

$\log(\Delta Y/Y)$

CIE Y based contrast

$$C_r = (\Delta Y/Y)$$

$$L^* = (t/a) \ln [ 1 + b (Y/Y_u) ]$$

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

tristimulus value Y contrast

$$-1 \quad 0,1 \quad \log(dY/Y) = \log [ ( 1 + b \cdot (Y/Y_u) ) / ( t \cdot Y ) ]$$

$$-2 \quad 0,01 \quad \log(dY/Y) = -2.34, \quad m_u = -0.13$$

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

application  
range

$$-3 \quad 0,1 \quad 1 \quad 10 \quad Y_u=18 \quad 100 \quad Y$$

-2 -1 0 1 2  $\log(Y)$