



ViewSonic ColorPro vDisplay Manager COLOR BLINDNESS SIMULATION MODE ENABLES INCLUSIVE DESIGN FOR CREATIVES

Challenges

Visual media creators want to reach as many people as possible with their designs, but optimizing content for those with color blindness can be difficult, especially accommodating multiple types of colorblindness.

Around 3.8% of the population experience some kind of colorblindness. However, not all types of colorblindness are the same, mostly in the colors that can and cannot be perceived.

- Protanopia: Red colorblindness or perception deficiency; poor red-green-yellow differentiation
- Deuteranopia: Green colorblindness or perception deficiency; poor red-green-yellow differentiation
- Tritanopia: Blue colorblindness or perception deficiency; poor yellow-blue differentiation

Creatives would benefit from a system that allows them to see through different eyes and perceive their work in a new way.

For more information, visit ColorPro at color.viewsonic.com.

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Solution

vDisplay Manager and ColorPro

With select ColorPro monitors, the ViewSonic® vDisplay Manager software is able to accurately simulate color blindness or color vision deficiency (CVD) even to users able to see the full spectrum.

With this tool, designers are able to create accessible designs with enough contrast and visibility even to those who may not be able to perceive certain colors - or any color at all.

Therefore, ColorPro monitors' commitment to color accuracy extends to even accommodating those who have limited color perception. With specialized color filter technology, vDisplay Manager's color blindness simulator isolates the unperceived color on supported VP2468a, VP2768a, and VP3481a monitors.



ViewSonic® VP2468a & VP2768a



ViewSonic® VP3481a

What is Colorblindness?

More Information

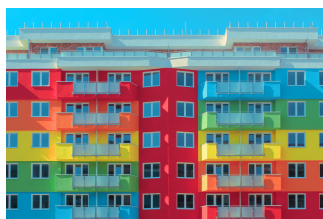
Color blindness is a genetic condition that limits a person's ability to perceive one or more colors. Also called color deficiency, color blindness affects around 300 million people worldwide. As the gene for colorblindness is associated with the X chromosome, 1 in 12 men have some kind of color deficiency. However, only 1 in 200 women have the same vision issue.

How Does Color Blindness Work?

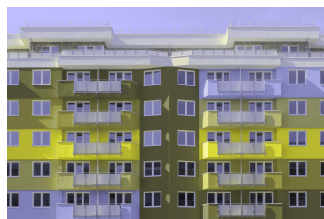
The retina is the layer of light-sensitive cells that lines the back of the eye. These are made up of rods and cones. While rods are very light sensitive, they see only in black and white. Cones are responsible for perceiving color.

There are 3 different types of cones, each specializing in a particular part of the light spectrum: red, green, and blue. The signals of these specialized cells - along with the rods - are transmitted to the brain to produce images.

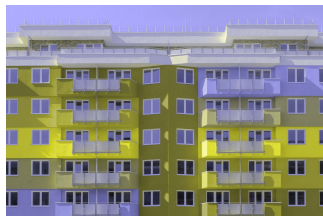
Color blindness occurs when one or more type of cone is absent, not working, or detecting color differently.



Original



Protanopia



Deuteranopia



Tritanopia

How Does the Color Blindness Simulator Help?

vDisplay Manager's color blindness simulator simulates different types of color blindness by altering how certain colors are displayed.

Deficient colors will be washed out into gray scale to show where perception issues may occur. While this may not be true to what a viewer with CVD actually perceives, it is a useful analog for creators to make their designs work for a broader audience.

The advantage of this approach is that unaffected colors are not necessarily affected to a person with full color vision, allowing for a standard workflow.

Color Blindness Mode

vDisplay Manager for People with Color Blindness or Color Vision Deficiency (CVD)

Along with a color blindness simulator, vDisplay Manager also includes color blindness modes for creators with different forms of CVD.

While this is not a new feature among high-quality design monitors, many color blindness modes result in distortions to all the viewed colors. However, ViewSonic® ColorPro™ commitment to color accuracy means that corrected images see minimal change to the visible colors.

In fact, ColorPro™ is setting the industry standard for color accuracy among creators and viewers with color vision deficiencies of all kinds.

According to TÜV SÜD's technical report on vDisplay Manager, color blind or CVD viewers can recognize displayed colors with 90% accuracy. Compared to standard color blindness filters with only 70% recognition, this represents a huge leap forward.



TÜV SÜD Certification

Creating a New Test with ViewSonic®

TÜV SÜD is an international certifying body for the safety, security, and sustainability of technology in virtually every sector. Their standards are the benchmark of quality worldwide.

When ViewSonic submitted ColorPro monitors for compliance with color blindness and color vision deficiency (CVD) standards, no such certification existed. Using the ColorPro guidelines, however, TÜV SÜD will establish new standards for color vision impairment accommodations.

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