

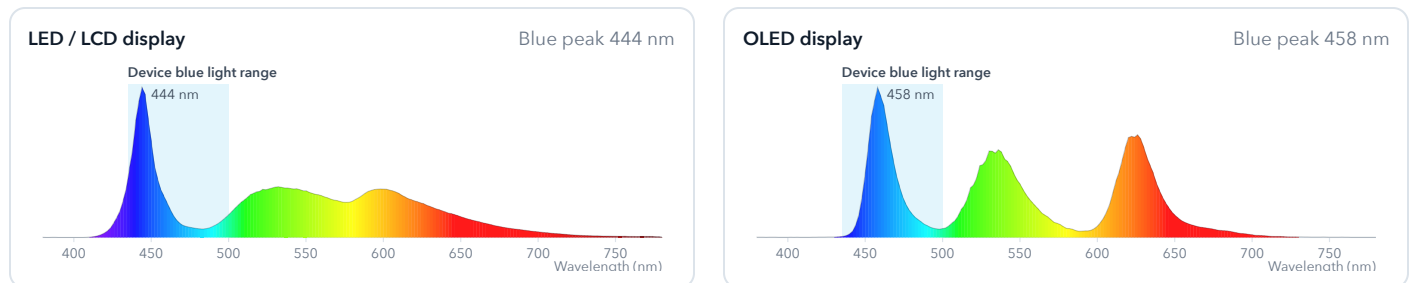
How Eyesafe works.



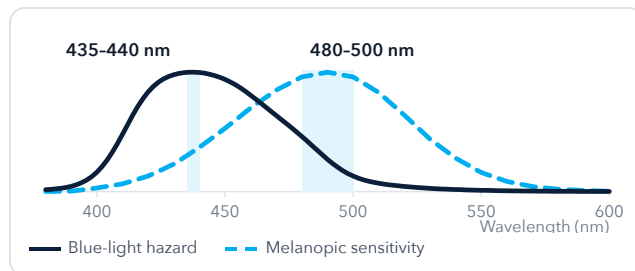
Eyesafe technology reduces high-energy blue light from digital screens while keeping color true. It is built into film, glass, lenses and display panels, measured against the Eyesafe® Requirements, and verified by third-party labs like UL Solutions and TÜV Rheinland.

01 It starts with the light your screen emits.

Screens make white by mixing blue, green and red light. LED-backlit LCD screens (most laptops, monitors and TVs) have one sharp blue spike, measured at 444 nm. OLED screens (most phones) have three separate peaks, with blue at 458 nm.



02 Where blue light matters for the eye and for sleep.



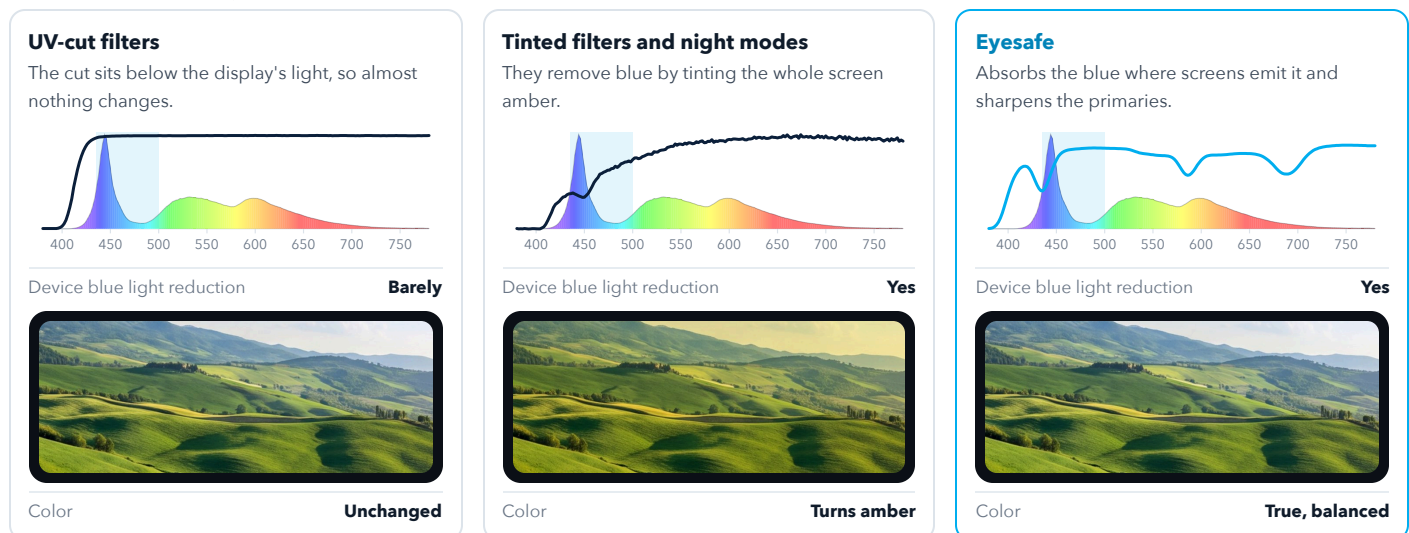
435-440 nm

The peak of the blue-light hazard function used in eye-safety standards (ICNIRP, IEC 62471).¹

480-500 nm

Peak melanopic sensitivity, the eye's body-clock receptors (CIE S 026). Light in the 400-500 nm range has been shown to impact sleep.^{2,4}

03 Most blue light filters miss or overcorrect.



Measured spectral transmission of representative products in each class, shown over a measured LED display. No brands are named.⁵

Sources

1. ICNIRP (2013), Guidelines on limits of exposure to incoherent visible and infrared radiation; IEC 62471; ANSI Z80.3. Blue-light hazard function B(λ), peak 435-440 nm.
2. CIE S 026:2018, System for metrology of optical radiation for ipRGC-influenced responses to light; Berson et al., Science (2002).
3. Eyesafe measurement of an LED-backlit display and an OLED smartphone (True Tone off).
4. Chang et al., PNAS (2015); Higuchi et al. (2014); van der Lely et al., J Adolesc Health (2015).
5. Transmission curves: Eyesafe spectrophotometer measurements (380-780 nm). Eyesafe curve: RPF60 verification sample (April 2026).

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04 Absorb the blue. Sharpen the color.

1 Absorb

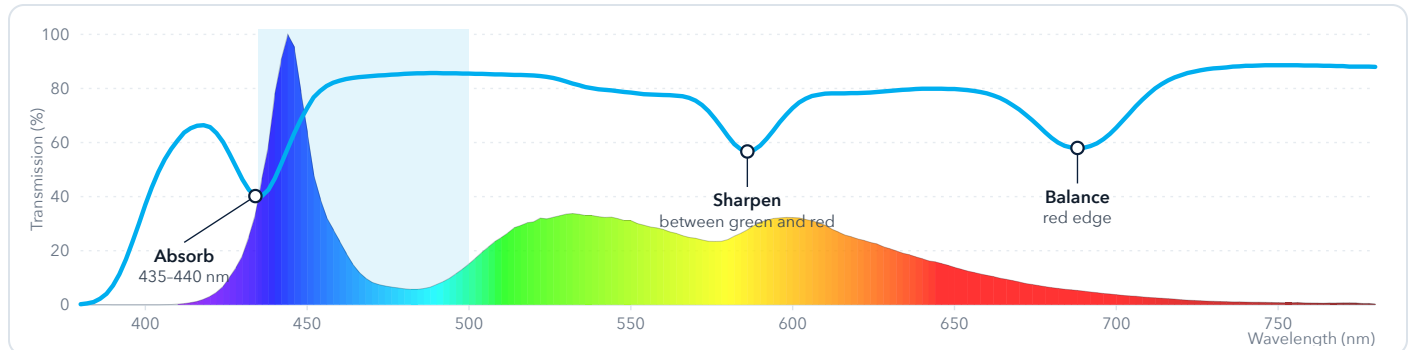
Eyesafe absorbers work across 400–500 nm, with peak absorption at 435–440 nm, the region of greatest concern for the eye.

2 Sharpen

Additional notches sit in the gaps between the display's green and red primaries, so each color comes through cleaner and more saturated.

3 Balance

Because blue, green and red are tuned together, white stays neutral. The screen doesn't turn yellow.



Eyesafe RPF60 (UL verification sample) over a measured LED display. Blue: measured Eyesafe transmission. Color fill: measured display emission. Shaded: 435–500 nm.⁵

Eyesafe technology reduces light in the 400–500 nm range, which has been shown to impact sleep.⁴

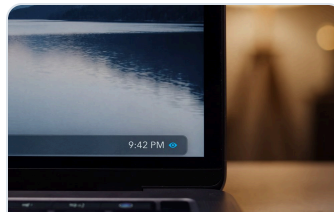
05 One science. Every screen.



Screen protection

Film, glass and privacy protectors for phones, laptops, Chromebooks and monitors.

[Learn more →](#)



Displays

Built into laptops, monitors and TVs by the manufacturer, inside the panel.

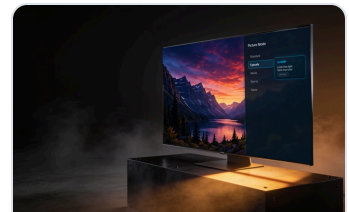
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Eyewear

Lens technology for everyday and computer glasses.

[Learn more →](#)



Eyesafe IQ

Adaptive software for TVs and laptops. Eyesafe Mode is the setting you turn on.

[Learn more →](#)

06 Measured against our standard.

Each product is rated on a scale. The higher the number, the more blue light reduction in that band.



RPF® scale Radiance Protection
Factor. LED/LCD, peak 435–440 nm.



CPF scale Circadian Protection
Factor. OLED, 480–500 nm.



Verified by third-party labs

UL Solutions · TÜV Rheinland



Developed with eye doctors

The Eyesafe Vision Health Advisory Board guides the Eyesafe® Requirements.

07 Grounded in published standards.

ICNIRP · IEC 62471

Blue-light hazard function, peak 435–440 nm

ANSI Z80.3

Eyewear photobiological safety

CIE S 026:2018

Melanopic (body-clock) response

08 Protected by 100+ patents and trade secrets.

Multi-notch filtration · Melanopic tuning · Color filter · Light conversion · Adaptive control · Photobiomodulation

[View patents →](#)

350 million+ Eyesafe-enabled devices

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