

log ΔY CIE tristimulus value Y difference

$$\log(\Delta Y) = \frac{\Delta Y}{Y_u} L^* = \left(\frac{t}{a} \right) \ln \left[1 + b \left(\frac{Y}{Y_u} \right) \right]$$

$a=0.3411$ $t=88.23$ $t/a=258.6$ $b=a \cdot Y_u=6.14$

tristimulus value Y difference

$$\log(dY) = \log \left[\left(s + q \cdot Y \right) / c \right]$$

$$= \log \left[\left(1 + b \cdot \left(\frac{Y}{Y_u} \right) \right) / t \right]$$

$s=0.017$ $q=0.0058$ $c=1.5$

$$Y_u=18, dY_u=0.08, dY_u/Y_u=0.004$$

$$\log(dY) = -1.09, m_u=0.86$$

application
range

$$Y_u=18 \quad 100 \quad Y$$

