



a Mativ Brand

Tekra Tek Tip

Light Management Terminology

When determining a film for light management, there are a lot of options on the market. Understanding how each will impact your light source without having to sample 100 options often comes down to understanding the terminology. There are a few key terms to learn and Tekra is here to help.

LT Value: Light Transmission, also known as oWpacity level, sometimes it is referred to as haze. It is a numerical value out of 100, 100 completely transparent.

White Point: The 'white point' indicates the level of blue within the film. The bluer, the cooler the white and the "whiter" it looks. The higher the level of red within the film, the warmer and more yellow the film will appear.

Cooler, 'whiter white" is preferred in retail signage that includes skin tones such as cosmetics. It is preferred in menu boards that include images of food as it will make the food look "fresher" than a yellow undertone.

"Warmer whites" are preferred in photographic-quality graphics, or any graphics high in red and yellow values.

Color Index: Color index is a simple numerical expression that determines the color of an object, which indicates its "visual temperature". The color index determines the breakdown of the colors and can report them numerically. Tekra's lab is able to determine the color index of our films and provide an index report that looks like this:

L	61.4	"School Bus Yellow" color Index Report
a	+18.1	
b	+32.2	

The yellow color Index of the school bus is shown above. The + values in both a and b indicate higher levels of red and yellow and lower levels of blues and greens



Color Index Axis



L: (Lightness)axis. 0 is black, 100 is white and 50 is middle grey

a: (red-green) axis. Positive values are red, negative values are green, and 0 is neutral

b: (blue-yellow) axis. Positive values are yellow, negative values are blue and 0 is neutral.

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For a “whiter white”: Look for the “b” to have a lower number, close to or below zero, indicating the film will cast more ‘blue’ and less yellow, therefore making it appear “cooler’ and ‘brighter’, bringing your prints to light.

If you are printing a bright cool toned image, such as a salad on a media with warm tones, the warm tones will cancel out the cool greens and they will look tan and drab.

For a “warmer” tone: look for the “a” value to have a higher number, offering more red undertones and less green undertones. These will enhance the existing color base and add depth. They are perfect for sunsets, landscapes and images that offer warm colors and a lot of perspective.

Green undertones will neutralize warm colors in your print and make them look dull and minimize the images visual dimension.

Dead White Opaque (DWO): This is a 100% Opaque material that allows zero light to pass through. This is a true blackout material and is used for dual side printing.

Semi-Opaque Films: These indicate films with a 90% or greater opacity. We often refer to these as “near dead” films. These films are ideal for POP signage in retail environments vs. 100% opaque films, because it ensures enough translucidity that the signs are visible under reflective store lights and won’t reflect off of the material, creating “hot spots” that cause a blind spot on the image.

Hot Spots: Hot spots indicate areas in the material the illuminate brighter when lit, sometimes to the point that you can no longer see that area of the print. Diffusing films are often used in conjunction with printed material to deflect the light and prevent the hot spots. These are specifically necessary when back lighting a clear film.

Reverse Print: Mirror image is printed on the reverse side of the material to protect the ink and is lit from behind.

Front Print: Image is printed on the front side of the material and can be either back lit or front lit. These materials often need additional lamination or post-processing to protect the inks.

Selecting the right media for your print can make a huge difference in the result. It can take an average print to a wow-piece and give your portfolio the little extra needed over the competition. All it really takes is understanding a few key terms decide exactly which media is the best one for your next project.