

$\log(\Delta Y)$

CIELABu2

tristimulus value difference

$Y_{nc} = Y_W \text{RGB}_{nc} = 100, 21, 72, 7$

ΔY

2 100

$$l^*_{\text{CIELABu2}} = 59(Y/Y_u)^{1/2,5} - 9 \quad (Y_u = 18, Y_{nc}/100 < Y \leq Y_{nc})$$

$$\log(dY) = (1/2,5) \log[2,5(Y_u/58)] + [1 - (1/2,5)] \log(Y)$$

1 10

$$l^*_u = 50, dY_u = 4,27, dY_u/Y_u = 0,2377$$

$$\log(dY) = 4,27, m_u = 0,59$$

0 1

$$dY_{90} = 11,23, \gamma = 2,5, 1/\gamma = 1/2,5 = 0,40$$

$$dY_{18} = 4,27, s_n = 58,42, D_n = -8,42$$

$$dY_{3,6} = 1,52, Y_u = 18, dY_u = 4,27$$

application range

-1 0 1 10 100 $Y_u = 18$ 100 Y
-2 -1 0 $Y_N = 3,6$ 1 $Y_W = 90$ 2 $\log(Y)$