

# LABJND colour difference formula of CIE 230:2019

## Modifications with normalization to $Y_u$ of surround

$$dY = A_1 + A_2 Y \quad \text{error } 0,0044 \quad A_1 = 0,0170, A_2 = 0,0058 \quad [1d]$$

$$= A_1 + A_{2u} (Y/Y_u) \quad A_1 = 0,0170, A_{2u} = 0,1004 = A_2 Y_u \quad [2d]$$

$$\int \frac{dY}{A_1 + A_2 Y} = \frac{1}{A_2} \ln | A_1 + A_2 Y | = F^*(Y) \quad (A_3 = 1) \quad [1i]$$

$$dY = A_1 [1 + A_2 Y] \quad \text{error } 0,0044 \quad A_1 = 0,0170, A_2 = 0,3343 \quad [5d]$$

$$= A_1 [1 + A_{2u} (Y/Y_u)] \quad A_1 = 0,0170, A_{2u} = 5,931 = A_2 Y_u \quad [6d]$$

$$\frac{1}{A_1} \int \frac{dY}{1 + A_2 Y} = \frac{1}{A_1 A_2} \ln | 1 + A_2 Y | = F^*(Y) \quad (A_3 = 1) \quad [5i]$$