

# sensation scaling functions

lightness  $L^*$  and tristimulus value  $Y$

adaptation on surround white  $W$

$$L^*_{\mathbf{W}} = 100 ( Y / 100 )^{1/2,0}$$

adaptation on surround grey  $U$

$$L^*_{\mathbf{U}} = 100 ( Y / 100 )^{1/2,4}$$

description with CIELAB 1976

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

adaptation on surround black  $N$

$$L^*_{\mathbf{N}} = 100 ( Y / 100 )^{1/3,0}$$