

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

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

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

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

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

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

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

