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**	**CIE tristimulus values; Range Y_{N1} ... Y_{N2}**	**Paper (S) luminance[2)]; Ratio [cd/m²] $L_{WS} : L_{NS}$**	**Display (P) luminance[2)]; 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	0,00 ... <0,46	142 : 142/288	142*36 : 018	display, only 062 lux
C_{Y7} **144:1**	88,9 : 0,62	0,46 ... <0,93	142 : 142/144	142*36 : 035	display, only 125 lux
C_{Y6} **72:1**	88,9 : 1,25	0,93 ... <1,87	142 : 142/72	142*36 : 071	display, only 250 lux
C_{Y5} **36:1**	**88,9 : 2,50**	**1,87 ... <3,75**	**142 : 142/36**	**142*36 : 142**	**display & surface**
C_{Y4} **18:1**	88,9 : 5,00	3,75 ... <7,50	142 : 142/18	142*18 : 142	**display & surface**
C_{Y3} **9:1**	88,9 : 10,0	7,50 ... <15,0	142 : 142/09	142*09 : 142	**display & surface**
C_{Y2} **4,5:1**	88,9 : 20,0	15,0 ... <30,0	142 : 142/4,5	142*4,5 : 142	**display & surface**
C_{Y1} **2,25:1**[3)]	88,9 : 40,0	30,0 ... <60,0	142 : 142/2,25	142*2,25 : 142	**display & surface**

1) The example is intended for data projectors (P). The standard contrast step (bold) with L_{WP}=142*36 cd/m² is hard to reach.

2) 500 lux corresponds to the viewing luminance L_v=142 cd/m² for a standard white paper with the tristimulues value Y_W=88,9.

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.