

What the science says, and what the product does.

A short set of statements, each with its source, for Lenovo Chromebook screen protection with Eyesafe® technology. Every statement below is backed by a published source or certified test data.

A Why districts are asking

Context about screens and children's eyes. These statements describe screen use overall, not this product.

SCREEN TIME

Teens in the US average 8.5 hours of screen time per day; tweens (ages 8 to 12) average 5.5 hours, not counting school work.¹

CHILDREN'S EYES

Children are a sensitive population: the crystalline lens continues developing to roughly age 20 and filters less blue light, so a child's retina receives more blue light than an adult's for the same exposure.²

CHILDREN'S EYES

Children are more sensitive to blue light: larger pupils, shorter viewing distance, and less protective lens yellowing.³

AGE GRADIENT

For the same display, the effective blue-light dose reaching the retina is highest in the youngest eyes and declines steadily with age.⁴

SCREENS AND SLEEP

Controlled experiments show that evening use of light-emitting screens suppresses melatonin, delays the circadian clock, lengthens time-to-sleep, and reduces next-morning alertness.⁹

CHILDREN AND SLEEP

Under identical evening light conditions, children's melatonin suppression is roughly double that of adults. Filtering blue wavelengths during evening screen use significantly protects melatonin production in adolescents.^{10, 11}

B What the product does

Every product statement, and how the product delivers it.

STATEMENT	HOW
Lenovo Chromebook screen protection with Eyesafe® technology reduces high-energy blue light from 400 to 500 nm. ¹²	Transmission is reduced across the full 400 to 500 nm band, about 30% on average, including the wavelengths linked to sleep and the body clock.
Filters 60%* of the blue light of most concern to our eyes (RPF60). ^{5, 8}	Reduction peaks at 435 to 440 nm, the band that eye-safety standards weight most heavily, rather than tinting the whole screen.
Supports visual comfort and reduces the blue light linked to later sleep timing. ^{9, 11, 12}	Evening screen light affects melatonin and sleep timing (section A); the film reduces that light every hour the device is on.
Reduces blue light while maintaining the vibrant color of the screen. ⁵	Because only a narrow band is reduced, there is no yellow tint. Software night modes shift the whole screen warm instead.

Continued on page 2. *Measured at 435 to 440 nm. Certified product transmission data available on request.

B What the product does (continued)

Always-on blue light protection, with nothing for the student to turn on or adjust.⁵

It is a physical layer on the display, so protection does not depend on settings or student behavior.

Verified by UL Solutions to achieve industry-leading requirements for blue light reduction.^{5, 6}

Eyesafe® Accessory Requirements 3.0 grade screen protection from RPF20 to RPF80. This product is graded RPF60.

A scratch- and damage-resistant PET surface layer, built for durability.⁵

The PET surface layer sits on top, with Eyesafe® technology beneath it. Precision fit for each supported device; anti-glare; touch and stylus compatible.

C What these statements do not claim

- This product reduces blue light, maintains color and protects the screen. Its sleep statement is limited to reducing the blue light linked to later sleep timing.
- No claim is made that this product treats sleep problems, improves academic performance, relieves eye strain, reduces myopia, or prevents any disease.
- Published findings on screens and children's sleep reflect screen use overall (light, stimulation and time displacement), not blue light alone.
- Every quantified light-reduction figure traces to certified test data. Transmission data and certification documentation are available on request to support procurement and RFP responses.



Verified by UL Solutions. Developed with eye doctors on the Eyesafe® Vision Health Advisory Board.

Sources

- 1 Common Sense Media. The Common Sense Census: Media Use by Tweens and Teens. www.commonsensemedia.org/research
- 2 ANSES (French Agency for Food, Environmental and Occupational Health & Safety). LED report, 2019. www.anses.fr/en/content/leds-ansess-recommendations-limiting-exposure-blue-light
- 3 SCHEER (EU Scientific Committee on Health, Environmental and Emerging Risks). Final Opinion on Light-Emitting Diodes, 2018. health.ec.europa.eu/other-pages/health-sc-basic-page/final-opinion-light-emitting-diodes-leds_en
- 4 Chaopu Y, et al. 2018. Optics Express. pubmed.ncbi.nlm.nih.gov/30469778/
- 5 Eyesafe® Accessory Requirements 3.0. Certified product transmission and color test data available on request. eyesafe.com/standards
- 6 UL Solutions product verification (Eyesafe® RPF60). verify.ul.com
- 7 Eyesafe® Vision Health Advisory Board. eyesafe.com
- 8 Blue light hazard weighting: ICNIRP Guidelines on Limits of Exposure to Incoherent Visible and Infrared Radiation (2013); ANSI Z80.3.
- 9 Chang A-M, et al. 2015. Proceedings of the National Academy of Sciences. pubmed.ncbi.nlm.nih.gov/25535358/
- 10 Higuchi S, et al. 2014. Journal of Clinical Endocrinology & Metabolism. pubmed.ncbi.nlm.nih.gov/24840814/
- 11 van der Lely S, et al. 2015. Journal of Adolescent Health. pubmed.ncbi.nlm.nih.gov/25287985/
- 12 Eyesafe® RPF60 transmission spectrum, UL verification sample (April 2026). Data available on request.

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