

**lightness scaling ( $\ln(10)=2,3$ ,  $Y_u=18$ )**

**$L^*_{\text{CIELAB}}$ ,  $T^*_{\text{IECsRGB}}$ ,  $T^*_{\text{TUBJND}}$**

**description with CIELAB 1976**

$$L^*_{\text{CIELAB}} = 116 ( Y / 100 )^{1/3,0} - 16$$

**Approximation by IECsRGB 1999**

$$T^*_{\text{IECsRGB}} = 100 ( Y / 100 )^{1/2,4}$$

**Approximation by TUBJND 2024**

$$T^*_{\text{TUBJND}} = 47,49 ( Y / Y_u )^{1/\ln(10)}$$

**$\ln [T^*_{\text{TUBJND,relative}}]$  has the slope 1!**

$$\ln [T^*_{\text{TUBJND,r}}] = \log ( Y / Y_u )$$