

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

CIELABn9 relative
tistimulus value contrast

$$C_r/C_{ru} = (Y/\Delta Y)/(Y/\Delta Y)_u \quad Y_{nc} = Y_W \text{RGB}_{nc} = 100, 21, 72, 7$$

2
100

$$t^*_{\text{CIELABn9}} = 87(Y/Y_n)^{1/1.5} + 13 \quad (Y_n = 100, Y_{nc}/100 < Y \leq Y_{nc})$$

$$\log[(Y/dY)/(Y/dY)_u] = (1/1.5) \log(Y/Y_u)$$

1
10

$$(Y/dY)_{90}/(Y/dY)_u = 2.92, \gamma = 1.5, 1/\gamma = 1/1.5 = 0.66$$

$$(Y/dY)_{18}/(Y/dY)_u = 1.00, S_n = 86.98, D_n = 13.01$$

$$(Y/dY)_{3.6}/(Y/dY)_u = 0.34, Y_n = 100, dY_n = 5.40$$

0
-1

$$\log[(Y/dY)/(Y/dY)_u] = 0, m_u = 0.66$$

$$t^*_{u} = 41, dY_u = 5.40, 1_u/dY_u = 3$$

application
range

