More protection, less reflection.

Options for everyone.

- **Suitable for all ages**
- **Available in today's most popular lens materials***
- **Available lens materials: 1.50, TRIVEX,® Polycarbonate, 1.60, 1.67, 1.74**

*excluded and not available for: Bifocal and Trifocal Lenses, DriveSafe Lenses, Sports Lenses, EnergizeMe lenses.

ZEISS BlueGuard Lenses. Contact your **ZEISS** representative or visit **www.zeiss.com/BlueGuard** to learn more.

[1] Inhouse measurements and calculations based on the BVB (Blue-Violet-Block) metric. Analyses by Technology and Innovation, ZEISS Vision Care, DE 2020
[2] Inhouse measurements and calculations based on the DBRLED (Digital Blue Light Reflection) metric. Analyses by Technology and Innovation, ZEISS Vision Care, DE 2020
[3] Quantitative survey with N=100 consumers (spectacle lens wearers) in Germany in September 2020
[4] Watson A. (2020). In-home media consumption due to the coronavirus outbreak among internet users worldwide as of March 2020, by country. www.statista.com, URL https://www.statista.com/statistics/1106498/home-media-consumption-coronavirus-worldwide-by-country
[5] The Vision Council (2016). 2016 Digital Eye Strain Report

Carl Zeiss Vision Inc.
Customer Service USA: 1-866-596-5467
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Seeing beyond

More protection, less reflection.

Seeing beyond

ZEISS BlueGuard™ Lenses

Great looking lenses which reduce digital eyestrain from blue light AND protect eyes from potentially harmful UV.

www.zeiss.com/BlueGuard

ZEISS BlueGuard Lenses.
The next generation of blue light blocking lenses.

More protection, less reflection.

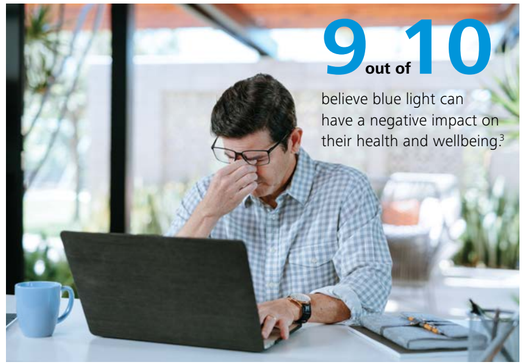
A product in demand.
Usage of digital devices is skyrocketing, along with awareness of digital blue light. People are concerned about the impact of blue light on their eyes, and the effect it has on the way they look - especially on video calls.

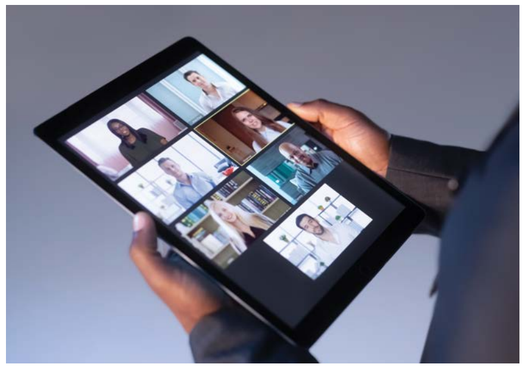
A new innovation by ZEISS.
In the past, blue light blocking was achieved through coatings which reflect blue light. ZEISS BlueGuard lenses have blue light blocking properties build directly into the lens material.

More protection:
Built on the foundation of ZEISS UVProtect Technology, the ZEISS BlueGuard lens material provides full UVA protection and now **blocks up to 40%** of potentially eye straining blue light.

Easy on the eyes:
Designed to address digital eye strain in an increasingly digital world.

Less reflection:
For good looks on- and offline, ZEISS BlueGuard Lenses have up to **50 %[2] less reflections** of digital blue light compared to ZEISS DuraVision BlueProtect coating.





Address your patient's concerns.

8 out of **10** consumers **say it is important** to protect their eyes from blue light.[3]

More exposure – independent of age.

Over the last year, research has shown that people of all ages, from all over the world are spending more time on digital devices.[4]

In addition, more homes use LED lights that also emit blue light. So, besides facing potentially harmful blue light when working indoors or at night. This is causing people to be concerned about the impact of blue light on their sleep and wellbeing.

Increased awareness of digital eye strain.

Up to two thirds of adults[5] who regularly use digital devices experience various symptoms associated with digital eye strain. Google searches show people are actively looking for solutions to digital eyestrain.

Now, more than ever, consumers are seeking products that offer blue light protection.

Look your best – on-and-offline.

As more work and events move online, patients still want to look their best. That means wearing aesthetically pleasing lenses without annoying blue or purple reflections.

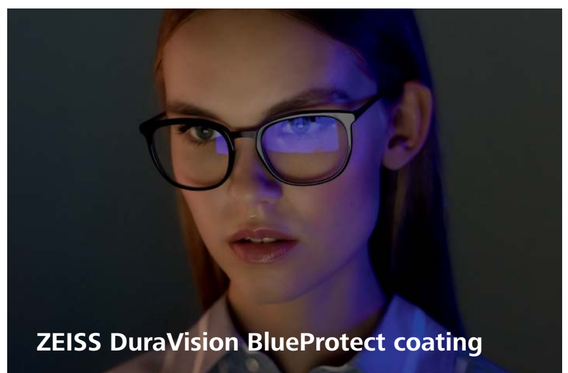
ZEISS BlueGuard Lenses have **up to 50%**[2] **less reflections** of digital blue light than ZEISS DuraVision BlueProtect coating.

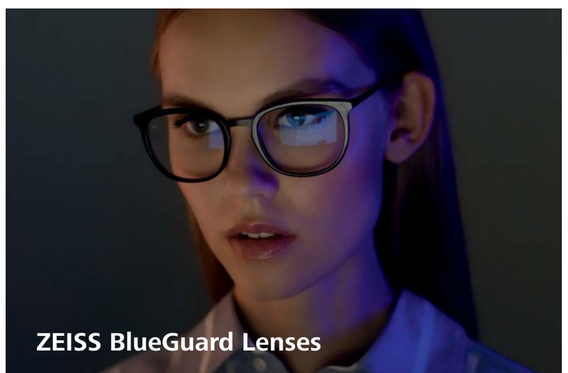
Improved aesthetics

Blue light blocking coatings are designed to block blue light by reflecting it, which is why its residual reflections are higher. These reflections can be noticeable and unsightly, especially indoors where displays and LEDs are the primary light sources.

Now you can take selfies or join video calls with more confidence.

Because the blue light and UV blocking properties are now inside the lens material, ZEISS BlueGuard lenses with ZEISS Duravision Platinum coating reveal more of your eyes with fewer blue/purple reflections.





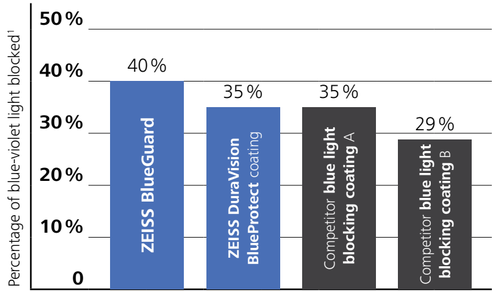
The solution: ZEISS BlueGuard Lenses.

Enhanced protection

ZEISS BlueGuard Lenses block **up to 40%**[1] of potentially harmful and irritating blue light.

ZEISS scientists incorporated blue light blocking properties directly into the chemical make up of the lens material. In addition to blocking the potentially harmful blue light from the sun, ZEISS BlueGuard Lenses also filter irritating digital blue light properties directly into the lens material.

Furthermore, ZEISS BlueGuard also includes ZEISS UVProtect technology which provides sunglass-level UV protection (up to 400nm) in all ZEISS clear lenses.



ZEISS BlueGuard Lenses (1.6 Lens Material) block slightly more blue light than blue light blocking coatings.

An excellent balance between protection, visual comfort and aesthetics.

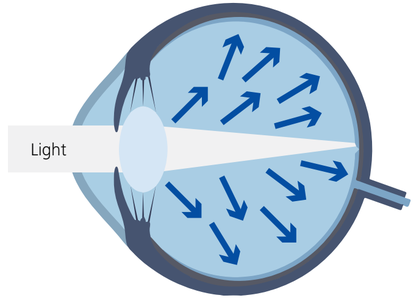
More visual comfort

ZEISS BlueGuard Lenses are designed to address **digital eye strain.**

Digital devices and LED lights emit high amounts of blue light are all around us.

Blue light tends to scatter as it enters the eye, causing so-called “visual noise”. This could be perceived as discomfort glare and result in a reduction in contrast perception. Additionally, blue light causes longitudinal aberrations that may lead to blurred images. This unfocused “visual noise” can contribute to visual discomfort and symptoms associated with digital eye strain.

ZEISS BlueGuard lenses address a key portion of the blue light spectrum that can intensify symptoms of digital eye strain.



Blue light scatters in the occular media, causing discomfort glare.

What is blue light?

- Visible blue light is electromagnetic radiation in the wavelength from 380–500 nm.
- The spectral range between 400–455 nm is considered potentially harmful blue light.
- *455 nm is defined by ISO/TR 20772-2018 as the upper limit of the light spectrum which has the greatest phototoxic risk to retinal pigment epithelial (RPE) cells.

What is digital eye strain?

- Digital eye strain (DES) is the combination of eye and vision problems associated with the use of computers and other electronic displays.
- DES causes visual disturbance and / or visual discomfort.
- Most frequently named symptoms include glare / dazzle, uncomfortable vision, accommodation stress and dysfunction, fixation disparity, pain in or around the eyes, dryness and eye fatigue.