



BLUE UV | CAPTURE™

EVERYDAY HARMFUL BLUE LIGHT¹ & UV PROTECTION.
CLARITY ON TOP².



ORDINARY
BLUE CUT LENS



NEW

BLUE UV CAPTURE™
LENS³

1. Blue UV Capture™ lens feature blocks at least 20% of harmful blue-violet light (up to 455nm, with the greatest toxicity between 415-455nm). For Polycarbonate concave lenses, the harmful blue light blocking percentage might be slightly lower.
2. Extremely low residual tint resulting from absorbing blue-violet light.
3. Blue UV Capture™ lens includes polycarbonate material featured in this image.



BLUE LIGHT IS EVERYWHERE

OUTDOORS



Blue light is emitted mainly by the sun,
by far its largest source

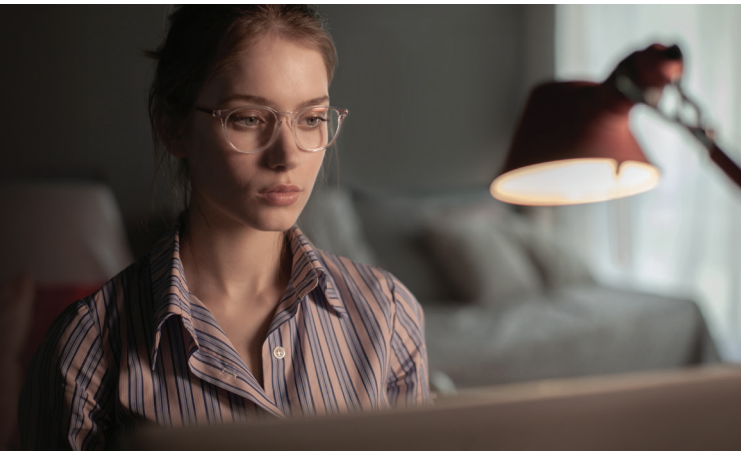
INDOORS



Blue light is also emitted by artificial
lights and digital devices



Our exposure to blue light
is growing as we are living longer
than ever before, exposing ourselves
to more and more artificial lights
and digital devices



Overexposure to blue light may have an impact on:



VISUAL FATIGUE



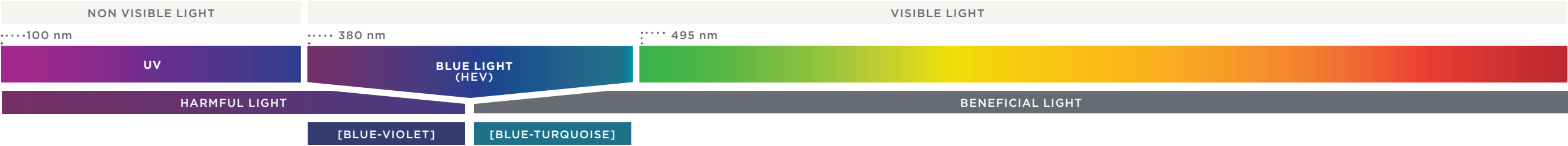
GLARE

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 380-495 nm.

BLUE LIGHT IS MADE UP OF BOTH:

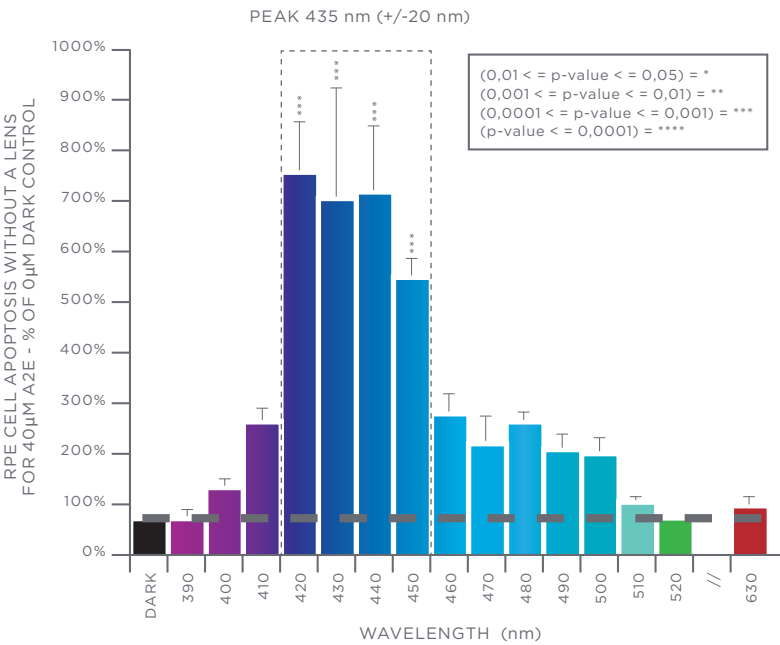
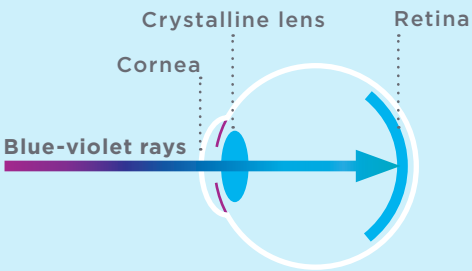
- | Harmful blue-violet light (380-455 nm with the greatest toxicity between 415-455 nm)
- | Beneficial blue-turquoise light (465 - 495 nm)



HARMFUL BLUE-VIOLET LIGHT

Blue-violet light has been identified as the **most harmful light to the outer retina**.

It activates lipofuscin phototoxic components, **that may cause retinal cells death**.



THE EFFECTS OF HARMFUL LIGHT ON RPE CELLS

The outer retina is composed of retinal pigment epithelial (RPE) cells and the outer segments of visual photoreceptors, which detect light. RPE cells are critical to the functioning, survival and constant renewal of these photoreceptors.

RPE cells may be damaged by Blue-Violet light.

Cuttingedge research carried out by Essilor® & the Paris Vision Institute has revealed that the precise band of 415-455 nm induces the highest rate of RPE cell apoptosis.

BENEFICIAL 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 cycle¹.

WE NEED TO PROTECT OUR EYES FROM HARMFUL BLUE-VIOLET LIGHT WHILE LETTING BENEFICIAL BLUE-TURQUOISE LIGHT PASS THROUGH.

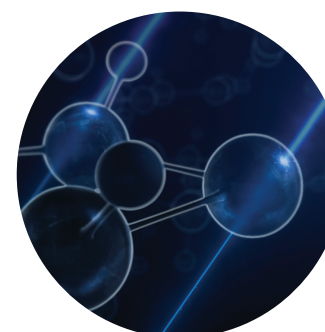
1. Hattar S., Liao H.W., Takao M., Berson D.M. and Yau K.-W. (2002), Melanopsin-containing retinal ganglion cells: architecture, projections and intrinsic photosensitivity.

Discover
BLUE UV | CAPTURE



EVERYDAY HARMFUL
BLUE LIGHT
PROTECTION...

A new in-mass solution conceived to protect our eyes
from harmful blue-violet light, every day.

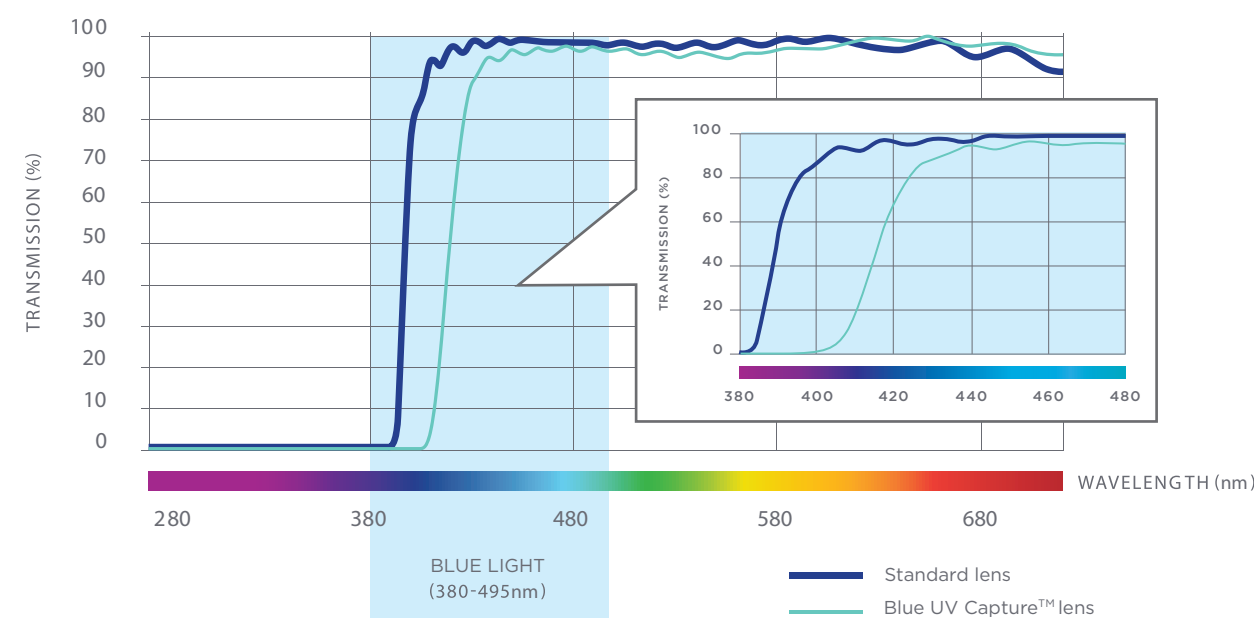


Thanks to a combination of carefully selected molecules at the very heart of the lens, Blue UV Capture™ efficiently filters out harmful blue-violet light while letting beneficial blue-turquoise light pass through.

Blue UV Capture™ lens feature offers
UP TO 3 TIMES MORE PROTECTION
against harmful blue-violet light
than regular prescription lenses¹.

1. Blue UV Capture™ lens feature blocks at least 20% of harmful blue-violet light. For Polycarbonate concave lenses, the harmful blue light blocking percentage might be slightly lower. Regular prescription lenses = 1.5 or Poly material (without blue protection) with Crizal Forte® UV coating at equal center-thickness.

Transmission curve of Blue UV Capture™ lens versus standard lens.



Blue UV Capture™ lens feature partially cuts out harmful blue-violet wavelengths whereas a standard lens without blue filter doesn't.

The harmful blue-violet light is partially absorbed by the lens and converted into harmless and unperceived heat while the beneficial blue-turquoise light pass through.

...and **UV FILTER**

Blue UV Capture™ lens feature offers UV protection in any lens material¹

BLUE UV CAPTURE™	
Index	Wavelengths cut
Orma®	403 nm
Trivex®	414 nm
Airwear®	403 nm
Ormix®	407 nm
Stylis®	408 nm

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

CLARITY ON TOP



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

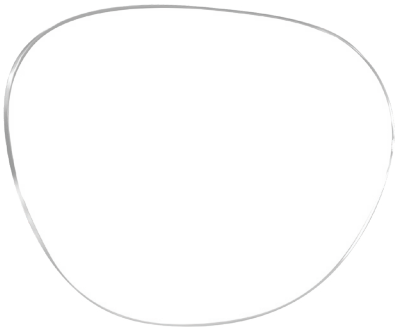
According to the laws of physics, if an object absorbs a color, it will appear as its complementary color.

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 Blue UV Capture™ lens to neutralize the yellow residual tint for an optimal clear lens².



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

ULTIMATE PROTECTION

AGAINST UV AND HARMFUL BLUE-VIOLET LIGHT¹



BLUE UV | CAPTURE™
+
Crizal® PREVENCIA®

Crizal® PREVENCIA® OFFERS 3 BENEFITS

- 1. Selective blue light filtration
Partially filters out harmful blue-violet light while letting beneficial blue-turquoise light pass through
- 2. UV cut
UV protection with an E-SPF 35™ index
- 3. Optimal vision & durable transparency
Offers a complete protection against:



Reflections



Scratches



Smudges



Dust



Water

PRODUCT RANGE AND PERFORMANCE

BLUE UV CAPTURE™ LENS					
	Orma®	Trivex®	Airwear®	Ormix®	Stylis®
Beneficial blue-turquoise light transmission (%) (465-495 nm)	95%	96%	98%	97%	97%
Harmful blue-violet light cut (%) (400-455 nm)	28%	41%	22%	27%	33%

BLUE UV CAPTURE™ LENS + CRIZAL® PREVENCIA®					
	Orma®	Trivex®	Airwear®	Ormix®	Stylis®
Beneficial blue-turquoise light transmission (%) (465-495 nm)	91%	92%	94%	95%	94%
Harmful blue-violet light cut (%) (400-455 nm)	40%	51%	35%	37%	42%

The combination of Blue UV Capture™ lens with Crizal® Prevenzia® coating offers

UP TO 5 TIMES MORE PROTECTION
against harmful blue-violet light than regular prescription lenses¹.

1. Blue UV Capture™ lens feature combined with Crizal® Prevenzia® coating filters up to 35% of harmful blue-violet light with front and back side UV protection of E-SPF 35™ index. For Polycarbonate concave lenses, the harmful blue light blocking percentage might be slightly lower. Regular prescription lenses = 1.5 or Poly material (without blue protection) with Crizal® Forte® UV coating at equal center-thickness.

BLUE UV | CAPTURE™



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E-SPF® is an index rating the overall UV protection of a lens. E-SPF® was developed by Essilor International and endorsed by third party experts.
The E-SPF® index relates to lens performance only and excludes direct eye exposure that depends on external factors (wearer's morphology, frame shape, position of wearers).