

Designing With Light
Chapter 8

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Apparent Color

Blackbody Radiator

Chroma

Chromatic Adaptation

Chromaticity

Color Constancy

Color Rendering Index

<p>The perceived color of an object resulting from the color content of the light source, the object's reflectivity and the eye's adaptation to the illuminated environment.</p>	
<p>The saturation or purity of a color</p>	<p>An idealized object that is a perfect absorber of all energy that strikes its surface, and that is an ideal emitter of energy whose spectral power distribution curve is based on its temperature.</p>
<p>Refers to the color of a light source independent of its brightness.</p>	<p>The visual system's process of adjusting perceived color based on target and surround colors.</p>
<p>A measurement of the effect of a light source on the color appearance of an object compared to its color appearance under a reference light source. The evaluation is based on eight color samples, but is calculated mathematically, not visually. Expressed on a scale of 0 to 100, where 100 indicates no color shift. A low CRI rating suggests that the colors of objects will appear unnatural under that particular light source.</p>	<p>The perception of objects as having the same color under differing lighting conditions</p>

Color Rendering

Color Temperature

Correlated Color Temperature

Hue

Metamers

Binning

A numerical indication of the warmth or coolness of white light. Specifically, it is the absolute temperature of a blackbody radiator having a chromaticity equal to that of the lighting source, expressed in kelvin. Strictly speaking, this applies only to incandescent light sources.

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The general color attribute of red, blue, yellow, green etc.

CCT describes the color temperature of non-incandescent light sources.

The sorting of LEDs by their color or color properties.

Two or more light sources of the same color but having different spectral power distribution curves.