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 $Y_W : Y_N$ 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}=2,4−0,18k**	**Paper (S) luminance; Ratio [cd/m²] $L_{WS} : L_{NS}$**	**Display (P) luminance; Ratio [cd/m²] $L_{WP} : L_{NP}$**	**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/m² 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.