

A man with short dark hair and a beard, wearing a white dress shirt, a dark suit jacket, and a blue tie, is looking at a laptop screen. He is wearing red-rimmed glasses and has his hands clasped in front of his chin, appearing thoughtful. The background is a bright, slightly blurred office setting. A dark grey banner is at the top, and a red curved banner is at the bottom.

Shamir
Blue Zero™

PROTECTING YOU FROM
TODAY'S LIGHT SOURCES

**BLOCKS
3X* MORE
HARMFUL
BLUE LIGHT
THAN STANDARD
CLEAR LENSES**



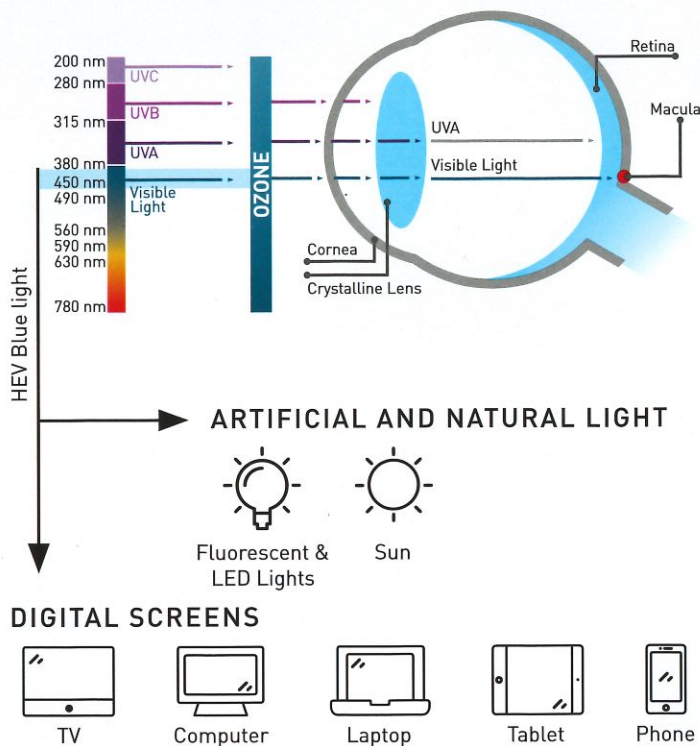
ReCreating Perfect Vision®

Shamir Blue Zero™

SHAMIR BLUE ZERO™

Shamir has developed a lens treatment providing protection from the potential harm of natural and artificial light sources present in our everyday lives, from TV and computer screens, smartphones, tablets, and more (FIG A).

FIG. A
BLUE LIGHT EMITTING SOURCES



"Many of the displays we all use today have blue light frequencies between 415 and 455 nanometers."¹

Based on a unique polymer formula, Shamir **Blue Zero™** High Index 1.67 and Shamir **Blue Zero™** Trivex™ blocks up to 98% HEV blue light in the 415nm - 435nm range. Shamir **Blue Zero™** Polycarbonate blocks up to 50% HEV blue light in the 415nm - 435nm range.

^{*}The percentage of blue light blocked can vary due to Rx thickness of the lens and by material index. The percentage blocked is three times more at 424nm, this represents the midpoint of the harmful blue light range.

¹Blue light can damage your eyes, display manufacturers react with "safe screens"; By Matthew Humphries Sep. 7, 2015 11:59 am; www.Geek.com

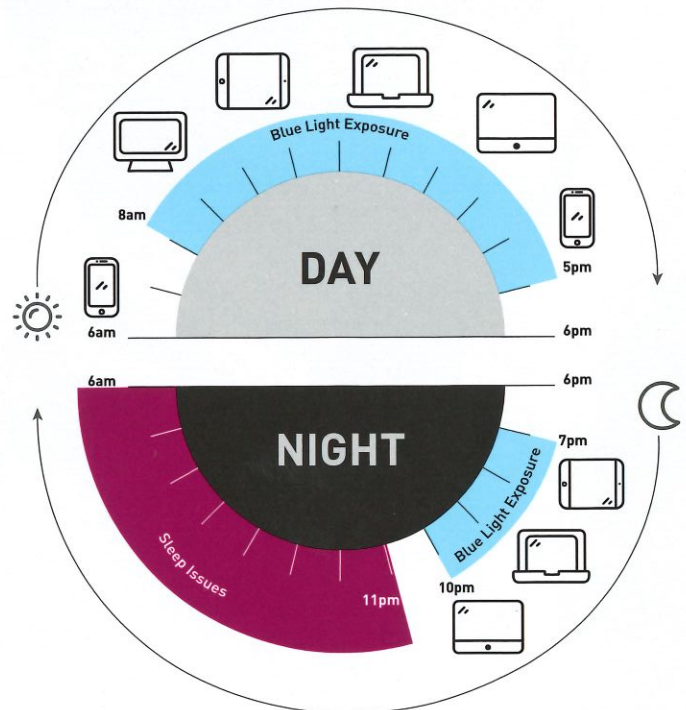
WHY IT'S SO IMPORTANT

RISKS OF OVEREXPOSURE

Extensive exposure to blue light leads to tired, dry eyes, eye strain, insufficient visual contrast, and headaches. At worst, it increases risk of macular degeneration and retinal disease.

Children are particularly vulnerable since the lens of their eyes are more transparent, allowing in more blue light from TV screens and tablets.

EXPOSURE AROUND THE CLOCK



KNOWN BLUE LIGHT EFFECTS

- ▶ **HARD TIME SLEEPING**
Decreased melatonin causes a disruption of the sleep cycle
- ▶ **FATIGUE**
Exposure leads to tired, dry eyes, eye strain and headaches

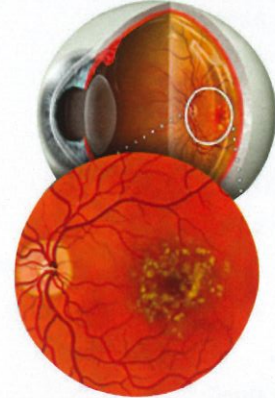
REDUCING A CLEAR & PRESENT DANGER

Research on visual health shows an increase in the incidence of ophthalmic disease related to today's greatly increased exposure to artificial light, which is known to not only increase the risk of ocular disease, but it is also related to general health problems.

It can cause increased production of lipofuscin (FIG B) (aging markers and free radicals), and is an effective suppressor of melatonin. Decreased melatonin causes disruption of the natural sleep cycle and has been related to greater risk of a number of other conditions from cardio-metabolic problems to impaired immune systems.

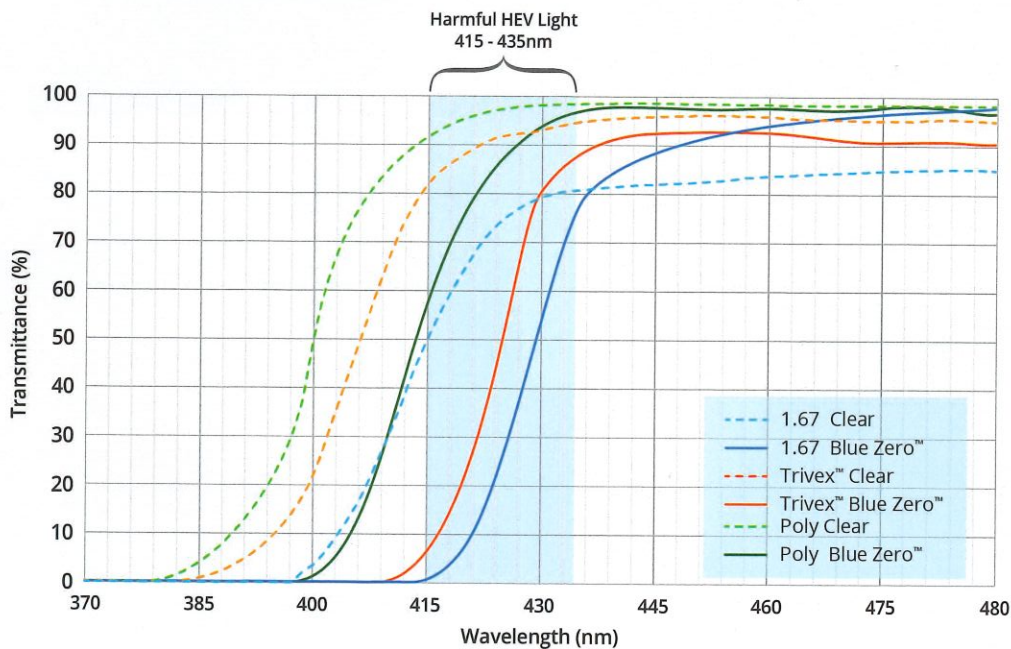
FIG. B

Chronic accumulation of lipofuscin is implicated in pathological mechanisms that can lead to **degenerative retinal diseases.**



HEV BLUE LIGHT TRANSMITTANCE

The graph below shows the percentage of light being transmitted through various (standard) clear and **Blue Zero™** materials, along the light spectrum.



Transmittance was measured with a Spectrometer, using finished Plano lenses (2mm center thickness).

WHY IT'S YOUR BEST OPTION

PROTECTING VISUAL HEALTH

Shamir **Blue Zero™** is a nearly clear lens. Shamir **Blue Zero™** lens clarity ensures comfortable vision in all light conditions, maintaining optimal visual acuity. **By absorbing just the right amount of blue light, Blue Zero™ protects health without interfering with visual comfort.** It also provides UV protection by effectively absorbing

harmful UVA and UVB rays. Shamir **Blue Zero™** is suitable for **everyone, recommended for children as well as adults, and for wearers of prescription or plano lenses.** Shamir's **Blue Zero™** means that everyone's visual health is automatically cared for!

SHAMIR BLUE ZERO™ IS AVAILABLE IN THE FOLLOWING SHAMIR LENS DESIGNS:

EVERYDAY

> PROGRESSIVE

Shamir **Autograph Intelligence™**
Shamir **Autograph® III**
Shamir **Autograph® II+**
Shamir **InTouch™**
Shamir **Spectrum +™**
Shamir **Element™**

> SINGLE VISION

Shamir **Autograph® III-SV**
Shamir **Autograph II-Single Vision™**
Shamir **Spectrum -Single Vision™**

> BIFOCAL

Shamir **Duo™**

WORK

Shamir **Computer™**
Shamir **Workspace™**
Shamir **Relax™**

PLAY

Shamir **Attitude III® - Fashion**
Shamir **Autograph II - Attitude™**

> SPORT

Shamir **Attitude III® - Sport**
Shamir **Golf™**

> SPORT SV

Shamir **Attitude III® - SV**
Shamir **Autograph II - Single Vision Attitude™**
Shamir **Golf - Single Vision™**

Available in Trivex™, Polycarbonate, and SuperLite™ 1.67

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