-VIOLET LIGHT FILTERING...

An embedded solution to filter blue-violet light, every day.

Thanks to a combination of carefully selected molecules at the very heart of the lens, **Essential Blue Series®** efficiently filters out blue-violet light while letting blue-turquoise light pass through.

Essential Blue Series lens features
FILTERS UP TO 3 TIMES MORE BLUE-VIOLET LIGHT
than regular prescription lenses(1)

1. Essential Blue Series lens feature filters at least 20% of blue-violet light. For Polycarbonate concave lenses, the blue-violet light filtering percentage might be slightly lower. Regular prescription lenses = 1.5 or Poly material (without blue-violet light filter) with Crizal® Sapphire® UV coating at equal center-thickness.

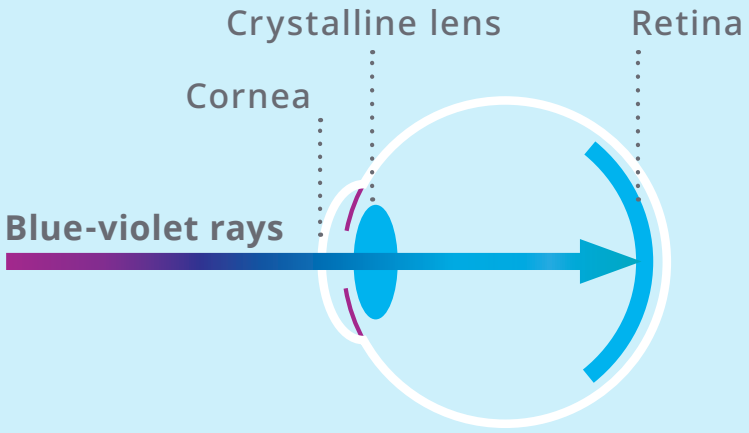
WHAT IS **BLUE LIGHT?**

BLUE LIGHT is a part of visible light and it is close to UV light in the light spectrum. Its wavelength ranges between 380-500 nm.

BLUE-VIOLET LIGHT

Blue-violet light has been recognized as **potentially harmful to the outer retina.**

It is also an inhibitor for antioxidant defenses in the outer retina, that **may accelerate retinal aging**.

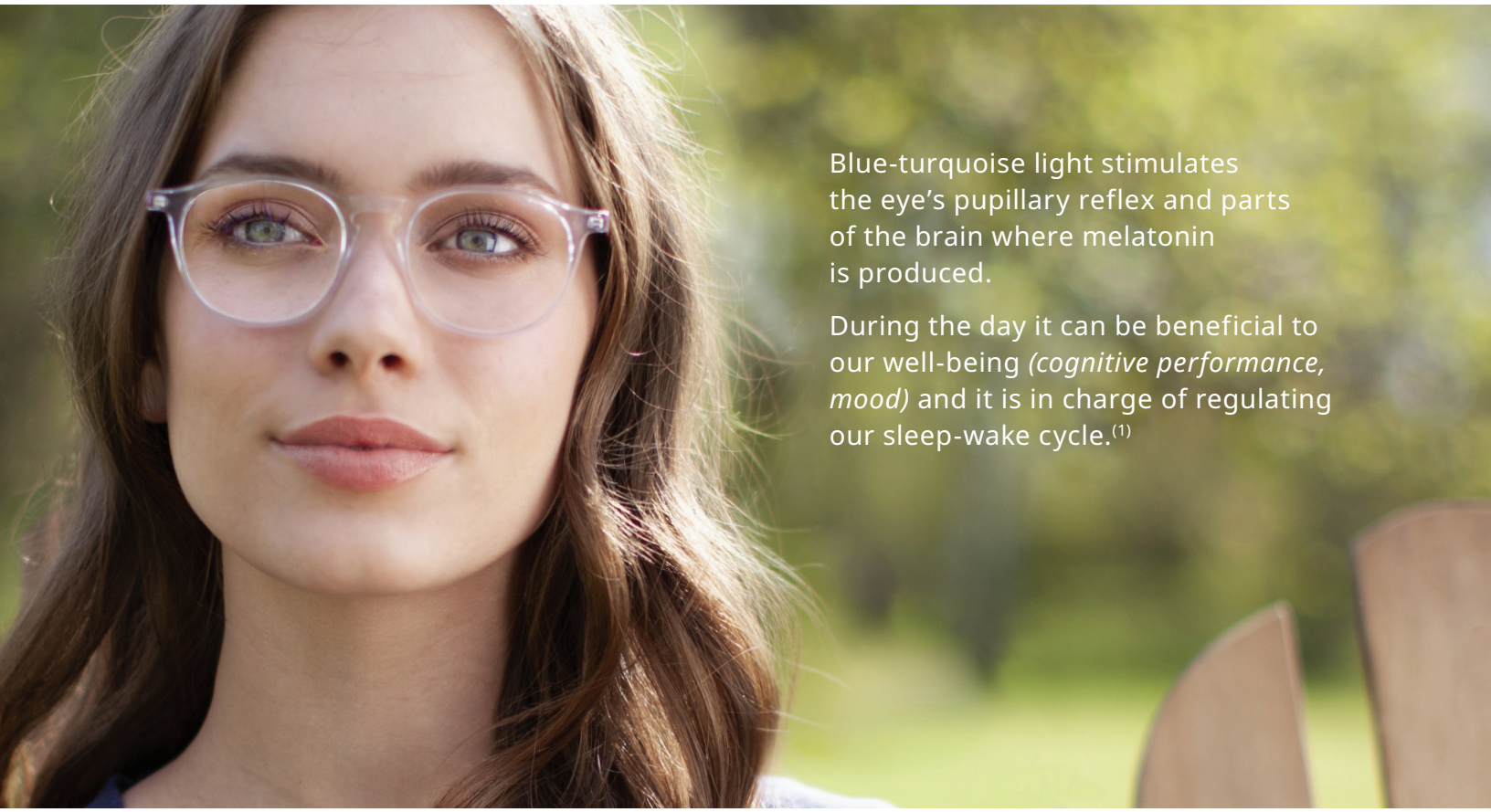


BLUE LIGHT IS MADE UP OF BOTH:

- | Blue-violet light (400-455nm as stated by ISO TR20772:2018)
- | Blue-turquoise light (460 – 500 nm)

VISIBLE LIGHT

BLUE-TURQUOISE LIGHT



Blue-turquoise light stimulates the eye's pupillary reflex and parts of the brain where melatonin is produced.

During the day it can be beneficial to our well-being *(cognitive performance, mood)* and it is in charge of regulating our sleep-wake cycle.[1]

WE NEED TO REDUCE OUR EXPOSURE TO BLUE-VIOLET LIGHT WHILE MAINTAINING THE ONE TO BLUE-TURQUOISE LIGHT DURING THE DAY.

1. Hattar S., Liao H.W., Takao M., Berson D.M. and Yau K.-W. (2002), Melanopsin-containing retinal ganglion cells: architecture, projections and intrinsic photosensitivity.

PROVIDING CLARITY

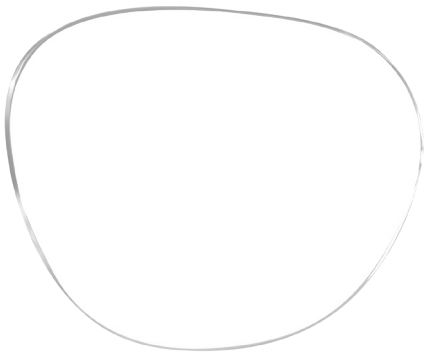
Due to the principle of complementary colors, cutting blue light leads to a yellow residual tint on the lens.

According to the laws of physics, if an object absorbs a color, it will appear as its complementary color.

As blue and yellow are complementary colors, the block of blue-violet light gives the lens a yellow residual color.

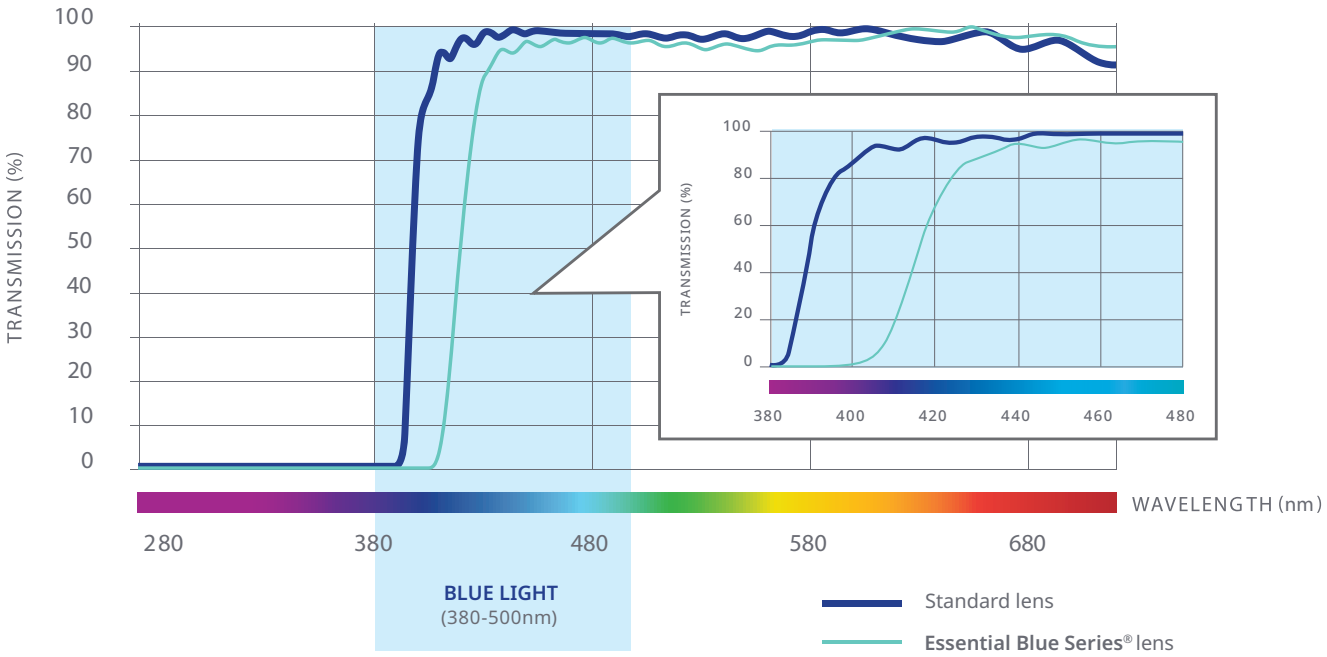
OPTIMAL CLARITY

A coloring agent has been added to **Essential Blue Series®** lens to neutralize the yellow residual tint for an optimal clear lens.[2]



2. Extremely low residual tint resulting from absorbing blue-violet light.

Transmission curve of **Essential Blue Series**® lens versus standard lens.



Essential Blue Series lenses partially cut blue-violet light wavelengths whereas a standard lens does not.

The blue-violet light is partially absorbed by the lens and converted into unperceived hear while the blue-turquoise light passes through.

Essential Blue Series lenses offer UV protection in any lens material(1)

ESSENTIAL BLUE SERIES	
Index	**Filters wavelengths up to**
Plastic 1.50	403 nm
Airwear®	403 nm
Thin & Lite® 1.60	411 nm
Thin & Lite® 1.67	413 nm

1. ***Essential Blue Series*** lens feature combined with any Crizal® coating have a front and back side UV protection up to E-SPF 35™ index.