

$\log(\Delta Y/\Delta Y_u)$

CIELABu3 relative
tristimulus value difference

$$Y_{nc} = L^* \mathbf{w} \mathbf{R} \mathbf{G} \mathbf{B}_{nc} = 100, \text{red}, \text{green}, \text{blue}$$

$$L^*_{\text{CIELABu3}} = 50 (Y/Y_u)^{1/2,0} + 1 \quad (Y_u = 18, Y_{nc}/100 < Y \leq Y_{nc})$$

$$\log(dY/dY_u) = [1 - (1/2,0)] \log(Y/Y_u)$$

2 100

1 10

0 1

-1

-2

$$L^*_u = 50, dY_u = 4,06, dY_u/Y_u = 0,2257$$

$$\log[(dY)/(dY)_u] = 0, m_u = 0,50$$

application
range

0,1

1

10

100

$Y_u = 18$

$Y_N = 3,6$

$Y_W = 90$

2

$\log(Y)$