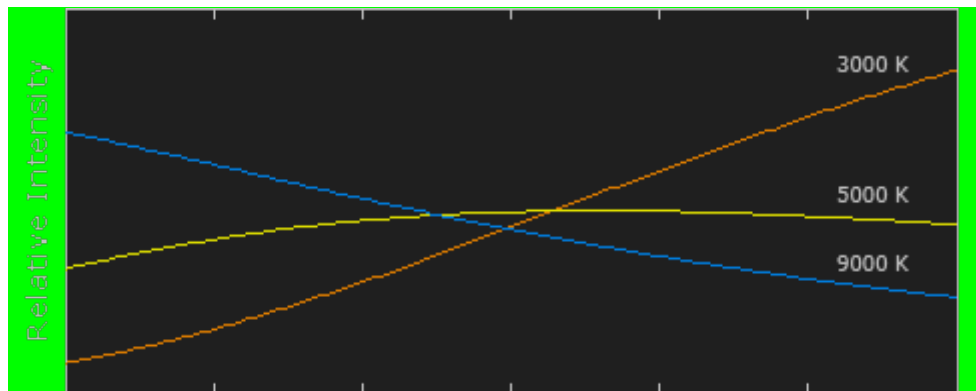


Topic 99

White Balance

White balance (WB) is the process of removing unrealistic color casts, so that objects which appear white in person are rendered white in your photo. Proper camera white balance has to take into account the "color temperature" of a light source, which refers to the relative warmth or coolness of white light. Our eyes are very good at judging what is white under different light sources, but digital cameras often have great difficulty with auto white balance (AWB) — and can create unsightly blue, orange, or even green color casts. Understanding digital white balance can help you avoid these color casts, thereby improving your photos under a wider range of lighting conditions.



Note how 5000 K produces roughly neutral light, whereas 3000 K and 9000 K produce light spectrums which shift to contain more orange and blue wavelengths, respectively. As the color temperature rises, the color distribution becomes cooler. This may not seem intuitive, but results from the fact that shorter wavelengths contain light of higher energy.

Why is color temperature a useful description of light for photographers, if they never deal with true blackbodies? Fortunately, light sources such as daylight and tungsten bulbs closely mimic the distribution of light created by blackbodies, although others such as fluorescent and most

commercial lighting depart from blackbodies significantly. Since photographers never use the term color temperature to refer to a true blackbody light source, the term is implied to be a "correlated color temperature" with a similarly colored blackbody.