



# **Eyesafe® Accessory Requirements 3.0**

## Blue Light Management and Color Performance for Screen Accessory Manufacturers

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Developed in collaboration with the Eyesafe Vision Health Advisory Board.  
For more information about Eyesafe® Requirements, certification, and partner guidelines,  
please visit [eyesafe.com](https://eyesafe.com).

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# Eyesafe® Accessory Requirements 3.0

Amidst increasing scientific and medical research on blue light exposure, Eyesafe has released updated blue light accessory requirements, targeting the light emitted between 435-440 nanometers (nm) and 480-500 nm. Studies suggest these wavelengths pose the greatest risk to retinal health and circadian rhythm, as referenced by the Spectral Weighting Factors for Blue-Light Hazard as published by the International Commission on Non-Ionizing Radiation Protection (ICNIRP) in 2013, the American National Standard Institute (ANSI) Z80.3, and the CIE System for Metrology of Optical Radiation for IPRGC-Influenced Responses to Light.<sup>1</sup>

In parallel with the updated requirements, Eyesafe is renewing RPF® Radiance Protection Factor for Accessory. Products will be assigned an RPF® ranging from RPF30 to RPF 80, with higher numbers equating to better blue light protection. The RPF calculation measures both toxicity and circadian impact. This was done in collaboration with doctors and healthcare leaders to provide a more comprehensive measure of blue light impact on human health.

RPF for Accessories is identified as a factor (percentage number between 0-100) to quantify the performance of reduction of blue light hazard and circadian impact of a standard display product. The RPF number combines the reduction level of toxic blue light of accessory optical film at 435-440 nm and the reduction level of circadian impact at 480-500 nm, with criteria for luminance and correlated color temperature (CCT). RPF for Accessory requirements will be third-party verified and may be used for marketing purposes with permission from Eyesafe.

<b>Eyesafe Accessory Screen Protection Requirements 3.0 (2024)</b>				
<b>RPF® Radiance Protection Factor</b>	<b>Blue Light Toxicity Reduction</b>	<b>Circadian Impact (CI) Reduction</b>	<b>Shift of CCT</b>	<b>Luminance Reduction</b>
RPF30	≥15%	≥15%	≤250	≤20%
RPF40	≥20%	≥20%	≤350	≤20%
RPF50	≥25%	≥25%	≤350	≤20%
RPF60	≥30%	≥30%	≤500	≤25%
RPF70	≥35%	≥35%	≤500	≤25%
RPF80	≥40%	≥40%	≤500	≤30%

**Notes:**  
 The Eyesafe Accessory Requirements are applicable for product formats including screen overlays and protectors for use with consumer electronics.  
 The RPF number will range from RPF30 to RPF80 and require achievement of each of the identified requirements.  
 The application of the solution will reduce the blue content and lead to a display color temperature deviation and luminance reduction within an identified range.  
 The performance of the solution shall not lead to a color temperature shift more than allowed limits.

<sup>1</sup> American National Standards Institute (ANSI) Z80.3 and the International Commission on Non-Ionizing Radiation Protection (ICNIRP) Guidelines define the peak toxic hazard region of the blue spectrum as 435-440 nm. CIE S 026:2018 CIE System for Metrology of Optical Radiation for ipRGC-Influenced Responses to Light. International Standard. (2018). 10.25039/S026.2018 identifies 480-500 nm as the range that has the most impact on circadian rhythm.