What is harmful blue light?

Blue light (also known as High Energy Visible Light) is at the far end of the visible spectrum, close to ultraviolet light, with a wavelength of between 380-460 nanometers. Harmful blue light is centered around 435nm.\(^1\)

Where is harmful blue light found?

Often associated exclusively with electronic devices and screens, harmful blue light is actually present both indoors and outdoors. The sun is the largest singular source of harmful blue light, scattering it through the atmosphere and emitting over 100 times the intensity of electronic devices and screens!

How do Transitions lenses help?

Delivering comfort of vision today and helping provide comprehensive protection for tomorrow, Transitions lenses block harmful UV and reduce exposure to harmful blue light indoors and outdoors so you can safely enjoy your vision today and in the future.

\(^1\) Arnault et al., 2013, http://dx.doi.org/10.1371/journal.pone.0071398
Indoors, Transitions lenses block 20% to 36% of harmful blue light indoors excluding CR607 Transitions Signature VII products which block 14% to 19%. The 2 times comparison refers to typical clear 1.50 and polycarbonate hard-coated lenses.

Transitions® Signature® VII lenses block at least 20% of the harmful blue light indoors, which is up to 2 times more than standard clear lenses, and they block over 85% outdoors.

Outdoors, they darken to help provide even more protection from harmful blue light, intense glare and UV rays from the sun.

Transitions® XTRActive® lenses help provide more protection than Transitions Signature VII lenses – they provide more protection against blue light everywhere you need it by blocking at least 34% of the harmful blue light indoors and 88% to 95% of harmful blue light outdoors.

Transition® Vantage® lenses reduce exposure to harmful blue light, blocking at least 34% indoors, which is 3 times more than a standard clear lens, and over 85% outdoors.

Photochromic performance is influenced by temperature, UV exposure, and lens material.