

$XYZ_w=95.0443, 100.0, 108.89$ b^*_{D65}

$a^* = 500 (a' - a'_n) Y^{1/3}$

$b^* = 500 (b' - b'_n) Y^{1/3}$

$a' = a_2 [x/y]^{1/3}$

$b' = b_2 [z/y]^{1/3}$

$a_2 = [1/X_{D65}]^{1/3} = 0.2191$

$b_2 = -[1/Z_{D65}]^{1/3} = -0.08376$

$n = D65$

CIELAB D65

Name and spectral range

Rn_0 595_445 YRn_0 570_770

Yw_0 495_445 YGw_0 470_620

Gw_0 445_595 BGw_0 770_570

Optimal colours (o), $Y_w=100$
of usually 100nm bandwidth for D65
in chroma diagram (a^*_{D65}, b^*_{D65})

