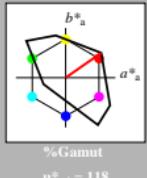


**Input:** Colorimetric Television Luminous System TLS18  
 for hue  $h^* = lab^*h = 35/360 = 0.097$   
 $lab^*tch$  and  $lab^{*nch}$



D65: hue O  
 LCH\*Ma: 53 87 35  
 $olv^*Ma: 1.0 \ 0.0 \ 0.0$   
 triangle lightness  $t^*$



relative Inform. Technology (IT)  
 $lab^*L = 1.0 \ 1.0 \ 1.0$   
 $lab^*a = 0.0 \ 0.0 \ 0.0$   
 $lab^*b = 0.0 \ 0.0 \ 0.0$   
 standard and adapted CIELAB  
 $lab^*L = 95.41 \ 95.41 \ 95.41$   
 $lab^*a = 0.0 \ 0.0 \ 0.0$   
 $lab^*b = 0.0 \ 0.0 \ 0.0$

relative CIELAB lab\*  
 $lab^*L = 1.0 \ 1.0 \ 1.0$   
 $lab^*a = 0.0 \ 0.0 \ 0.0$   
 $lab^*b = 0.0 \ 0.0 \ 0.0$

relative Inform. Technology (IT)  
 $lab^*L = 0.75 \ 0.75 \ 0.75$   
 $lab^*a = 1.0 \ 1.0 \ 1.0$   
 $lab^*b = 1.0 \ 1.0 \ 1.0$   
 standard and adapted CIELAB  
 $lab^*L = 76.07 \ 76.07 \ 76.07$   
 $lab^*a = 0.0 \ 0.0 \ 0.0$   
 $lab^*b = 0.0 \ 0.0 \ 0.0$

relative CIELAB lab\*  
 $lab^*L = 0.75 \ 0.75 \ 0.75$   
 $lab^*a = 1.0 \ 1.0 \ 1.0$   
 $lab^*b = 1.0 \ 1.0 \ 1.0$

relative Inform. Technology (IT)  
 $lab^*L = 0.5 \ 0.5 \ 0.5$   
 $lab^*a = 0.5 \ 0.5 \ 0.5$   
 $lab^*b = 0.5 \ 0.5 \ 0.5$   
 standard and adapted CIELAB  
 $lab^*L = 65.4 \ 65.4 \ 65.4$   
 $lab^*a = 0.0 \ 0.0 \ 0.0$   
 $lab^*b = 0.0 \ 0.0 \ 0.0$

relative CIELAB lab\*  
 $lab^*L = 0.5 \ 0.5 \ 0.5$   
 $lab^*a = 0.5 \ 0.5 \ 0.5$   
 $lab^*b = 0.5 \ 0.5 \ 0.5$

relative Inform. Technology (IT)  
 $lab^*L = 0.25 \ 0.25 \ 0.25$   
 $lab^*a = 1.0 \ 1.0 \ 1.0$   
 $lab^*b = 1.0 \ 1.0 \ 1.0$   
 standard and adapted CIELAB  
 $lab^*L = 22.37 \ 22.37 \ 22.37$   
 $lab^*a = 0.0 \ 0.0 \ 0.0$   
 $lab^*b = 0.0 \ 0.0 \ 0.0$

relative CIELAB lab\*  
 $lab^*L = 0.25 \ 0.25 \ 0.25$   
 $lab^*a = 1.0 \ 1.0 \ 1.0$   
 $lab^*b = 1.0 \ 1.0 \ 1.0$

relative Inform. Technology (IT)  
 $lab^*L = 0.0 \ 0.0 \ 0.0$   
 $lab^*a = 0.0 \ 0.0 \ 0.0$   
 $lab^*b = 0.0 \ 0.0 \ 0.0$   
 standard and adapted CIELAB  
 $lab^*L = 10.03 \ 10.03 \ 10.03$   
 $lab^*a = 0.0 \ 0.0 \ 0.0$   
 $lab^*b = 0.0 \ 0.0 \ 0.0$

relative CIELAB lab\*  
 $lab^*L = 0.0 \ 0.0 \ 0.0$   
 $lab^*a = 0.0 \ 0.0 \ 0.0$   
 $lab^*b = 0.0 \ 0.0 \ 0.0$

relative Inform. Technology (IT)  
 $lab^*L = 0.0 \ 0.0 \ 0.0$   
 $lab^*a = 0.0 \ 0.0 \ 0.0$   
 $lab^*b = 0.0 \ 0.0 \ 0.0$   
 standard and adapted CIELAB  
 $lab^*L = 26.27 \ 26.27 \ 26.27$   
 $lab^*a = 0.0 \ 0.0 \ 0.0$   
 $lab^*b = 0.0 \ 0.0 \ 0.0$

relative CIELAB lab\*  
 $lab^*L = 0.0 \ 0.0 \ 0.0$   
 $lab^*a = 0.0 \ 0.0 \ 0.0$   
 $lab^*b = 0.0 \ 0.0 \ 0.0$

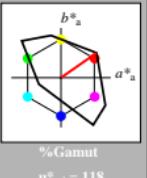
n\* = 1.0

**TLS18; adapted (a) CIELAB data**

	$L^*=L_a^*$	$a^*_a$	$b^*_a$	$C^*_{ab}$	$h^*_{ab}$
O Ma	52.76	71.63	49.88	87.29	35
Y Ma	92.74	-20.02	84.97	87.3	103
L Ma	84.0	-78.98	73.94	102.8	137
C Ma	87.14	-44.41	-13.11	46.32	196
V Ma	35.47	64.92	-95.06	115.12	304
M Ma	59.01	89.33	-55.67	105.26	328
N Ma	18.01	0.0	0.0	0	0
W Ma	95.41	0.0	0.0	0	0
R CIE	39.92	58.74	27.99	65.07	25
J CIE	81.26	-2.88	71.56	71.62	92
G CIE	52.23	-42.41	13.6	44.55	162
B CIE	30.57	1.41	-46.46	46.49	272

**Output: Colorimetric Television Luminous System TLS18**

for hue  $h^* = lab^*h = 35/360 = 0.097$   
 $lab^*tch$  and  $lab^{*nch}$



D65: hue O  
 LCH\*Ma: 53 87 35  
 $olv^*Ma: 1.0 \ 0.0 \ 0.0$

triangle lightness  $t^*$



relative Inform. Technology (IT)  
 $lab^*L = 1.0 \ 1.0 \ 1.0$   
 $lab^*a = 0.0 \ 0.0 \ 0.0$   
 $lab^*b = 0.0 \ 0.0 \ 0.0$

relative CIELAB lab\*  
 $lab^*L = 1.0 \ 1.0 \ 1.0$   
 $lab^*a = 0.0 \ 0.0 \ 0.0$   
 $lab^*b = 0.0 \ 0.0 \ 0.0$

relative Inform. Technology (IT)  
 $lab^*L = 0.75 \ 0.75 \ 0.75$   
 $lab^*a = 1.0 \ 1.0 \ 1.0$   
 $lab^*b = 1.0 \ 1.0 \ 1.0$   
 standard and adapted CIELAB  
 $lab^*L = 76.07 \ 76.07 \ 76.07$   
 $lab^*a = 0.0 \ 0.0 \ 0.0$   
 $lab^*b = 0.0 \ 0.0 \ 0.0$

relative CIELAB lab\*  
 $lab^*L = 0.75 \ 0.75 \ 0.75$   
 $lab^*a = 1.0 \ 1.0 \ 1.0$   
 $lab^*b = 1.0 \ 1.0 \ 1.0$

relative Inform. Technology (IT)  
 $lab^*L = 0.5 \ 0.5 \ 0.5$   
 $lab^*a = 0.5 \ 0.5 \ 0.5$   
 $lab^*b = 0.5 \ 0.5 \ 0.5$   
 standard and adapted CIELAB  
 $lab^*L = 65.45 \ 65.45 \ 65.45$   
 $lab^*a = 0.0 \ 0.0 \ 0.0$   
 $lab^*b = 0.0 \ 0.0 \ 0.0$

relative CIELAB lab\*  
 $lab^*L = 0.5 \ 0.5 \ 0.5$   
 $lab^*a = 0.5 \ 0.5 \ 0.5$   
 $lab^*b = 0.5 \ 0.5 \ 0.5$

relative Inform. Technology (IT)  
 $lab^*L = 0.25 \ 0.25 \ 0.25$   
 $lab^*a = 1.0 \ 1.0 \ 1.0$   
 $lab^*b = 1.0 \ 1.0 \ 1.0$   
 standard and adapted CIELAB  
 $lab^*L = 54.74 \ 54.74 \ 54.74$   
 $lab^*a = 0.0 \ 0.0 \ 0.0$   
 $lab^*b = 0.0 \ 0.0 \ 0.0$

relative CIELAB lab\*  
 $lab^*L = 0.25 \ 0.25 \ 0.25$   
 $lab^*a = 1.0 \ 1.0 \ 1.0$   
 $lab^*b = 1.0 \ 1.0 \ 1.0$

relative Inform. Technology (IT)  
 $lab^*L = 0.0 \ 0.0 \ 0.0$   
 $lab^*a = 0.0 \ 0.0 \ 0.0$   
 $lab^*b = 0.0 \ 0.0 \ 0.0$   
 standard and adapted CIELAB  
 $lab^*L = 21.51 \ 21.51 \ 21.51$   
 $lab^*a = 0.0 \ 0.0 \ 0.0$   
 $lab^*b = 0.0 \ 0.0 \ 0.0$

relative CIELAB lab\*  
 $lab^*L = 0.0 \ 0.0 \ 0.0$   
 $lab^*a = 0.0 \ 0.0 \ 0.0$   
 $lab^*b = 0.0 \ 0.0 \ 0.0$

relative Inform. Technology (IT)  
 $lab^*L = 0.0 \ 0.0 \ 0.0$   
 $lab^*a = 0.0 \ 0.0 \ 0.0$   
 $lab^*b = 0.0 \ 0.0 \ 0.0$   
 standard and adapted CIELAB  
 $lab^*L = 26.27 \ 26.27 \ 26.27$   
 $lab^*a = 0.0 \ 0.0 \ 0.0$   
 $lab^*b = 0.0 \ 0.0 \ 0.0$

n\* = 1.0

**TLS18; adapted (a) CIELAB data**

	$L^*=L_a^*$	$a^*_a$	$b^*_a$	$C^*_{ab}$	$h^*_{ab}$
O Ma	52.76	71.63	49.88	87.29	35
Y Ma	92.74	-20.02	84.97	87.3	103
L Ma	84.0	-78.98	73.94	102.8	137
C Ma	87.14	-44.41	-13.11	46.32	196
V Ma	35.47	64.92	-95.06	115.12	304
M Ma	59.01	89.33	-55.67	105.26	328
N Ma	18.01	0.0	0.0	0	0
W Ma	95.41	0.0	0.0	0	0
R CIE	39.92	58.74	27.99	65.07	25
J CIE	81.26	-2.88	71.56	71.62	92
G CIE	52.23	-42.41	13.6	44.55	162
B CIE	30.57	1.41	-46.46	46.49	272

%Regularity

g\*<sub>H,rel</sub> = 22

g\*<sub>C,rel</sub> = 40

n\* = 0.00

blackness n\*



relative Inform. Technology (IT)  
 $lab^*L = 0.5 \ 0.5 \ 0.5$   
 $lab^*a = 0.0 \ 0.0 \ 0.0$   
 $lab^*b = 0.0 \ 0.0 \ 0.0$

relative CIELAB lab\*  
 $lab^*L = 0.5 \ 0.5 \ 0.5$   
 $lab^*a = 0.0 \ 0.0 \ 0.0$   
 $lab^*b = 0.0 \ 0.0 \ 0.0$

relative Inform. Technology (IT)  
 $lab^*L = 0.25 \ 0.25 \ 0.25$   
 $lab^*a = 1.0 \ 1.0 \ 1.0$   
 $lab^*b = 1.0 \ 1.0 \ 1.0$   
 standard and adapted CIELAB  
 $lab^*L = 54.74 \ 54.74 \ 54.74$   
 $lab^*a = 0.0 \ 0.0 \ 0.0$   
 $lab^*b = 0.0 \ 0.0 \ 0.0$

relative CIELAB lab\*  
 $lab^*L = 0.25 \ 0.25 \ 0.25$   
 $lab^*a = 1.0 \ 1.0 \ 1.0$   
 $lab^*b = 1.0 \ 1.0 \ 1.0$

relative Inform. Technology (IT)  
 $lab^*L = 0.0 \ 0.0 \ 0.0$   
 $lab^*a = 0.0 \ 0.0 \ 0.0$   
 $lab^*b = 0.0 \ 0.0 \ 0.0$   
 standard and adapted CIELAB  
 $lab^*L = 21.51 \ 21.51 \ 21.51$   
 $lab^*a = 0.0 \ 0.0 \ 0.0$   
 $lab^*b = 0.0 \ 0.0 \ 0.0$

n\* = 0.25

blackness n\*



relative Inform. Technology (IT)  
 $lab^*L = 0.5 \ 0.5 \ 0.5$   
 $lab^*a = 0.0 \ 0.0 \ 0.0$   
 $lab^*b = 0.0 \ 0.0 \ 0.0$

relative CIELAB lab\*  
 $lab^*L = 0.5 \ 0.5 \ 0.5$   
 $lab^*a = 0.0 \ 0.0 \ 0.0$   
 $lab^*b = 0.0 \ 0.0 \ 0.0$

relative Inform. Technology (IT)  
 $lab^*L = 0.25 \ 0.25 \ 0.25$   
 $lab^*a = 1.0 \ 1.0 \ 1.0$   
 $lab^*b = 1.0 \ 1.0 \ 1.0$   
 standard and adapted CIELAB  
 $lab^*L = 54.74 \ 54.74 \ 54.74$   
 $lab^*a = 0.0 \ 0.0 \ 0.0$   
 $lab^*b = 0.0 \ 0.0 \ 0.0$

relative CIELAB lab\*  
 $lab^*L = 0.25 \ 0.25 \ 0.25$   
 $lab^*a = 1.0 \ 1.0 \ 1.0$   
 $lab^*b = 1.0 \ 1.0 \ 1.0$

n\* = 1.00

blackness n\*



NE590-7, 5 step scales for constant CIELAB hue 35/360 = 0.097 (left)

5 step scales for constant CIELAB hue 35/360 = 0.097 (right)

BAM-test chart NE59; Colorimetric systems TLS18 & TLS18  
 D65: 2 coordinate data of 5 step colour scales for 10 hues

input:  $olv^* \text{setrgbcolor}$   
 output:  $olv^* \text{setrgbcolor} / w^* \text{setgray}$

