

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 red–green yellow–blue radial	<i>linear chromatic value diagram (A, B)</i> $A = [X / Y - X_n / Y_n] Y = [a - a_n] Y$ $= [x / y - x_n / y_n] Y$ $B = - 0,4 [Z / Y - Z_n / Y_n] Y = [b - b_n] Y$ $= - 0,4 [z / y - z_n / y_n] Y$ $C_{AB} = [A^2 + B^2]^{1/2}$	$n=D65$ (background)
chromaticity red–green yellow–blue radial	<i>linear chromaticity diagram (a, b)</i> $a = X / Y = x / y$ $b = - 0,4 [Z / Y] = - 0,4 [z / y]$ $c_{ab} = [(a - a_n)^2 + (b - b_n)^2]^{1/2}$	<i>compare to linear cone excitation</i> $L/(L+M)=P/(P+D)$ $S/(L+M)=T/(P+D)$