

$\log \Delta Y$

CIELAB-

tristimulus value difference

$\log(\Delta Y)$

2
100

$(s=66, Y_u=18, 1/255 < Y < 7)$

$$L^*_{\text{CIELAB}} = s(Y/Y_u)^{1/3} - 16 \quad (s=66, Y_u=18, 1 < Y \leq 100)$$

CIELAB-tristimulus value difference

$$\begin{aligned} \log(dY) &= \log(3(Y_u/116)) + (2/3) \log(Y/Y_u) \\ &= \log(3(Y_u^{1/3})/116) + (2/3) \log(Y) \end{aligned}$$

1
10

0
1

$Y_u=18, dY_u=0,83, dY_u/Y_u=0,0454$

$\log(dY)=0,82, m_u=0,66$

application range

-1
-2

0,1
-1

1
0

$Y_N=4$
1

10

$Y_u=18$
1

100
2

$\log(Y)$