

When red is not red:

Understanding the importance of color matching

Color as brand

Color is an integral part of branding. Whether it's the robin's egg blue box with jewelry inside, a green and yellow tractor or the white delivery truck with a purple and orange logo, we instinctively know brands by their colors.

As a commercial printer, we understand that achieving accurate and consistent color results in everything we produce is vital in protecting the integrity of your brand.



Color perception

vs.

Color reality

Color perception is the way your eye sees the color. Many factors can affect it — the lighting, the environment, the type of printer being used (toner-based or inkjet), and even the eye of the beholder! We don't all see color the same way.

Color reality is the scientific means of matching a color. We have spectrophotometers that measure any color visible to the human eye.

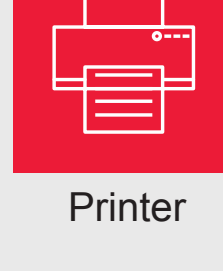
Color perception



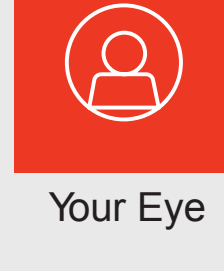
Lighting



Environment

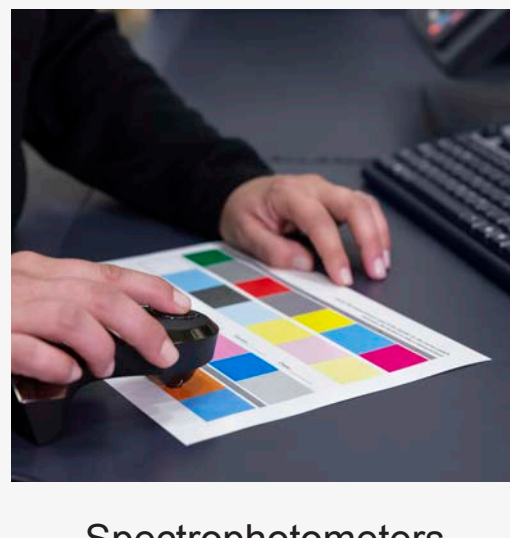


Printer



Your Eye

Color reality



Spectrophotometers

Simply put, the red you see may not be the red you wanted.

To match colors, we examine the color we want to achieve against the color we've printed to see how close they actually are. Our color management team works to get your color correct every time.

Coding the colors

CMYK, which stands for "Cyan Magenta Yellow Black," is primarily concerned with the combination of ink on the paper to produce colors—in particular, the four basic colors used for printing color images. We combine these four colors on a substrate (the underlying surface), which is essentially the fifth color.

RGB, which stands for "Red Green Blue," is the combination of light to produce a wide array of color. RGB is the color of video, screens, and monitors.

Generally speaking: If you're looking at this content on a screen, you're seeing RGB colors. If you printed this and are looking at it on a sheet of paper, that's CMYK.

When it comes to important brand colors, the industry relies on Pantone.

Pantone is much richer, saturated and more vibrant than what you can normally achieve with a CMYK gamut and sometimes even a digital gamut. We have high-scale printers that can print outside of CMYK. We can take a Pantone color and convert it into our workflow accurately. As a best practice, companies should have their brand colors as a Pantone plate.



CMYK



RGB

What is the color gamut?

This is the reproducible amount of color that your eye can see. CMYK typically has a smaller color gamut. RGB has a larger gamut. It's brighter, more saturated.

This is the challenge when printing what you see on your monitor. Compromises have to take place when that RGB is being converted to ink on paper. While we can work with RGB, it's much easier to achieve what viewers see when working within CMYK.



Quality control of the colors

A great printer isn't going to perform at its best if the people running the machines aren't trained to verify the consistency and make the necessary adjustments. Every individual printer in our retail stores and closed-door production facilities print a set of color bars daily. It must measure within the tolerances of strict industry standards every time. All our printers make this check. This QC process is part of our proprietary workflow software.

Performing at the highest levels

It's not enough to just say we hold ourselves to the highest color matching standards. We have the credentials to prove it. G7 is an industry certification by Idealliance, requiring a yearly certification and regular onsite performance checks and calibrations. All of our closed-door production facilities are G7 Master Printer certified. Everyone on our color management team is G7 expert certified.

Color matching is a vital part of your organization's reputation, which is why we make it such a big part of our print operation. Let us help you build your brand through print.

Learn more: [fedex.com/intheknow](https://www.fedex.com/intheknow)