

$\log[(Y/\Delta Y) / (Y/\Delta Y)_u]$

TUBsRGB-Y contrast
normalized to $(Y/\Delta Y)_u$

$$C_r/C_{ru} = (Y/\Delta Y) / (Y/\Delta Y)_u$$

2 **100** $L^* = s (Y/Y_n)^n - d$ ($Y_n=100, Y_u=18, s=100, n=1/\ln(10), d=0$) [1a]

$$L^* = r (Y/Y_u)^n - d$$
 ($r = s (Y_u/Y_n)^n = 47,48, L^*_u = r - d$) [1b]

$$Y/dY = Y / \{ [(Y_n / (n s))] (Y/Y_n)^{1-n} \}$$
 [4c]

$$(Y/Y)_u = Y_u / \{ [(Y_n / (n s))] (Y_u/Y_n)^{1-n} \}$$
 [4d]

1 **10** $(Y/dY) / (Y/dY)_u = (Y/Y_u)^n$ [4e]

$$\log [(Y/dY) / (Y/dY)_u] = (n) \log(Y/Y_u)$$
 [4f]

