

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 l^*



% Gamut
 $u^*_{rel} = 118$
 % Regularity
 $g^*_{rel} = 22$
 $g^*_{Crel} = 40$

relative Inform. Technology (IT)
 $olv^*s^* = 1.0$ 1.0 1.0 (1.0)
 $cmyn^*s^* = 0.0$ 0.0 0.0 (0.0)
 $olv^*t^* = 1.0$ 1.0 1.0 1.0
 $cmyn^*t^* = 0.0$ 0.0 0.0 0.0
 standard and adapted CIELAB
 LAB*LAB 95.41 0.0 0.0
 LAB*LABa 95.41 0.0 0.0
 LAB*TCHe 99.99 0.01 -

relative CIELAB lab*
 $lab^*lab = 1.0$ 0.5 0.0 0.0
 $lab^*tch = 1.0$ 0.0 - -
 $lab^*nch = 1.0$ 0.0 - -
 relative Natural Colour (NC)
 $lab^*l^*rj = 1.0$ 0.0 0.0 0.0
 $lab^*t^*cE = 1.0$ 0.0 - -
 $lab^*n^*cE = 0.0$ 0.0 - -

relative Inform. Technology (IT)
 $olv^*s^* = 0.5$ 0.5 0.5 (1.0)
 $cmyn^*s^* = 0.5$ 0.5 0.5 (0.0)
 $olv^*t^* = 1.0$ 1.0 1.0 0.5
 $cmyn^*t^* = 0.0$ 0.0 0.0 0.5
 standard and adapted CIELAB
 LAB*LAB 56.72 0.0 0.0
 LAB*LABa 56.72 0.0 0.0
 LAB*TCHe 50.0 0.01 -

relative CIELAB lab*
 $lab^*lab = 0.5$ 0.0 0.0 0.0
 $lab^*tch = 0.5$ 0.0 - -
 $lab^*nch = 0.5$ 0.0 - -
 relative Natural Colour (NC)
 $lab^*l^*rj = 0.5$ 0.0 0.0 0.0
 $lab^*t^*cE = 0.5$ 0.0 - -
 $lab^*n^*cE = 0.5$ 0.0 - -

relative Inform. Technology (IT)
 $olv^*s^* = 0.0$ 0.0 0.0 (1.0)
 $cmyn^*s^* = 1.0$ 1.0 1.0 (0.0)
 $olv^*t^* = 1.0$ 1.0 1.0 1.0
 $cmyn^*t^* = 0.0$ 0.0 0.0 0.0
 standard and adapted CIELAB
 LAB*LAB 18.03 0.0 0.0
 LAB*LABa 18.03 0.0 0.0
 LAB*TCHe 0.01 0.01 -

relative CIELAB lab*
 $lab^*lab = 0.0$ 0.0 0.0 0.0
 $lab^*tch = 0.0$ 0.0 - -
 $lab^*nch = 0.0$ 0.0 - -
 relative Natural Colour (NC)
 $lab^*l^*rj = 0.0$ 0.0 0.0 0.0
 $lab^*t^*cE = 0.0$ 0.0 - -
 $lab^*n^*cE = 1.0$ 0.0 - -

relative Inform. Technology (IT)
 $olv^*s^* = 1.0$ 0.5 0.5 (1.0)
 $cmyn^*s^* = 0.0$ 0.5 0.5 (0.0)
 $olv^*t^* = 1.0$ 0.5 0.5 0.0
 $cmyn^*t^* = 0.0$ 0.5 0.5 0.0
 standard and adapted CIELAB
 LAB*LAB 74.08 35.81 24.94
 LAB*LABa 74.08 35.81 24.94
 LAB*TCHe 75.0 43.63 34.85

relative CIELAB lab*
 $lab^*lab = 0.724$ 0.41 0.286
 $lab^*tch = 0.75$ 0.5 0.097
 $lab^*nch = 0.0$ 0.5 0.097
 relative Natural Colour (NC)
 $lab^*l^*rj = 0.724$ 0.488 0.109
 $lab^*t^*cE = 0.75$ 0.5 0.035
 $lab^*n^*cE = 0.0$ 0.5 0.14

relative Inform. Technology (IT)
 $olv^*s^* = 0.5$ 0.0 0.0 (1.0)
 $cmyn^*s^* = 0.5$ 1.0 1.0 (0.0)
 $olv^*t^* = 1.0$ 0.5 0.5 0.5
 $cmyn^*t^* = 0.0$ 0.5 0.5 0.5
 standard and adapted CIELAB
 LAB*LAB 35.39 35.81 24.94
 LAB*LABa 35.39 35.81 24.94
 LAB*TCHe 25.01 43.63 34.85

relative CIELAB lab*
 $lab^*lab = 0.225$ 0.41 0.286
 $lab^*tch = 0.225$ 0.5 0.097
 $lab^*nch = 0.0$ 0.5 0.097
 relative Natural Colour (NC)
 $lab^*l^*rj = 0.225$ 0.488 0.109
 $lab^*t^*cE = 0.75$ 0.5 0.035
 $lab^*n^*cE = 0.5$ 0.5 0.14

TLS18; adapted (a) CIELAB data

	L^*	a^*	b^*	C^*_{ab}	h^*_{ab}
OMa	52.76	71.63	49.88	87.29	35
YMa	92.74	-20.02	84.97	87.3	103
LMa	84.70	-78.98	73.94	108.2	137
CMa	87.14	-44.41	-13.11	46.32	196
VMa	35.44	64.92	-95.06	115.12	304
MMa	59.01	89.33	-55.67	105.26	328
NMa	18.01	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.74	27.99	65.07	25
JCIE	81.26	-22.88	71.56	71.62	92
BCIE	52.23	-42.41	13.6	44.55	162
G _{CI} 3057	1.41	-46.46	46.49	272	

relative Inform. Technology (IT)
 $olv^*s^* = 1.0$ 0.0 0.0 (1.0)
 $cmyn^*s^* = 1.0$ 1.0 1.0 (0.0)
 $olv^*t^* = 1.0$ 0.0 1.0 0.5
 $cmyn^*t^* = 0.0$ 1.0 0.0 0.5
 standard and adapted CIELAB
 LAB*LAB 52.76 71.62 49.87
 LAB*LABa 52.76 71.62 49.87
 LAB*TCHe 50.0 87.27 34.85

relative CIELAB lab*
 $lab^*lab = 0.449$ 0.82 0.571
 $lab^*tch = 0.449$ 0.976 0.218
 $lab^*nch = 0.0$ 1.0 0.097
 relative Natural Colour (NC)
 $lab^*l^*rj = 0.449$ 0.976 0.218
 $lab^*t^*cE = 0.5$ 1.0 0.035
 $lab^*n^*cE = 0.0$ 1.0 0.14

Output: Colorimetric Offset Reflective System ORS18

for hue $h^* = lab^*h = 38/360 = 0.105$
 lab^*tch and lab^*nch

D65: hue O
 LCH*Ma: 48 83 38
 olv*Ma: 1.0 0.0 0.0

triangle lightness l^*



% Gamut
 $u^*_{rel} = 93$
 % Regularity
 $g^*_{rel} = 57$
 $g^*_{Crel} = 59$

relative Inform. Technology (IT)
 $olv^*s^* = 1.0$ 1.0 1.0 (1.0)
 $cmyn^*s^* = 0.0$ 0.0 0.0 (0.0)
 $olv^*t^* = 1.0$ 1.0 1.0 1.0
 $cmyn^*t^* = 0.0$ 0.0 0.0 0.0
 standard and adapted CIELAB
 LAB*LAB 95.41 -0.98 4.75
 LAB*LABa 95.41 0.0 0.0
 LAB*TCHe 99.99 0.01 -

relative CIELAB lab*
 $lab^*lab = 1.0$ 0.0 0.0 0.0
 $lab^*tch = 1.0$ 0.0 - -
 $lab^*nch = 1.0$ 0.0 - -
 relative Natural Colour (NC)
 $lab^*l^*rj = 1.0$ 0.0 0.0 0.0
 $lab^*t^*cE = 0.0$ 0.0 - -
 $lab^*n^*cE = 0.0$ 0.0 - -

relative Inform. Technology (IT)
 $olv^*s^* = 0.5$ 0.5 0.5 (1.0)
 $cmyn^*s^* = 0.5$ 0.5 0.5 (0.0)
 $olv^*t^* = 1.0$ 1.0 1.0 0.5
 $cmyn^*t^* = 0.0$ 1.0 0.0 0.5
 standard and adapted CIELAB
 LAB*LAB 56.71 -0.24 2.14
 LAB*LABa 56.71 0.0 0.0
 LAB*TCHe 50.0 0.01 -

relative CIELAB lab*
 $lab^*lab = 0.5$ 0.0 0.0 0.0
 $lab^*tch = 0.5$ 0.0 - -
 $lab^*nch = 0.5$ 0.0 - -
 relative Natural Colour (NC)
 $lab^*l^*rj = 0.5$ 0.0 0.0 0.0
 $lab^*t^*cE = 0.5$ 0.0 - -
 $lab^*n^*cE = 0.5$ 0.0 - -

relative Inform. Technology (IT)
 $olv^*s^* = 1.0$ 0.5 0.5 (1.0)
 $cmyn^*s^* = 0.0$ 0.5 0.5 (0.0)
 $olv^*t^* = 1.0$ 0.5 0.5 0.0
 $cmyn^*t^* = 0.0$ 0.5 0.5 0.0
 standard and adapted CIELAB
 LAB*LAB 71.67 32.15 28.41
 LAB*LABa 71.67 32.15 28.41
 LAB*TCHe 75.0 41.31 37.69

relative CIELAB lab*
 $lab^*lab = 0.693$ 0.396 0.306
 $lab^*tch = 0.75$ 0.5 0.105
 $lab^*nch = 0.0$ 0.5 0.105
 relative Natural Colour (NC)
 $lab^*l^*rj = 0.693$ 0.477 0.15
 $lab^*t^*cE = 0.75$ 0.5 0.048
 $lab^*n^*cE = 0.0$ 0.5 0.191

relative Inform. Technology (IT)
 $olv^*s^* = 0.5$ 0.0 0.0 (1.0)
 $cmyn^*s^* = 0.5$ 1.0 1.0 (0.0)
 $olv^*t^* = 1.0$ 0.5 0.5 0.5
 $cmyn^*t^* = 0.0$ 0.5 0.5 0.5
 standard and adapted CIELAB
 LAB*LAB 32.98 32.9 25.8
 LAB*LABa 32.98 32.69 25.25
 LAB*TCHe 25.01 41.31 37.69

relative CIELAB lab*
 $lab^*lab = 0.193$ 0.396 0.306
 $lab^*tch = 0.225$ 0.5 0.105
 $lab^*nch = 0.0$ 0.5 0.105
 relative Natural Colour (NC)
 $lab^*l^*rj = 0.193$ 0.477 0.15
 $lab^*t^*cE = 0.75$ 0.5 0.048
 $lab^*n^*cE = 0.5$ 0.5 0.191

ORS18; adapted (a) CIELAB data

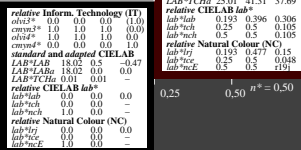
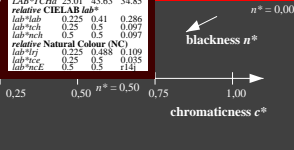
	L^*	a^*	b^*	C^*_{ab}	h^*_{ab}
OMa	47.94	65.39	50.52	82.63	38
YMa	90.37	-10.26	91.75	92.32	96
LMa	50.9	-62.83	34.96	71.91	151
CMa	58.62	-30.34	-45.01	54.3	236
VMa	25.72	31.1	-44.4	54.22	305
MMa	48.13	75.28	-8.36	75.74	354
NMa	18.01	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.66	26.98	64.57	25
JCIE	81.26	-2.16	67.76	67.79	92
BCIE	52.23	-42.25	11.76	43.87	164
G _{CI} 3057	1.15	-46.84	46.86	271	

relative Inform. Technology (IT)
 $olv^*s^* = 1.0$ 0.0 0.0 (1.0)
 $cmyn^*s^* = 0.0$ 1.0 1.0 (0.0)
 $olv^*t^* = 1.0$ 1.0 1.0 0.0
 $cmyn^*t^* = 0.0$ 1.0 1.0 0.0
 standard and adapted CIELAB
 LAB*LAB 47.94 65.3 52.06
 LAB*LABa 47.94 65.37 50.51
 LAB*TCHe 50.0 82.61 37.69

relative CIELAB lab*
 $lab^*lab = 0.387$ 0.791 0.611
 $lab^*tch = 0.387$ 0.954 0.299
 $lab^*nch = 0.0$ 1.0 0.105
 relative Natural Colour (NC)
 $lab^*l^*rj = 0.387$ 0.954 0.299
 $lab^*t^*cE = 0.5$ 1.0 0.048
 $lab^*n^*cE = 0.0$ 1.0 0.191

relative Inform. Technology (IT)
 $olv^*s^* = 0.5$ 0.0 0.0 (1.0)
 $cmyn^*s^* = 0.5$ 1.0 1.0 (0.0)
 $olv^*t^* = 1.0$ 0.5 0.5 0.5
 $cmyn^*t^* = 0.0$ 0.5 0.5 0.5
 standard and adapted CIELAB
 LAB*LAB 32.98 32.9 25.8
 LAB*LABa 32.98 32.69 25.25
 LAB*TCHe 25.01 41.31 37.69

relative CIELAB lab*
 $lab^*lab = 0.287$ 0.791 0.611
 $lab^*tch = 0.287$ 0.954 0.299
 $lab^*nch = 0.0$ 1.0 0.105
 relative Natural Colour (NC)
 $lab^*l^*rj = 0.287$ 0.954 0.299
 $lab^*t^*cE = 0.5$ 1.0 0.048
 $lab^*n^*cE = 0.0$ 1.0 0.191



$n^* = 1.0$

$n^* = 1.0$

BAM test chart NE16; Colorimetric systems TLS18 & ORS18
 D65: 2 coordinate data of 3 step colour scales for 10 hues

3 step scales for constant CIELAB hue 38/360 = 0.105 (right)
 input: $olv^* setrgcolor$
 output: $olv^* setrgcolor / w^* setgray$