

L^* CIELABu3 standard lightness L^*

$$Y_{nc} = L^*_{wRGBnc} = 100, 52, 87, 31$$

 L^*

4 10000

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

$$L^*_N(3,6) = 23, L^*_u(18) = 50, L^*_W(90) = 111$$

3 1000

2 100

$$\log[L^*/L^*_u] = 0, m_u = 0,49$$

$$L^*_u = 49, L^*_u = 50$$

application
range

1

0,1

-1

0

10

1

100

2

 $Y_u = 18$ $Y_W = 90$ Y $\log(Y)$ $Y_N = 3,6$