Contrast steps C_{Yi} (i=1 to 8), CIE tristimulues values Y_{W} and Y_{N} according to ISO 9241−306 1)

Contrast step C_{Yi} and *Y*-ratio (i=1 .. 8)	**CIE tristimulus values; Ratio $Y_{\mathrm{W}} : Y_{\mathrm{N}}$ of White *W* and Black *N***	**absolute Gamma G_{Pk}**(k=0 to 7) **for display (P) with G_{P0}=2,4 2) G_{Pk}=2,4−0,18*k***	**Paper (S) luminance; Ratio [cd/m^2] $L_{\mathrm{WS}} : L_{\mathrm{NS}}$**	**Display (P) luminance; Ratio [cd/m^2] $L_{\mathrm{WP}} : L_{\mathrm{NP}}$**	**application and colour mode at work place; illuminance on display 500 lux or 250/125/62 lux**
C_{Y8} 288:1	88,9 : 0,31	G_{P0} = 2,40	142 : 142/288	142*36 : 018	display, only 062 lux
C_{Y7} 144:1	88,9 : 0,62	G_{P1} = 2,22	142 : 142/144	142*36 : 035	display, only 125 lux
C_{Y6} 72:1	88,9 : 1,25	G_{P2} = 2,04	142 : 142/72	142*36 : 071	display, only 250 lux
C_{Y5} 36:1	**88,9 : 2,50**	G_{P3} = **1,86**	**142 : 142/36**	**142*36 : 142**	**display & surface**
C_{Y4} 18:1	88,9 : 5,00	G_{P4} = 1,68	142 : 142/18	142*18 : 142	display & surface
C_{Y3} 9:1	88,9 : 10,0	G_{P5} = 1,50	142 : 142/09	142*09 : 142	display & surface
C_{Y2} 4,5:1	88,9 : 20,0	G_{P6} = 1,32	142 : 142/4,5	142*4,5 : 142	display & surface
C_{Y1}2,25:1 3)	88,9 : 40,0	G_{P7} = 1,14	142 : 142/2,25	142*2,25:142	display & surface

1) The example is given for data projectors (P). The standard contrast step (bold) C_{Y5} with L_{WP}=142*36 cd/m^2 is hard to reach.

2) The computer operating system *Apple* has used the value 1,8 until 2010. The change to 2,4 *(= Windows)* is in the wrong direction.

3) For the contrast C_{Y} =2:1 the viewing luminances of both the black in the projection and the white standard offset paper are equal (!). Visual fatique caused by the adaptation luminance ratio 36:1 of the black at the screen and the black at the paper shall be reduced. If for example a grey screen with the CIE tristimulus value Y_{Z} = 22,2 (=0,25*88.9) is used the contrast step C_{Yi} remains constant. Then the luminance ratio of all colours at the screen and the paper has reduced to 9:1. This reduces visual fatique.

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