Colour-blind Series: Tritanopia

What is it for?

Tritanopia is a form of colour blindness that affects the ability to see blue. Protanopia and Deuteranopia are both types of "red-green colour blindness". Tritanopia is different: it affects blue and yellow. People with Tritanopia struggle to distinguish blue from green, and yellow from pink or red. It is significantly rarer than the red-green types, affecting less than 0.01% of the population.

In practice, this means colour choices that feel safe for red-green colour blindness can still cause problems. A design that uses blue and green to tell groups apart can be very hard to understand. So can yellow text on white, or white text on yellow.

Tritanopia is part of a broader family of colour vision deficiencies, and this Colour-blind Series looks at each of the main types. Each type affects a different part of the colour range, but they all teach the same lesson: never rely on colour alone to share something important.

How to support it

The key principle is that colour should always be paired with another visual cue.

- Designers can add icons, labels, or patterns next to colour to show meaning. They can also use colour-blind simulation tools to check designs before they are built.
- Developers can ensure interactive states like errors and warnings are distinguishable by more than just colour (e.g. by using icons or supporting text).
- Content writers can make sure any meaning shown through colour is also stated in words.

Useful links

- Web Content Accessibility Guidelines (WCAG) 1.4.1: Use of Colour
- Colour Blindness Simulator (Coblis)
- Colour and Accessibility (WebAIM)