

color valence metric (color data: linear relation to CIE 1931 data)

linear color terms	name and relationship to CIE tristimulus or chromaticity values	notes
tristimulus values	X, Y, Z	
chromatic value	<i>linear chromatic value diagram (A, B)</i>	for $n=D65$
red-green	$A = n_A [X / Y - X_n / Y_n]$ $Y = n_A [a - a_n]$ $Y = n_A [x / y - x_n / y_n]$	$X_n = 95,05$ $Y_n = 100,00$
yellow-blue	$B = -0,4 n_B [Z/Y-Z_n/Y_n]$ $Y = n_B [b - b_n]$ $Y = -0,4 n_B [z / y - z_n / y_n]$	$X_n = 108,90$ $n_A = n_B = 2,5$
radial	$C_{AB} = [A^2 + B^2]^{1/2}$	(background)
chromaticity	<i>linear chromaticity diagram (a, b)</i>	<i>compare to linear cone excitation</i>
red-green	$a = X / Y = x / y$	
yellow-blue	$b = - 0,4 [Z / Y] = - 0,4 [z / y]$	
radial	$c_{ab} = [(a - a_n)^2 + (b - b_n)^2]^{1/2}$	$L/(L+M)$ $S/(L+M)$