

Input: Colorimetric Offset Reflective System ORS18

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

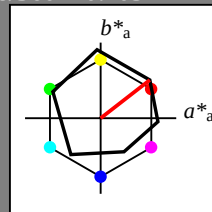
lab^*tch and lab^*nch

D50: hue O

LCH*Ma: 48 82 38

olv*Ma: 1.0 0.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 94$

%Regularity

$g^*_{H,rel} = 65$

$g^*_{C,rel} = 60$

relative Inform. Technology (IT)
olvi3* 1.0 1.0 1.0 (1.0)
cmyn3* 0.0 0.0 0.0 (0.0)
olvi4* 1.0 1.0 1.0 1.0
cmyn4* 0.0 0.0 0.0 0.0

standard and adapted CIELAB
LAB*LAB 95.46 -0.39 4.69
LAB*LABa 95.46 0.0 0.0
LAB*TCHa 99.99 0.01 -

relative CIELAB lab*
lab*lab 1.0 0.0 0.0
lab*tch 1.0 0.0 -
lab*nch 0.0 0.0 -

relative Natural Colour (NC)
lab*lrj 1.0 0.0 0.0
lab*tce 1.0 0.0 -
lab*nce 0.0 0.0 -

relative Inform. Technology (IT)
olvi3* 0.5 0.5 0.5 (1.0)
cmyn3* 0.5 0.5 0.5 (0.0)
olvi4* 1.0 1.0 1.0 0.5
cmyn4* 0.0 0.0 0.0 0.5

standard and adapted CIELAB
LAB*LAB 56.78 0.13 2.11
LAB*LABa 56.78 0.0 0.0
LAB*TCHa 50.0 0.01 -

relative CIELAB lab*
lab*lab 0.5 0.0 0.0
lab*tch 0.5 0.0 -
lab*nch 0.5 0.0 -

relative Natural Colour (NC)
lab*lrj 0.5 0.0 0.0
lab*tce 0.5 0.0 -
lab*nce 0.5 0.0 -

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 1.0 (0.0)
olvi4* 1.0 1.0 1.0 0.0
cmyn4* 0.0 0.0 0.0 1.0

standard and adapted CIELAB
LAB*LAB 18.1 0.67 -0.46
LAB*LABa 18.1 0.0 0.0
LAB*TCHa 0.01 0.01 -

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 -
lab*nch 1.0 0.0 -

relative Natural Colour (NC)
lab*lrj 0.0 0.0 0.0
lab*tce 0.0 0.0 -
lab*nce 1.0 0.0 -

$n^* = 1,0$

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O _{Ma}	47.94	65.05	50.54	82.38	38
Y _{Ma}	91.0	-4.72	90.58	90.7	93
L _{Ma}	50.9	-63.18	34.98	72.22	151
C _{Ma}	56.99	-39.34	-48.1	62.16	231
V _{Ma}	25.72	30.89	-44.4	54.09	305
M _{Ma}	49.99	75.76	-4.64	75.9	356
N _{Ma}	18.09	0.0	0.0	0.0	0
W _{Ma}	95.46	0.0	0.0	0.0	0
R _{CIE}	41.88	61.66	30.69	68.88	26
J _{CIE}	81.97	2.02	67.79	67.82	88
G _{CIE}	51.62	-41.32	9.74	42.46	167
B _{CIE}	29.2	-5.79	-49.61	49.96	263

relative Inform. Technology (IT)
olvi3* 1.0 0.5 0.5 (1.0)
cmyn3* 0.0 0.5 0.5 (0.0)
olvi4* 1.0 0.5 0.5 1.0
cmyn4* 0.0 0.5 0.5 0.0

standard and adapted CIELAB
LAB*LAB 71.7 32.45 28.38
LAB*LABa 71.7 32.52 25.26
LAB*TCHa 75.0 41.18 37.84

relative CIELAB lab*
lab*lab 0.693 0.395 0.307
lab*tch 0.75 0.5 0.105
lab*nch 0.0 0.5 0.105

relative Natural Colour (NC)
lab*lrj 0.693 0.479 0.143
lab*tce 0.75 0.5 0.046
lab*nce 0.0 0.5 r18j

relative Inform. Technology (IT)
olvi3* 0.5 0.0 0.0 (1.0)
cmyn3* 0.5 1.0 1.0 (0.0)
olvi4* 1.0 0.5 0.5 0.5
cmyn4* 0.0 0.5 0.5 0.5

standard and adapted CIELAB
LAB*LAB 33.02 32.98 25.8
LAB*LABa 33.02 32.52 25.26
LAB*TCHa 25.01 41.18 37.84

relative CIELAB lab*
lab*lab 0.193 0.395 0.307
lab*tch 0.25 0.5 0.105
lab*nch 0.5 0.5 0.105

relative Natural Colour (NC)
lab*lrj 0.193 0.479 0.143
lab*tce 0.25 0.5 0.046
lab*nce 0.5 0.5 r18j

$n^* = 0,50$

relative Inform. Technology (IT)
olvi3* 1.0 0.0 0.0 (1.0)
cmyn3* 0.0 1.0 1.0 (0.0)
olvi4* 1.0 0.0 0.0 1.0
cmyn4* 0.0 1.0 1.0 0.0

standard and adapted CIELAB
LAB*LAB 47.94 65.3 52.06
LAB*LABa 47.94 65.04 50.53
LAB*TCHa 50.0 82.36 37.84

relative CIELAB lab*
lab*lab 0.386 0.79 0.613
lab*tch 0.5 1.0 0.105
lab*nch 0.0 1.0 0.105

relative Natural Colour (NC)
lab*lrj 0.386 0.958 0.285
lab*tce 0.5 1.0 0.046
lab*nce 0.0 1.0 r18j

$n^* = 0,00$

blackness n^*

chromaticness c^*

$n^* = 1,0$

Output: Colorimetric Television Luminous System TLS00

for hue $h^* = lab^*h = 38/360 = 0.107$

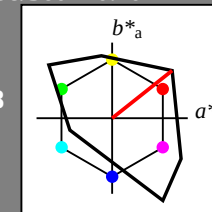
lab^*tch and lab^*nch

D50: hue O

LCH*Ma: 54 101 38

olv*Ma: 1.0 0.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 156$

%Regularity

$g^*_{H,rel} = 26$

$g^*_{C,rel} = 45$

relative Inform. Technology (IT)
olvi3* 1.0 1.0 1.0 (1.0)
cmyn3* 0.0 0.0 0.0 (0.0)
olvi4* 1.0 1.0 1.0 1.0
cmyn4* 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*TCHa 99.99 0.01 -

relative CIELAB lab*
lab*lab 1.0 0.0 0.0
lab*tch 1.0 0.0 -
lab*nch 0.0 0.0 -

relative Natural Colour (NC)
lab*lrj 1.0 0.0 0.0
lab*tce 1.0 0.0 -
lab*nce 0.0 0.0 -

relative Inform. Technology (IT)
olvi3* 0.5 0.5 0.5 (1.0)
cmyn3* 0.5 0.5 0.5 (0.0)
olvi4* 1.0 1.0 1.0 0.5
cmyn4* 0.0 0.0 0.0 0.5

standard and adapted CIELAB
LAB*LAB 47.72 0.0 0.0
LAB*LABa 47.72 0.0 0.0
LAB*TCHa 50.0 0.01 -

relative CIELAB lab*
lab*lab 0.5 0.0 0.0
lab*tch 0.5 0.0 -
lab*nch 0.5 0.0 -

relative Natural Colour (NC)
lab*lrj 0.5 0.0 0.0
lab*tce 0.5 0.0 -
lab*nce 0.5 0.0 -

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 1.0 (0.0)
olvi4* 1.0 1.0 1.0 0.0
cmyn4* 0.0 0.0 0.0 1.0

standard and adapted CIELAB
LAB*LAB 0.03 0.0 0.0
LAB*LABa 0.03 0.0 0.0
LAB*TCHa 0.01 0.01 -

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 -
lab*nch 1.0 0.0 -

relative Natural Colour (NC)
lab*lrj 0.0 0.0 0.0
lab*tce 0.0 0.0 -
lab*nce 1.0 0.0 -

$n^* = 1,0$

relative Inform. Technology (IT)
olvi3* 1.0 0.5 0.5 (1.0)
cmyn3* 0.0 0.5 0.5 (0.0)
olvi4* 1.0 0.5 0.5 1.0
cmyn4* 0.0 0.5 0.5 0.0

standard and adapted CIELAB
LAB*LAB 74.79 39.67 31.49
LAB*LABa 74.79 39.67 31.49
LAB*TCHa 75.0 50.65 38.44

relative CIELAB lab*
lab*lab 0.784 0.392 0.311
lab*tch 0.75 0.5 0.107
lab*nch 0.0 0.5 0.107

relative Natural Colour (NC)
lab*lrj 0.784 0.479 0.142
lab*tce 0.75 0.5 0.046
lab*nce 0.0 0.5 r18j

relative Inform. Technology (IT)
olvi3* 0.5 0.0 0.0 (1.0)
cmyn3* 0.5 1.0 1.0 (0.0)
olvi4* 1.0 0.5 0.5 0.5
cmyn4* 0.0 0.5 0.5 0.5

standard and adapted CIELAB
LAB*LAB 27.1 39.67 31.49
LAB*LABa 27.1 39.67 31.49
LAB*TCHa 25.01 50.65 38.44

relative CIELAB lab*
lab*lab 0.284 0.392 0.311
lab*tch 0.25 0.5 0.107
lab*nch 0.5 0.5 0.107

relative Natural Colour (NC)
lab*lrj 0.284 0.479 0.142
lab*tce 0.25 0.5 0.046
lab*nce 0.5 0.5 r18j

$n^* = 0,50$

blackness n^*

chromaticness c^*

$n^* = 1,0$

BAM-test chart PE10; Colorimetric systems ORS18 & TLS00
D50: 2 coordinate data of 3 step colour scales for 10 hues

input: olv* setrgbcolor
output: no change compared to input

Input: Colorimetric Offset Reflective System ORS18

for hue $h^* = lab^*h = 93/360 = 0.258$

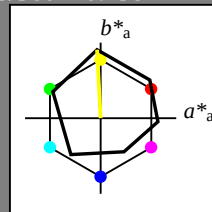
lab^*tch and lab^*nch

D50: hue Y

LCH*Ma: 91 91 93

olv*Ma: 1.0 1.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 94$

%Regularity

$g^*_{H,rel} = 65$

$g^*_{C,rel} = 60$

relative Inform. Technology (IT)
olvi3* 1.0 1.0 1.0 (1.0)
cmyn3* 0.0 0.0 0.0 (0.0)
olvi4* 1.0 1.0 1.0 1.0
cmyn4* 0.0 0.0 0.0 0.0

standard and adapted CIELAB
LAB*LAB 95.46 -0.39 4.69
LAB*LABa 95.46 0.0 0.0
LAB*TCHa 99.99 0.01 -

relative CIELAB lab*
lab*lab 1.0 0.0 0.0
lab*tch 1.0 0.0 -
lab*nch 0.0 0.0 -

relative Natural Colour (NC)
lab*lrj 1.0 0.0 0.0
lab*tce 1.0 0.0 -
lab*nce 0.0 0.0 -

relative Inform. Technology (IT)
olvi3* 0.5 0.5 0.5 (1.0)
cmyn3* 0.5 0.5 0.5 (0.0)
olvi4* 1.0 1.0 1.0 0.5
cmyn4* 0.0 0.0 0.0 0.5

standard and adapted CIELAB
LAB*LAB 56.78 0.13 2.11
LAB*LABa 56.78 0.0 0.0
LAB*TCHa 50.0 0.01 -

relative CIELAB lab*
lab*lab 0.5 0.0 0.0
lab*tch 0.5 0.0 -
lab*nch 0.5 0.0 -

relative Natural Colour (NC)
lab*lrj 0.5 0.0 0.0
lab*tce 0.5 0.0 -
lab*nce 0.5 0.0 -

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 1.0 (0.0)
olvi4* 1.0 1.0 1.0 0.0
cmyn4* 0.0 0.0 0.0 1.0

standard and adapted CIELAB
LAB*LAB 18.1 0.67 -0.46
LAB*LABa 18.1 0.0 0.0
LAB*TCHa 0.01 0.01 -

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 -
lab*nch 1.0 0.0 -

relative Natural Colour (NC)
lab*lrj 0.0 0.0 0.0
lab*tce 0.0 0.0 -
lab*nce 1.0 0.0 -

$n^* = 1,0$

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O _{Ma}	47.94	65.05	50.54	82.38	38
Y _{Ma}	91.0	-4.72	90.58	90.7	93
L _{Ma}	50.9	-63.18	34.98	72.22	151
C _{Ma}	56.99	-39.34	-48.1	62.16	231
V _{Ma}	25.72	30.89	-44.4	54.09	305
M _{Ma}	49.99	75.76	-4.64	75.9	356
N _{Ma}	18.09	0.0	0.0	0.0	0
W _{Ma}	95.46	0.0	0.0	0.0	0
R _{CIE}	41.88	61.66	30.69	68.88	26
J _{CIE}	81.97	2.02	67.79	67.82	88
G _{CIE}	51.62	-41.32	9.74	42.46	167
B _{CIE}	29.2	-5.79	-49.61	49.96	263

relative Inform. Technology (IT)
olvi3* 1.0 1.0 0.5 (1.0)
cmyn3* 0.0 0.0 0.5 (0.0)
olvi4* 1.0 1.0 0.5 1.0
cmyn4* 0.0 0.0 0.5 0.0

standard and adapted CIELAB
LAB*LAB 93.22 -2.72 49.83
LAB*LABa 93.22 -2.36 45.28
LAB*TCHa 75.0 45.34 92.99

relative CIELAB lab*
lab*lab 0.971 -0.025 0.499
lab*tch 0.75 0.5 0.258
lab*nch 0.0 0.5 0.258

relative Natural Colour (NC)
lab*lrj 0.971 -0.046 0.498
lab*tce 0.75 0.5 0.265
lab*nce 0.0 0.5 0.265

relative Inform. Technology (IT)
olvi3* 0.5 0.5 0.0 (1.0)
cmyn3* 0.5 0.5 1.0 (0.0)
olvi4* 1.0 1.0 0.5 0.5
cmyn4* 0.0 0.0 0.5 0.5

standard and adapted CIELAB
LAB*LAB 54.55 -2.19 47.25
LAB*LABa 54.55 -2.36 45.28
LAB*TCHa 25.01 45.34 92.99

relative CIELAB lab*
lab*lab 0.471 -0.025 0.499
lab*tch 0.25 0.5 0.258
lab*nch 0.5 0.5 0.258

relative Natural Colour (NC)
lab*lrj 0.471 -0.046 0.498
lab*tce 0.25 0.5 0.265
lab*nce 0.5 0.5 0.265

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 1.0 (0.0)
olvi4* 1.0 1.0 1.0 0.0
cmyn4* 0.0 0.0 0.0 1.0

standard and adapted CIELAB
LAB*LAB 18.1 0.67 -0.46
LAB*LABa 18.1 0.0 0.0
LAB*TCHa 0.01 0.01 -

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 -
lab*nch 1.0 0.0 -

relative Natural Colour (NC)
lab*lrj 0.0 0.0 0.0
lab*tce 0.0 0.0 -
lab*nce 1.0 0.0 -

$n^* = 0,00$

blackness n^*

chromaticness c^*

Output: Colorimetric Television Luminous System TLS00

for hue $h^* = lab^*h = 100/360 = 0.277$

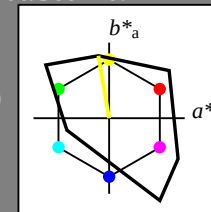
lab^*tch and lab^*nch

D50: hue Y

LCH*Ma: 93 84 100

olv*Ma: 1.0 1.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 156$

%Regularity

$g^*_{H,rel} = 26$

$g^*_{C,rel} = 45$

relative Inform. Technology (IT)
olvi3* 1.0 1.0 1.0 (1.0)
cmyn3* 0.0 0.0 0.0 (0.0)
olvi4* 1.0 1.0 1.0 1.0
cmyn4* 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*TCHa 99.99 0.01 -

relative CIELAB lab*
lab*lab 1.0 0.0 0.0
lab*tch 1.0 0.0 -
lab*nch 0.0 0.0 -

relative Natural Colour (NC)
lab*lrj 1.0 0.0 0.0
lab*tce 1.0 0.0 -
lab*nce 0.0 0.0 -

relative Inform. Technology (IT)
olvi3* 0.5 0.5 0.5 (1.0)
cmyn3* 0.5 0.5 0.5 (0.0)
olvi4* 1.0 1.0 1.0 0.5
cmyn4* 0.0 0.0 0.0 0.5

standard and adapted CIELAB
LAB*LAB 47.72 0.0 0.0
LAB*LABa 47.72 0.0 0.0
LAB*TCHa 50.0 0.01 -

relative CIELAB lab*
lab*lab 0.5 0.0 0.0
lab*tch 0.5 0.0 -
lab*nch 0.5 0.0 -

relative Natural Colour (NC)
lab*lrj 0.5 0.0 0.0
lab*tce 0.5 0.0 -
lab*nce 0.5 0.0 -

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 1.0 (0.0)
olvi4* 1.0 1.0 1.0 0.0
cmyn4* 0.0 0.0 0.0 1.0

standard and adapted CIELAB
LAB*LAB 0.03 0.0 0.0
LAB*LABa 0.03 0.0 0.0
LAB*TCHa 0.01 0.01 -

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 -
lab*nch 1.0 0.0 -

relative Natural Colour (NC)
lab*lrj 0.0 0.0 0.0
lab*tce 0.0 0.0 -
lab*nce 1.0 0.0 -

$n^* = 1,0$

TLS00; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O _{Ma}	54.19	79.36	63.0	101.33	38
Y _{Ma}	93.44	-14.18	82.59	83.8	100
L _{Ma}	82.82	-83.73	70.41	109.41	140
C _{Ma}	85.22	-55.9	-15.78	58.1	196
V _{Ma}	25.61	67.05	-108.87	127.87	302
M _{Ma}	58.76	91.18	-53.69	105.82	330
N _{Ma}	0.01	0.0	0.0	0.0	0
W _{Ma}	95.41	0.0	0.0	0.0	0
R _{CIE}	41.88	62.0	31.82	69.69	27
J _{CIE}	81.97	1.81	71.59	71.61	89
G _{CIE}	51.62	-41.11	11.52	42.7	164
B _{CIE}	29.2	-5.27	-49.33	49.62	264

relative Inform. Technology (IT)
olvi3* 1.0 1.0 0.5 (1.0)
cmyn3* 0.0 0.0 0.5 (0.0)
olvi4* 1.0 1.0 0.5 1.0
cmyn4* 0.0 0.0 0.5 0.0

standard and adapted CIELAB
LAB*LAB 94.42 -7.08 41.29
LAB*LABa 94.42 -7.08 41.29
LAB*TCHa 75.0 41.89 99.75

relative CIELAB lab*
lab*lab 0.99 -0.084 0.493
lab*tch 0.75 0.5 0.277
lab*nch 0.0 0.5 0.277

relative Natural Colour (NC)
lab*lrj 0.99 -0.114 0.487
lab*tce 0.75 0.5 0.287
lab*nce 0.0 0.5 0.287

relative Inform. Technology (IT)
olvi3* 0.5 0.5 0.0 (1.0)
cmyn3* 0.5 0.5 1.0 (0.0)
olvi4* 1.0 1.0 0.5 0.5
cmyn4* 0.0 0.0 0.5 0.5

standard and adapted CIELAB
LAB*LAB 46.73 -7.08 41.29
LAB*LABa 46.73 -7.08 41.29
LAB*TCHa 25.01 41.89 99.75

relative CIELAB lab*
lab*lab 0.49 -0.084 0.493
lab*tch 0.25 0.5 0.277
lab*nch 0.5 0.5 0.277

relative Natural Colour (NC)
lab*lrj 0.49 -0.114 0.487
lab*tce 0.25 0.5 0.287
lab*nce 0.5 0.5 0.287

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 1.0 (0.0)
olvi4* 1.0 1.0 1.0 0.0
cmyn4* 0.0 0.0 0.0 1.0

standard and adapted CIELAB
LAB*LAB 0.03 0.0 0.0
LAB*LABa 0.03 0.0 0.0
LAB*TCHa 0.01 0.01 -

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 -
lab*nch 1.0 0.0 -

relative Natural Colour (NC)
lab*lrj 0.0 0.0 0.0
lab*tce 0.0 0.0 -
lab*nce 1.0 0.0 -

$n^* = 0,00$

blackness n^*

chromaticness c^*

BAM-test chart PE10; Colorimetric systems ORS18 & TLS00
D50: 2 coordinate data of 3 step colour scales for 10 hues

input: olv* setrgbcolor
output: no change compared to input

Version 2.1, io=1,1

/PE10/ Form: 3/10, Serie: 1/1, Page: 3 Page: count: 3

output: no change compared to input

Input: Colorimetric Offset Reflective System ORS18

for hue $h^* = lab^*h = 231/360 = 0.641$

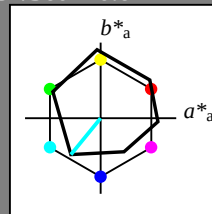
lab^*tch and lab^*nch

D50: hue C

LCH*Ma: 57 62 231

olv*Ma: 0.0 1.0 1.0

triangle lightness t^*



ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O _{Ma}	47.94	65.05	50.54	82.38	38
Y _{Ma}	91.0	-4.72	90.58	90.7	93
L _{Ma}	50.9	-63.18	34.98	72.22	151
C _{Ma}	56.99	-39.34	-48.1	62.16	231
V _{Ma}	25.72	30.89	-44.4	54.09	305
M _{Ma}	49.99	75.76	-4.64	75.9	356
N _{Ma}	18.09	0.0	0.0	0.0	0
W _{Ma}	95.46	0.0	0.0	0.0	0
R _{CIE}	41.88	61.66	30.69	68.88	26
J _{CIE}	81.97	2.02	67.79	67.82	88
G _{CIE}	51.62	-41.32	9.74	42.46	167
B _{CIE}	29.2	-5.79	-49.61	49.96	263

%Gamut

$u^*_{rel} = 94$

%Regularity

$g^*_{H,rel} = 65$

$g^*_{C,rel} = 60$

relative Inform. Technology (IT)
olv3* 1.0 1.0 1.0 (1.0)
cmyn3* 0.0 0.0 0.0 (0.0)
olv4* 1.0 1.0 1.0 1.0
cmyn4* 0.0 0.0 0.0 0.0

standard and adapted CIELAB
LAB*LAB 95.46 -0.39 4.69
LAB*LABa 95.46 0.0 0.0
LAB*TCHa 99.99 0.01 -

relative CIELAB lab*
lab*lab 1.0 0.0 0.0
lab*tch 1.0 0.0 -
lab*nch 0.0 0.0 -

relative Natural Colour (NC)
lab*lrj 1.0 0.0 0.0
lab*tce 1.0 0.0 -
lab*nce 0.0 0.0 -

relative Inform. Technology (IT)
olv3* 0.5 0.5 0.5 (1.0)
cmyn3* 0.5 0.5 0.5 (0.0)
olv4* 1.0 1.0 1.0 0.5
cmyn4* 0.0 0.0 0.0 0.5

standard and adapted CIELAB
LAB*LAB 56.78 0.13 2.11
LAB*LABa 56.78 0.0 0.0
LAB*TCHa 50.0 0.01 -

relative CIELAB lab*
lab*lab 0.5 0.0 0.0
lab*tch 0.5 0.0 -
lab*nch 0.5 0.0 -

relative Natural Colour (NC)
lab*lrj 0.5 0.0 0.0
lab*tce 0.5 0.0 -
lab*nce 0.5 0.0 -

relative Inform. Technology (IT)
olv3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 1.0 (0.0)
olv4* 1.0 1.0 1.0 0.0
cmyn4* 0.0 0.0 0.0 1.0

standard and adapted CIELAB
LAB*LAB 18.1 0.67 -0.46
LAB*LABa 18.1 0.0 0.0
LAB*TCHa 0.01 0.01 -

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 -
lab*nch 1.0 0.0 -

relative Natural Colour (NC)
lab*lrj 0.0 0.0 0.0
lab*tce 0.0 0.0 -
lab*nce 1.0 0.0 -

$n^* = 1,0$

relative Inform. Technology (IT)
olv3* 0.5 1.0 1.0 (1.0)
cmyn3* 0.5 0.0 0.0 (0.0)
olv4* 0.5 1.0 1.0 1.0
cmyn4* 0.5 0.0 0.0 0.0

standard and adapted CIELAB
LAB*LAB 76.22 -19.8 -20.63
LAB*LABa 76.22 -19.66 -24.04
LAB*TCHa 75.0 31.07 230.72

relative CIELAB lab*
lab*lab 0.751 -0.315 -0.386
lab*tch 0.75 0.5 0.641
lab*nch 0.0 0.5 0.641

relative Natural Colour (NC)
lab*lrj 0.751 -0.252 -0.43
lab*tce 0.75 0.5 0.666
lab*nce 0.0 0.5 0.666

relative Inform. Technology (IT)
olv3* 0.0 0.5 0.5 (1.0)
cmyn3* 1.0 0.5 0.5 (0.0)
olv4* 0.5 1.0 1.0 0.5
cmyn4* 0.5 0.0 0.0 0.5

standard and adapted CIELAB
LAB*LAB 37.54 -19.26 -23.2
LAB*LABa 37.54 -19.66 -24.04
LAB*TCHa 25.01 31.07 230.72

relative CIELAB lab*
lab*lab 0.251 -0.315 -0.386
lab*tch 0.25 0.5 0.641
lab*nch 0.5 0.5 0.641

relative Natural Colour (NC)
lab*lrj 0.251 -0.252 -0.43
lab*tce 0.25 0.5 0.666
lab*nce 0.5 0.5 0.666

relative Inform. Technology (IT)
olv3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 1.0 (0.0)
olv4* 1.0 1.0 1.0 0.0
cmyn4* 0.0 0.0 0.0 1.0

standard and adapted CIELAB
LAB*LAB 18.1 0.67 -0.46
LAB*LABa 18.1 0.0 0.0
LAB*TCHa 0.01 0.01 -

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 -
lab*nch 1.0 0.0 -

relative Natural Colour (NC)
lab*lrj 0.0 0.0 0.0
lab*tce 0.0 0.0 -
lab*nce 1.0 0.0 -

relative Inform. Technology (IT)
olv3* 0.0 1.0 1.0 (1.0)
cmyn3* 1.0 0.0 0.0 (0.0)
olv4* 0.0 1.0 1.0 1.0
cmyn4* 1.0 0.0 0.0 0.0

standard and adapted CIELAB
LAB*LAB 56.99 -39.2 -45.96
LAB*LABa 56.99 -39.33 -48.09
LAB*TCHa 50.0 62.15 230.72

relative CIELAB lab*
lab*lab 0.503 -0.632 -0.773
lab*tch 0.5 1.0 0.641
lab*nch 0.0 1.0 0.641

relative Natural Colour (NC)
lab*lrj 0.503 -0.505 -0.861
lab*tce 0.5 1.0 0.666
lab*nce 0.0 1.0 0.666

relative Inform. Technology (IT)
olv3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 1.0 (0.0)
olv4* 1.0 1.0 1.0 0.0
cmyn4* 0.0 0.0 0.0 1.0

standard and adapted CIELAB
LAB*LAB 0.03 0.0 0.0
LAB*LABa 0.03 0.0 0.0
LAB*TCHa 0.01 0.01 -

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 -
lab*nch 1.0 0.0 -

relative Natural Colour (NC)
lab*lrj 0.0 0.0 0.0
lab*tce 0.0 0.0 -
lab*nce 1.0 0.0 -

relative Inform. Technology (IT)
olv3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 1.0 (0.0)
olv4* 1.0 1.0 1.0 0.0
cmyn4* 0.0 0.0 0.0 1.0

standard and adapted CIELAB
LAB*LAB 0.03 0.0 0.0
LAB*LABa 0.03 0.0 0.0
LAB*TCHa 0.01 0.01 -

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 -
lab*nch 1.0 0.0 -

relative Natural Colour (NC)
lab*lrj 0.0 0.0 0.0
lab*tce 0.0 0.0 -
lab*nce 1.0 0.0 -

relative Inform. Technology (IT)
olv3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 1.0 (0.0)
olv4* 1.0 1.0 1.0 0.0
cmyn4* 0.0 0.0 0.0 1.0

standard and adapted CIELAB
LAB*LAB 0.03 0.0 0.0
LAB*LABa 0.03 0.0 0.0
LAB*TCHa 0.01 0.01 -

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 -
lab*nch 1.0 0.0 -

relative Natural Colour (NC)
lab*lrj 0.0 0.0 0.0
lab*tce 0.0 0.0 -
lab*nce 1.0 0.0 -

relative Inform. Technology (IT)
olv3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 1.0 (0.0)
olv4* 1.0 1.0 1.0 0.0
cmyn4* 0.0 0.0 0.0 1.0

standard and adapted CIELAB
LAB*LAB 0.03 0.0 0.0
LAB*LABa 0.03 0.0 0.0
LAB*TCHa 0.01 0.01 -

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 -
lab*nch 1.0 0.0 -

relative Natural Colour (NC)
lab*lrj 0.0 0.0 0.0
lab*tce 0.0 0.0 -
lab*nce 1.0 0.0 -

relative Inform. Technology (IT)
olv3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 1.0 (0.0)
olv4* 1.0 1.0 1.0 0.0
cmyn4* 0.0 0.0 0.0 1.0

standard and adapted CIELAB
LAB*LAB 0.03 0.0 0.0
LAB*LABa 0.03 0.0 0.0
LAB*TCHa 0.01 0.01 -

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 -
lab*nch 1.0 0.0 -

relative Natural Colour (NC)
lab*lrj 0.0 0.0 0.0
lab*tce 0.0 0.0 -
lab*nce 1.0 0.0 -

relative Inform. Technology (IT)
olv3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 1.0 (0.0)
olv4* 1.0 1.0 1.0 0.0
cmyn4* 0.0 0.0 0.0 1.0

standard and adapted CIELAB
LAB*LAB 0.03 0.0 0.0
LAB*LABa 0.03 0.0 0.0
LAB*TCHa 0.01 0.01 -

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 -
lab*nch 1.0 0.0 -

relative Natural Colour (NC)
lab*lrj 0.0 0.0 0.0
lab*tce 0.0 0.0 -
lab*nce 1.0 0.0 -

Output: Colorimetric Television Luminous System TLS00

for hue $h^* = lab^*h = 196/360 = 0.544$

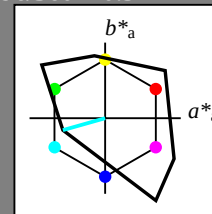
lab^*tch and lab^*nch

D50: hue C

LCH*Ma: 85 58 196

olv*Ma: 0.0 1.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 156$

%Regularity

$g^*_{H,rel} = 26$

$g^*_{C,rel} = 45$

relative Inform. Technology (IT)
olv3* 1.0 1.0 1.0 (1.0)
cmyn3* 0.0 0.0 0.0 (0.0)
olv4* 1.0 1.0 1.0 1.0
cmyn4* 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*TCHa 99.99 0.01 -

relative CIELAB lab*
lab*lab 1.0 0.0 0.0
lab*tch 1.0 0.0 -
lab*nch 0.0 0.0 -

relative Natural Colour (NC)
lab*lrj 1.0 0.0 0.0
lab*tce 1.0 0.0 -
lab*nce 0.0 0.0 -

relative Inform. Technology (IT)
olv3* 0.5 0.5 0.5 (1.0)
cmyn3* 0.5 0.5 0.5 (0.0)
olv4* 1.0 1.0 1.0 0.5
cmyn4* 0.0 0.0 0.0 0.5

standard and adapted CIELAB
LAB*LAB 47.72 0.0 0.0
LAB*LABa 47.72 0.0 0.0
LAB*TCHa 50.0 0.01 -

relative CIELAB lab*
lab*lab 0.5 0.0 0.0
lab*tch 0.5 0.0 -
lab*nch 0.5 0.0 -

relative Natural Colour (NC)
lab*lrj 0.5 0.0 0.0
lab*tce 0.5 0.0 -
lab*nce 0.5 0.0 -

relative Inform. Technology (IT)
olv3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 1.0 (0.0)
olv4* 1.0 1.0 1.0 0.0
cmyn4* 0.0 0.0 0.0 1.0

standard and adapted CIELAB
LAB*LAB 0.03 0.0 0.0
LAB*LABa 0.03 0.0 0.0
LAB*TCHa 0.01 0.01 -

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 -
lab*nch 1.0 0.0 -

relative Natural Colour (NC)
lab*lrj 0.0 0.0 0.0
lab*tce 0.0 0.0 -
lab*nce 1.0 0.0 -

$n^* = 1,0$

relative Inform. Technology (IT)
olv3* 0.5 1.0 1.0 (1.0)
cmyn3* 0.5 0.0 0.0 (0.0)
olv4* 0.5 1.0 1.0 1.0
cmyn4* 0.5 0.0 0.0 0.0

standard and adapted CIELAB
LAB*LAB 90.31 -27.94 -7.88
LAB*LABa 90.31 -27.94 -7.88
LAB*TCHa 75.0 29.04 195.77

relative CIELAB lab*
lab*lab 0.947 -0.48 -0.135
lab*tch 0.75 0.5 0.544
lab*nch 0.0 0.5 0.544

relative Natural Colour (NC)
lab*lrj 0.947 -0.439 -0.237
lab*tce 0.75 0.5 0.579
lab*nce 0.0 0.5 0.579

relative Inform. Technology (IT)
olv3* 0.0 0.5 0.5 (1.0)
cmyn3* 1.0 0.5 0.5 (0.0)
olv4* 0.5 1.0 1.0 0.5
cmyn4* 0.5 0.0 0.0 0.5

standard and adapted CIELAB
LAB*LAB 42.62 -27.94 -7.88
LAB*LABa 42.62 -27.94 -7.88
LAB*TCHa 25.01 29.04 195.77

relative CIELAB lab*
lab*lab 0.447 -0.48 -0.135
lab*tch 0.25 0.5 0.544
lab*nch 0.5 0.5 0.544

relative Natural Colour (NC)
lab*lrj 0.447 -0.439 -0.237
lab*tce 0.25 0.5 0.579
lab*nce 0.5 0.5 0.579

relative Inform. Technology (IT)
olv3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 1.0 (0.0)
olv4* 1.0 1.0 1.0 0.0
cmyn4* 0.0 0.0 0.0 1.0

standard and adapted CIELAB
LAB*LAB 0.03 0.0 0.0
LAB*LABa 0.03 0.0 0.0
LAB*TCHa 0.01 0.01 -

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 -
lab*nch 1.0 0.0 -

relative Natural Colour (NC)
lab*lrj 0.0 0.0 0.0
lab*tce 0.0 0.0 -
lab*nce 1.0 0.0 -

relative Inform. Technology (IT)
olv3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 1.0 (0.0)
olv4* 1.0 1.0 1.0 0.0
cmyn4* 0.0 0.0 0.0 1.0

standard and adapted CIELAB
LAB*LAB 0.03 0.0 0.0
LAB*LABa 0.03 0.0 0.0
LAB*TCHa 0.01 0.01 -

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 -
lab*nch 1.0 0.0 -

relative Natural Colour (NC)
lab*lrj 0.0 0.0 0.0
lab*tce 0.0 0.0 -
lab*nce 1.0 0.0 -

TLS00; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O _{Ma}	54.19	79.36	63.0	101.33	38
Y _{Ma}	93.44	-14.18	82.59	83.8	100
L _{Ma}	82.82	-83.73	70.41	109.41	140
C _{Ma}	85.22	-55.9	-15.78	58.1	196
V _{Ma}	25.61	67.05	-108.87	127.87	302
M _{Ma}	58.76	91.18	-53.69	105.82	330
N _{Ma}	0.01	0.0	0.0	0.0	0
W _{Ma}	95.41	0.0	0.0	0.0	0
R _{CIE}	41.88	62.0	31.82	69.69	27
J _{CIE}	81.97	1.81	71.59	71.61	89
G _{CIE}	51.62	-41.11	11.52	42.7	164
B _{CIE}	29.2	-5.27	-49.33	49.62	264

relative Inform. Technology (IT)
olv3* 0.5 1.0 1.0 (1.0)
cmyn3* 0.5 0.0 0.0 (0.0)
olv4* 0.5 1.0 1.0 1.0
cmyn4* 0.5 0.0 0.0 0.0

standard and adapted CIELAB
LAB*LAB 90.31 -27.94 -7.88
LAB*LABa 90.31 -27.94 -7.88
LAB*TCHa 75.0 29.04 195.77

relative CIELAB lab*
lab*lab 0.947 -0.48 -0.135
lab*tch 0.75 0.5 0.544
lab*nch 0.0 0.5 0.544

relative Natural Colour (NC)
lab*lrj 0.947 -0.439 -0.237
lab*tce 0.75 0.5 0.579
lab*nce 0.0 0.5 0.579

relative Inform. Technology (IT)
olv3* 0.0 0.5 0.5 (1.0)
cmyn3* 1.0 0.5 0.5 (0.0)
olv4* 0.5 1.0 1.0 0.5
cmyn4* 0.5 0.0 0.0 0.5

standard and adapted CIELAB
LAB*LAB 85.21 -55.89 -15.78
LAB*LABa 85.21 -55.89 -15.78
LAB*TCHa 50.0 58.09 195.77

relative CIELAB lab*
lab*lab 0.893 -0.961 -0.271
lab*tch 0.5 1.0 0.544
lab*nch 0.0 1.0 0.544

relative Natural Colour (NC)
lab*lrj 0.893 -0.878 -0.475
lab*tce 0.5 1.0 0.579
lab*nce 0.0 1.0 0.579

relative Inform. Technology (IT)
olv3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 1.0 (0.0)
olv4* 1.0 1.0 1.0 0.0
cmyn4* 0.0 0.0 0.0 1.0

standard and adapted CIELAB
LAB*LAB 0.03 0.0 0.0
LAB

Input: Colorimetric Offset Reflective System ORS18

for hue $h^* = lab^*h = 305/360 = 0.847$

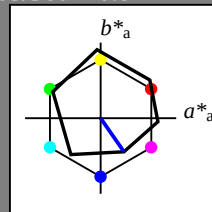
lab^*tch and lab^*nch

D50: hue V

LCH*Ma: 26 54 305

olv*Ma: 0.0 0.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 94$

%Regularity

$g^*_{H,rel} = 65$

$g^*_{C,rel} = 60$

relative Inform. Technology (IT)
olvi3* 1.0 1.0 1.0 (1.0)
cmyn3* 0.0 0.0 0.0 (0.0)
olvi4* 1.0 1.0 1.0 1.0
cmyn4* 0.0 0.0 0.0 0.0

standard and adapted CIELAB
LAB*LAB 95.46 -0.39 4.69
LAB*LABa 95.46 0.0 0.0
LAB*TCHa 99.99 0.01 -

relative CIELAB lab*
lab*lab 1.0 0.0 0.0
lab*tch 1.0 0.0 -
lab*nch 0.0 0.0 -

relative Natural Colour (NC)
lab*lrj 1.0 0.0 0.0
lab*tce 1.0 0.0 -
lab*nce 0.0 0.0 -

relative Inform. Technology (IT)
olvi3* 0.5 0.5 0.5 (1.0)
cmyn3* 0.5 0.5 0.5 (0.0)
olvi4* 1.0 1.0 1.0 0.5
cmyn4* 0.0 0.0 0.0 0.5

standard and adapted CIELAB
LAB*LAB 56.78 0.13 2.11
LAB*LABa 56.78 0.0 0.0
LAB*TCHa 50.0 0.01 -

relative CIELAB lab*
lab*lab 0.5 0.0 0.0
lab*tch 0.5 0.0 -
lab*nch 0.5 0.0 -

relative Natural Colour (NC)
lab*lrj 0.5 0.0 0.0
lab*tce 0.5 0.0 -
lab*nce 0.5 0.0 -

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 1.0 (0.0)
olvi4* 1.0 1.0 1.0 0.0
cmyn4* 0.0 0.0 0.0 1.0

standard and adapted CIELAB
LAB*LAB 18.1 0.67 -0.46
LAB*LABa 18.1 0.0 0.0
LAB*TCHa 0.01 0.01 -

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 -
lab*nch 1.0 0.0 -

relative Natural Colour (NC)
lab*lrj 0.0 0.0 0.0
lab*tce 0.0 0.0 -
lab*nce 1.0 0.0 -

$n^* = 1,0$

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O _{Ma}	47.94	65.05	50.54	82.38	38
Y _{Ma}	91.0	-4.72	90.58	90.7	93
L _{Ma}	50.9	-63.18	34.98	72.22	151
C _{Ma}	56.99	-39.34	-48.1	62.16	231
V _{Ma}	25.72	30.89	-44.4	54.09	305
M _{Ma}	49.99	75.76	-4.64	75.9	356
N _{Ma}	18.09	0.0	0.0	0.0	0
W _{Ma}	95.46	0.0	0.0	0.0	0
R _{CIE}	41.88	61.66	30.69	68.88	26
J _{CIE}	81.97	2.02	67.79	67.82	88
G _{CIE}	51.62	-41.32	9.74	42.46	167
B _{CIE}	29.2	-5.79	-49.61	49.96	263

relative Inform. Technology (IT)
olvi3* 0.5 0.5 1.0 (1.0)
cmyn3* 0.5 0.5 0.0 (0.0)
olvi4* 0.5 0.5 1.0 1.0
cmyn4* 0.5 0.5 0.0 0.0

standard and adapted CIELAB
LAB*LAB 60.59 15.52 -19.82
LAB*LABa 60.59 15.44 -22.19
LAB*TCHa 75.0 27.04 304.82

relative CIELAB lab*
lab*lab 0.549 0.285 -0.409
lab*tch 0.75 0.5 0.847
lab*nch 0.0 0.5 0.847

relative Natural Colour (NC)
lab*lrj 0.549 0.252 -0.431
lab*tce 0.75 0.5 0.834
lab*nce 0.0 0.5 b33r

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.5 (1.0)
cmyn3* 1.0 1.0 0.5 (0.0)
olvi4* 0.5 0.5 1.0 0.5
cmyn4* 0.5 0.5 0.0 0.5

standard and adapted CIELAB
LAB*LAB 21.91 16.06 -22.4
LAB*LABa 21.91 15.44 -22.19
LAB*TCHa 25.01 27.04 304.82

relative CIELAB lab*
lab*lab 0.049 0.285 -0.409
lab*tch 0.25 0.5 0.847
lab*nch 0.5 0.5 0.847

relative Natural Colour (NC)
lab*lrj 0.049 0.252 -0.431
lab*tce 0.25 0.5 0.834
lab*nce 0.5 0.5 b33r

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 1.0 (0.0)
olvi4* 1.0 1.0 1.0 0.0
cmyn4* 0.0 0.0 0.0 1.0

standard and adapted CIELAB
LAB*LAB 18.1 0.67 -0.46
LAB*LABa 18.1 0.0 0.0
LAB*TCHa 0.01 0.01 -

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 -
lab*nch 1.0 0.0 -

relative Natural Colour (NC)
lab*lrj 0.0 0.0 0.0
lab*tce 0.0 0.0 -
lab*nce 1.0 0.0 -

relative Inform. Technology (IT)
olvi3* 0.0 0.0 1.0 (1.0)
cmyn3* 1.0 1.0 0.0 (0.0)
olvi4* 0.0 0.0 1.0 1.0
cmyn4* 1.0 1.0 0.0 0.0

standard and adapted CIELAB
LAB*LAB 25.73 31.44 -44.34
LAB*LABa 25.73 30.88 -44.39
LAB*TCHa 50.0 54.08 304.82

relative CIELAB lab*
lab*lab 0.099 0.571 -0.82
lab*tch 0.5 1.0 0.847
lab*nch 0.0 1.0 0.847

relative Natural Colour (NC)
lab*lrj 0.099 0.505 -0.862
lab*tce 0.5 1.0 0.834
lab*nce 0.0 1.0 b33r

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 1.0 (0.0)
olvi4* 1.0 1.0 1.0 0.0
cmyn4* 0.0 0.0 0.0 1.0

standard and adapted CIELAB
LAB*LAB 0.03 0.0 0.0
LAB*LABa 0.03 0.0 0.0
LAB*TCHa 0.01 0.01 -

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 -
lab*nch 1.0 0.0 -

relative Natural Colour (NC)
lab*lrj 0.0 0.0 0.0
lab*tce 0.0 0.0 -
lab*nce 1.0 0.0 -

$n^* = 0,00$

blackness n^*

chromaticness c^*

Output: Colorimetric Television Luminous System TLS00

for hue $h^* = lab^*h = 302/360 = 0.838$

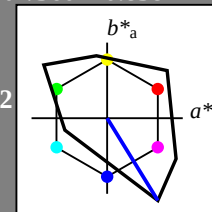
lab^*tch and lab^*nch

D50: hue V

LCH*Ma: 26 128 302

olv*Ma: 0.0 0.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 156$

%Regularity

$g^*_{H,rel} = 26$

$g^*_{C,rel} = 45$

relative Inform. Technology (IT)
olvi3* 1.0 1.0 1.0 (1.0)
cmyn3* 0.0 0.0 0.0 (0.0)
olvi4* 1.0 1.0 1.0 1.0
cmyn4* 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*TCHa 99.99 0.01 -

relative CIELAB lab*
lab*lab 1.0 0.0 0.0
lab*tch 1.0 0.0 -
lab*nch 0.0 0.0 -

relative Natural Colour (NC)
lab*lrj 1.0 0.0 0.0
lab*tce 1.0 0.0 -
lab*nce 0.0 0.0 -

relative Inform. Technology (IT)
olvi3* 0.5 0.5 0.5 (1.0)
cmyn3* 0.5 0.5 0.5 (0.0)
olvi4* 1.0 1.0 1.0 0.5
cmyn4* 0.0 0.0 0.0 0.5

standard and adapted CIELAB
LAB*LAB 47.72 0.0 0.0
LAB*LABa 47.72 0.0 0.0
LAB*TCHa 50.0 0.01 -

relative CIELAB lab*
lab*lab 0.5 0.0 0.0
lab*tch 0.5 0.0 -
lab*nch 0.5 0.0 -

relative Natural Colour (NC)
lab*lrj 0.5 0.0 0.0
lab*tce 0.5 0.0 -
lab*nce 0.5 0.0 -

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 1.0 (0.0)
olvi4* 1.0 1.0 1.0 0.0
cmyn4* 0.0 0.0 0.0 1.0

standard and adapted CIELAB
LAB*LAB 0.03 0.0 0.0
LAB*LABa 0.03 0.0 0.0
LAB*TCHa 0.01 0.01 -

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 -
lab*nch 1.0 0.0 -

relative Natural Colour (NC)
lab*lrj 0.0 0.0 0.0
lab*tce 0.0 0.0 -
lab*nce 1.0 0.0 -

$n^* = 1,0$

blackness n^*

chromaticness c^*

TLS00; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O _{Ma}	54.19	79.36	63.0	101.33	38
Y _{Ma}	93.44	-14.18	82.59	83.8	100
L _{Ma}	82.82	-83.73	70.41	109.41	140
C _{Ma}	85.22	-55.9	-15.78	58.1	196
V _{Ma}	25.61	67.05	-108.87	127.87	302
M _{Ma}	58.76	91.18	-53.69	105.82	330
N _{Ma}	0.01	0.0	0.0	0.0	0
W _{Ma}	95.41	0.0	0.0	0.0	0
R _{CIE}	41.88	62.0	31.82	69.69	27
J _{CIE}	81.97	1.81	71.59	71.61	89
G _{CIE}	51.62	-41.11	11.52	42.7	164
B _{CIE}	29.2	-5.27	-49.33	49.62	264

relative Inform. Technology (IT)
olvi3* 0.5 0.5 1.0 (1.0)
cmyn3* 0.5 0.5 0.0 (0.0)
olvi4* 0.5 0.5 1.0 1.0
cmyn4* 0.5 0.5 0.0 0.0

standard and adapted CIELAB
LAB*LAB 60.51 33.52 -54.42
LAB*LABa 60.51 33.52 -54.42
LAB*TCHa 75.0 63.92 301.63

relative CIELAB lab*
lab*lab 0.634 0.262 -0.425
lab*tch 0.75 0.5 0.838
lab*nch 0.0 0.5 0.838

relative Natural Colour (NC)
lab*lrj 0.634 0.231 -0.442
lab*tce 0.75 0.5 0.827
lab*nce 0.0 0.5 b30r

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.5 (1.0)
cmyn3* 1.0 1.0 0.5 (0.0)
olvi4* 0.5 0.5 1.0 0.5
cmyn4* 0.5 0.5 0.0 0.5

standard and adapted CIELAB
LAB*LAB 12.82 33.52 -54.42
LAB*LABa 12.82 33.52 -54.42
LAB*TCHa 25.01 63.92 301.63

relative CIELAB lab*
lab*lab 0.134 0.262 -0.425
lab*tch 0.25 0.5 0.838
lab*nch 0.5 0.5 0.838

relative Natural Colour (NC)
lab*lrj 0.134 0.231 -0.442
lab*tce 0.25 0.5 0.827
lab*nce 0.5 0.5 b30r

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 1.0 (0.0)
olvi4* 1.0 1.0 1.0 0.0
cmyn4* 0.0 0.0 0.0 1.0

standard and adapted CIELAB
LAB*LAB 0.03 0.0 0.0
LAB*LABa 0.03 0.0 0.0
LAB*TCHa 0.01 0.01 -

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 -
lab*nch 1.0 0.0 -

relative Natural Colour (NC)
lab*lrj 0.0 0.0 0.0
lab*tce 0.0 0.0 -
lab*nce 1.0 0.0 -

$n^* = 0,00$

blackness n^*

chromaticness c^*

Input: Colorimetric Offset Reflective System ORS18

for hue $h^* = lab^*h = 356/360 = 0.99$

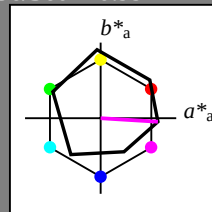
lab^*tch and lab^*nch

D50: hue M

LCH*Ma: 50 76 356

olv*Ma: 1.0 0.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 94$

%Regularity

$g^*_{H,rel} = 65$

$g^*_{C,rel} = 60$

ORS18; adapted (a) CIELAB data					
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O _{Ma}	47.94	65.05	50.54	82.38	38
Y _{Ma}	91.0	-4.72	90.58	90.7	93
L _{Ma}	50.9	-63.18	34.98	72.22	151
C _{Ma}	56.99	-39.34	-48.1	62.16	231
V _{Ma}	25.72	30.89	-44.4	54.09	305
M _{Ma}	49.99	75.76	-4.64	75.9	356
N _{Ma}	18.09	0.0	0.0	0.0	0
W _{Ma}	95.46	0.0	0.0	0.0	0
R _{CIE}	41.88	61.66	30.69	68.88	26
J _{CIE}	81.97	2.02	67.79	67.82	88
G _{CIE}	51.62	-41.32	9.74	42.46	167
B _{CIE}	29.2	-5.79	-49.61	49.96	263

relative Inform. Technology (IT)				
olvi3*	1.0	1.0	1.0	(1.0)
cmyn3*	0.0	0.0	0.0	(0.0)
olvi4*	1.0	1.0	1.0	1.0
cmyn4*	0.0	0.0	0.0	0.0

standard and adapted CIELAB

LAB*LAB	95.46	-0.39	4.69
LAB*LABa	95.46	0.0	0.0
LAB*TCHa	99.99	0.01	-

relative CIELAB lab*

lab*lab	1.0	0.0	0.0
lab*tch	1.0	0.0	-
lab*nch	0.0	0.0	-

relative Natural Colour (NC)

lab*lrj	1.0	0.0	0.0
lab*tce	1.0	0.0	-
lab*nce	0.0	0.0	-

relative Inform. Technology (IT)				
olvi3*	0.5	0.5	0.5	(1.0)
cmyn3*	0.5	0.5	0.5	(0.0)
olvi4*	1.0	1.0	1.0	0.5
cmyn4*	0.0	0.0	0.0	0.5

standard and adapted CIELAB

LAB*LAB	56.78	0.13	2.11
LAB*LABa	56.78	0.0	0.0
LAB*TCHa	50.0	0.01	-

relative CIELAB lab*

lab*lab	0.5	0.0	0.0
lab*tch	0.5	0.0	-
lab*nch	0.5	0.0	-

relative Natural Colour (NC)

lab*lrj	0.5	0.0	0.0
lab*tce	0.5	0.0	-
lab*nce	0.5	0.0	-

relative Inform. Technology (IT)				
olvi3*	0.0	0.0	0.0	(1.0)
cmyn3*	1.0	1.0	1.0	(0.0)
olvi4*	1.0	1.0	1.0	0.0
cmyn4*	0.0	0.0	0.0	1.0

standard and adapted CIELAB

LAB*LAB	18.1	0.67	-0.46
LAB*LABa	18.1	0.0	0.0
LAB*TCHa	0.01	0.01	-

relative CIELAB lab*

lab*lab	0.0	0.0	0.0
lab*tch	0.0	0.0	-
lab*nch	1.0	0.0	-

relative Natural Colour (NC)

lab*lrj	0.0	0.0	0.0
lab*tce	0.0	0.0	-
lab*nce	1.0	0.0	-

$n^* = 1.0$

relative Inform. Technology (IT)				
olvi3*	1.0	0.5	1.0	(1.0)
cmyn3*	0.0	0.5	0.0	(0.0)
olvi4*	1.0	0.5	1.0	1.0
cmyn4*	0.0	0.5	0.0	0.0

standard and adapted CIELAB

LAB*LAB	72.72	37.79	0.86
LAB*LABa	72.72	37.87	-2.31
LAB*TCHa	75.0	37.94	356.49

relative CIELAB lab*

lab*lab	0.706	0.499	-0.03
lab*tch	0.75	0.5	0.99
lab*nch	0.0	0.5	0.99

relative Natural Colour (NC)

lab*lrj	0.706	0.464	-0.186
lab*tce	0.75	0.5	0.939
lab*nce	0.0	0.5	0.75r

relative Inform. Technology (IT)				
olvi3*	0.5	0.0	0.5	(1.0)
cmyn3*	0.5	1.0	0.5	(0.0)
olvi4*	1.0	0.5	1.0	0.5
cmyn4*	0.0	0.5	0.0	0.5

standard and adapted CIELAB

LAB*LAB	34.04	38.32	-1.71
LAB*LABa	34.04	37.87	-2.31
LAB*TCHa	25.01	37.94	356.49

relative CIELAB lab*

lab*lab	0.206	0.499	-0.03
lab*tch	0.25	0.5	0.99
lab*nch	0.5	0.5	0.99

relative Natural Colour (NC)

lab*lrj	0.206	0.464	-0.186
lab*tce	0.25	0.5	0.939
lab*nce	0.5	0.5	0.75r

blackness n^*

chromaticness c^*

$n^* = 0.50$

$n^* = 1.0$

Output: Colorimetric Television Luminous System TLS00

for hue $h^* = lab^*h = 330/360 = 0.915$

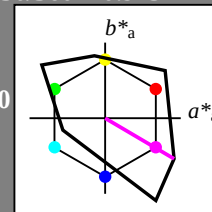
lab^*tch and lab^*nch

D50: hue M

LCH*Ma: 59 106 330

olv*Ma: 1.0 0.0 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 156$

%Regularity

$g^*_{H,rel} = 26$

$g^*_{C,rel} = 45$

TLS00; adapted (a) CIELAB data					
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O _{Ma}	54.19	79.36	63.0	101.33	38
Y _{Ma}	93.44	-14.18	82.59	83.8	100
L _{Ma}	82.82	-83.73	70.41	109.41	140
C _{Ma}	85.22	-55.9	-15.78	58.1	196
V _{Ma}	25.61	67.05	-108.87	127.87	302
M _{Ma}	58.76	91.18	-53.69	105.82	330
N _{Ma}	0.01	0.0	0.0	0.0	0
W _{Ma}	95.41	0.0	0.0	0.0	0
R _{CIE}	41.88	62.0	31.82	69.69	27
J _{CIE}	81.97	1.81	71.59	71.61	89
G _{CIE}	51.62	-41.11	11.52	42.7	164
B _{CIE}	29.2	-5.27	-49.33	49.62	264

relative Inform. Technology (IT)				
olvi3*	1.0	1.0	1.0	(1.0)
cmyn3*	0.0	0.0	0.0	(0.0)
olvi4*	1.0	1.0	1.0	1.0
cmyn4*	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*TCHa	99.99	0.01	-

relative CIELAB lab*

lab*lab	1.0	0.0	0.0
lab*tch	1.0	0.0	-
lab*nch	0.0	0.0	-

relative Natural Colour (NC)

lab*lrj	1.0	0.0	0.0
lab*tce	1.0	0.0	-
lab*nce	0.0	0.0	-

relative Inform. Technology (IT)				
olvi3*	0.5	0.5	0.5	(1.0)
cmyn3*	0.5	0.5	0.5	(0.0)
olvi4*	1.0	1.0	1.0	0.5
cmyn4*	0.0	0.0	0.0	0.5

standard and adapted CIELAB

LAB*LAB	47.72	0.0	0.0
LAB*LABa	47.72	0.0	0.0
LAB*TCHa	50.0	0.01	-

relative CIELAB lab*

lab*lab	0.5	0.0	0.0
lab*tch	0.5	0.0	-
lab*nch	0.5	0.0	-

relative Natural Colour (NC)

lab*lrj	0.5	0.0	0.0
lab*tce	0.5	0.0	-
lab*nce	0.5	0.0	-

relative Inform. Technology (IT)				
olvi3*	0.0	0.0	0.0	(1.0)
cmyn3*	1.0	1.0	1.0	(0.0)
olvi4*	1.0	1.0	1.0	0.0
cmyn4*	0.0	0.0	0.0	1.0

standard and adapted CIELAB

LAB*LAB	0.03	0.0	0.0
LAB*LABa	0.03	0.0	0.0
LAB*TCHa	0.01	0.01	-

relative CIELAB lab*

lab*lab	0.0	0.0	0.0
lab*tch	0.0	0.0	-
lab*nch	1.0	0.0	-

relative Natural Colour (NC)

lab*lrj	0.0	0.0	0.0
lab*tce	0.0	0.0	-
lab*nce	1.0	0.0	-

$n^* = 1.0$

relative Inform. Technology (IT)				
olvi3*	1.0	0.5	1.0	(1.0)
cmyn3*	0.0	0.5	0.0	(0.0)
olvi4*	1.0	0.5	1.0	1.0
cmyn4*	0.0	0.5	0.0	0.0

standard and adapted CIELAB

LAB*LAB	77.08	45.58	-26.83
LAB*LABa	77.08	45.58	-26.83
LAB*TCHa	75.0	52.9	329.5

relative CIELAB lab*

lab*lab	0.808	0.431	-0.253
lab*tch	0.75	0.5	0.915
lab*nch	0.0	0.5	0.915

relative Natural Colour (NC)

lab*lrj	0.808	0.371	-0.334
lab*tce	0.75	0.5	0.883
lab*nce	0.0	0.5	0.53r

relative Inform. Technology (IT)				
olvi3*	0.5	0.0	0.5	(1.0)
cmyn3*	0.5	1.0	0.5	(0.0)
olvi4*	1.0	0.5	1.0	0.5
cmyn4*	0.0	0.5	0.0	0.5

standard and adapted CIELAB

LAB*LAB	29.39	45.58	-26.83
LAB*LABa	29.39	45.58	-26.83
LAB*TCHa	25.01	52.9	329.5

relative CIELAB lab*

lab*lab	0.308	0.431	-0.253
lab*tch	0.25	0.5	0.915
lab*nch	0.5	0.5	0.915

relative Natural Colour (NC)

lab*lrj	0.308	0.371	-0.334
lab*tce	0.25	0.5	0.883
lab*nce	0.5	0.5	0.53r

blackness n^*

chromaticness c^*

$n^* = 0.50$

$n^* = 1.0$

Input: Colorimetric Offset Reflective System ORS18

for hue $h^* = lab^*h = 26/360 = 0.074$

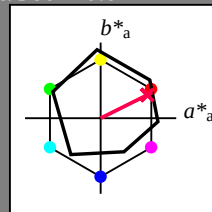
lab^*tch and lab^*nch

D50: hue R

LCH*Ma: 49 76 26

olv*Ma: 1.0 0.0 0.3

triangle lightness t^*



%Gamut

$u^*_{rel} = 94$

%Regularity

$g^*_{H,rel} = 65$

$g^*_{C,rel} = 60$

relative Inform. Technology (IT)
olvi3* 1.0 1.0 1.0 (1.0)
cmyn3* 0.0 0.0 0.0 (0.0)
olvi4* 1.0 1.0 1.0 1.0
cmyn4* 0.0 0.0 0.0 0.0

standard and adapted CIELAB
LAB*LAB 95.46 -0.39 4.69
LAB*LABa 95.46 0.0 0.0
LAB*TCHa 99.99 0.01 -

relative CIELAB lab*
lab*lab 1.0 0.0 0.0
lab*tch 1.0 0.0 -
lab*nch 0.0 0.0 -

relative Natural Colour (NC)
lab*lrj 1.0 0.0 0.0
lab*tce 1.0 0.0 -
lab*nce 0.0 0.0 -

relative Inform. Technology (IT)
olvi3* 0.5 0.5 0.5 (1.0)
cmyn3* 0.5 0.5 0.5 (0.0)
olvi4* 1.0 1.0 1.0 0.5
cmyn4* 0.0 0.0 0.0 0.5

standard and adapted CIELAB
LAB*LAB 56.78 0.13 2.11
LAB*LABa 56.78 0.0 0.0
LAB*TCHa 50.0 0.01 -

relative CIELAB lab*
lab*lab 0.5 0.0 0.0
lab*tch 0.5 0.0 -
lab*nch 0.5 0.0 -

relative Natural Colour (NC)
lab*lrj 0.5 0.0 0.0
lab*tce 0.5 0.0 -
lab*nce 0.5 0.0 -

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 1.0 (0.0)
olvi4* 1.0 1.0 1.0 0.0
cmyn4* 0.0 0.0 0.0 1.0

standard and adapted CIELAB
LAB*LAB 18.1 0.67 -0.46
LAB*LABa 18.1 0.0 0.0
LAB*TCHa 0.01 0.01 -

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 -
lab*nch 1.0 0.0 -

relative Natural Colour (NC)
lab*lrj 0.0 0.0 0.0
lab*tce 0.0 0.0 -
lab*nce 1.0 0.0 -

$n^* = 1,0$

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O _{Ma}	47.94	65.05	50.54	82.38	38
Y _{Ma}	91.0	-4.72	90.58	90.7	93
L _{Ma}	50.9	-63.18	34.98	72.22	151
C _{Ma}	56.99	-39.34	-48.1	62.16	231
V _{Ma}	25.72	30.89	-44.4	54.09	305
M _{Ma}	49.99	75.76	-4.64	75.9	356
N _{Ma}	18.09	0.0	0.0	0.0	0
W _{Ma}	95.46	0.0	0.0	0.0	0
R _{CIE}	41.88	61.66	30.69	68.88	26
J _{CIE}	81.97	2.02	67.79	67.82	88
G _{CIE}	51.62	-41.32	9.74	42.46	167
B _{CIE}	29.2	-5.79	-49.61	49.96	263

relative Inform. Technology (IT)
olvi3* 1.0 0.5 0.65 (1.0)
cmyn3* 0.0 0.5 0.35 (0.0)
olvi4* 1.0 0.5 0.65 1.0
cmyn4* 0.0 0.5 0.35 0.0

standard and adapted CIELAB
LAB*LAB 72.0 34.05 20.12
LAB*LABa 72.0 34.13 16.99
LAB*TCHa 75.0 38.12 26.46

relative CIELAB lab*
lab*lab 0.697 0.448 0.223
lab*tch 0.75 0.5 0.074
lab*nch 0.0 0.5 0.074

relative Natural Colour (NC)
lab*lrj 0.697 0.5 0.0
lab*tce 0.75 0.5 1.0
lab*nce 0.0 0.5 0.99r

relative Inform. Technology (IT)
olvi3* 0.5 0.0 0.15 (1.0)
cmyn3* 0.5 1.0 0.85 (0.0)
olvi4* 1.0 0.5 0.65 0.5
cmyn4* 0.0 0.5 0.35 0.5

standard and adapted CIELAB
LAB*LAB 33.33 34.58 17.55
LAB*LABa 33.33 34.13 16.99
LAB*TCHa 25.01 38.12 26.47

relative CIELAB lab*
lab*lab 0.197 0.447 0.223
lab*tch 0.25 0.5 0.074
lab*nch 0.5 0.5 0.074

relative Natural Colour (NC)
lab*lrj 0.197 0.5 0.0
lab*tce 0.25 0.5 0.0
lab*nce 0.5 0.5 0.00j

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 1.0 (0.0)
olvi4* 1.0 1.0 1.0 0.0
cmyn4* 0.0 0.0 0.0 1.0

standard and adapted CIELAB
LAB*LAB 18.1 0.67 -0.46
LAB*LABa 18.1 0.0 0.0
LAB*TCHa 0.01 0.01 -

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 -
lab*nch 1.0 0.0 -

relative Natural Colour (NC)
lab*lrj 0.0 0.0 0.0
lab*tce 0.0 0.0 -
lab*nce 1.0 0.0 -

$n^* = 0,00$

relative Inform. Technology (IT)
olvi3* 1.0 0.0 0.3 (1.0)
cmyn3* 0.0 1.0 0.7 (0.0)
olvi4* 1.0 0.0 0.3 1.0
cmyn4* 0.0 1.0 0.7 0.0

standard and adapted CIELAB
LAB*LAB 48.56 68.5 35.55
LAB*LABa 48.56 68.25 33.98
LAB*TCHa 50.0 76.24 26.47

relative CIELAB lab*
lab*lab 0.394 0.895 0.446
lab*tch 0.5 1.0 0.074
lab*nch 0.0 1.0 0.074

relative Natural Colour (NC)
lab*lrj 0.394 1.0 0.0
lab*tce 0.5 1.0 0.0
lab*nce 0.0 1.0 0.00j

relative Inform. Technology (IT)
olvi3* 0.5 0.5 0.5 (1.0)
cmyn3* 0.5 0.5 0.5 (0.0)
olvi4* 1.0 1.0 1.0 0.5
cmyn4* 0.0 0.0 0.0 0.5

standard and adapted CIELAB
LAB*LAB 47.72 0.0 0.0
LAB*LABa 47.72 0.0 0.0
LAB*TCHa 50.0 0.01 -

relative CIELAB lab*
lab*lab 0.5 0.0 0.0
lab*tch 0.5 0.0 -
lab*nch 0.5 0.0 -

relative Natural Colour (NC)
lab*lrj 0.5 0.0 0.0
lab*tce 0.5 0.0 -
lab*nce 0.5 0.0 -

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 1.0 (0.0)
olvi4* 1.0 1.0 1.0 0.0
cmyn4* 0.0 0.0 0.0 1.0

standard and adapted CIELAB
LAB*LAB 27.52 40.74 20.92
LAB*LABa 27.52 40.74 20.92
LAB*TCHa 25.01 45.8 27.18

relative CIELAB lab*
lab*lab 0.288 0.445 0.228
lab*tch 0.25 0.5 0.075
lab*nch 0.5 0.5 0.075

relative Natural Colour (NC)
lab*lrj 0.288 0.5 0.0
lab*tce 0.25 0.5 0.0
lab*nce 0.5 0.5 0.00j

$n^* = 0,00$

blackness n^*

chromaticness c^*

Output: Colorimetric Television Luminous System TLS00

for hue $h^* = lab^*h = 27/360 = 0.075$

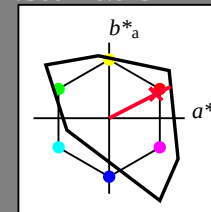
lab^*tch and lab^*nch

D50: hue R

LCH*Ma: 55 92 27

olv*Ma: 1.0 0.0 0.18

triangle lightness t^*



%Gamut

$u^*_{rel} = 156$

%Regularity

$g^*_{H,rel} = 26$

$g^*_{C,rel} = 45$

relative Inform. Technology (IT)
olvi3* 1.0 1.0 1.0 (1.0)
cmyn3* 0.0 0.0 0.0 (0.0)
olvi4* 1.0 1.0 1.0 1.0
cmyn4* 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*TCHa 99.99 0.01 -

relative CIELAB lab*
lab*lab 1.0 0.0 0.0
lab*tch 1.0 0.0 -
lab*nch 0.0 0.0 -

relative Natural Colour (NC)
lab*lrj 1.0 0.0 0.0
lab*tce 1.0 0.0 -
lab*nce 0.0 0.0 -

relative Inform. Technology (IT)
olvi3* 0.5 0.5 0.5 (1.0)
cmyn3* 0.5 0.5 0.5 (0.0)
olvi4* 1.0 1.0 1.0 0.5
cmyn4* 0.0 0.0 0.0 0.5

standard and adapted CIELAB
LAB*LAB 47.72 0.0 0.0
LAB*LABa 47.72 0.0 0.0
LAB*TCHa 50.0 0.01 -

relative CIELAB lab*
lab*lab 0.5 0.0 0.0
lab*tch 0.5 0.0 -
lab*nch 0.5 0.0 -

relative Natural Colour (NC)
lab*lrj 0.5 0.0 0.0
lab*tce 0.5 0.0 -
lab*nce 0.5 0.0 -

relative Inform. Technology (IT)
olvi3* 0.5 0.5 0.5 (1.0)
cmyn3* 0.5 0.5 0.5 (0.0)
olvi4* 1.0 1.0 1.0 0.5
cmyn4* 0.0 0.0 0.0 0.5

standard and adapted CIELAB
LAB*LAB 27.52 40.74 20.92
LAB*LABa 27.52 40.74 20.92
LAB*TCHa 25.01 45.8 27.18

relative CIELAB lab*
lab*lab 0.288 0.445 0.228
lab*tch 0.25 0.5 0.075
lab*nch 0.5 0.5 0.075

relative Natural Colour (NC)
lab*lrj 0.288 0.5 0.0
lab*tce 0.25 0.5 0.0
lab*nce 0.5 0.5 0.00j

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 1.0 (0.0)
olvi4* 1.0 1.0 1.0 0.0
cmyn4* 0.0 0.0 0.0 1.0

standard and adapted CIELAB
LAB*LAB 18.1 0.67 -0.46
LAB*LABa 18.1 0.0 0.0
LAB*TCHa 0.01 0.01 -

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 -
lab*nch 1.0 0.0 -

relative Natural Colour (NC)
lab*lrj 0.0 0.0 0.0
lab*tce 0.0 0.0 -
lab*nce 1.0 0.0 -

$n^* = 1,0$

blackness n^*

chromaticness c^*

TLS00; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O _{Ma}	54.19	79.36	63.0	101.33	38
Y _{Ma}	93.44	-14.18	82.59	83.8	100
L _{Ma}	82.82	-83.73	70.41	109.41	140
C _{Ma}	85.22	-55.9	-15.78	58.1	196
V _{Ma}	25.61	67.05	-108.87	127.87	302
M _{Ma}	58.76	91.18	-53.69	105.82	330
N _{Ma}	0.01	0.0	0.0	0.0	0
W _{Ma}	95.41	0.0	0.0	0.0	0
R _{CIE}	41.88	62.0	31.82	69.69	27
J _{CIE}	81.97	1.81	71.59	71.61	89
G _{CIE}	51.62	-41.11	11.52	42.7	164
B _{CIE}	29.2	-5.27	-49.33	49.62	264

relative Inform. Technology (IT)
olvi3* 1.0 0.5 0.591 (1.0)
cmyn3* 0.0 0.5 0.409 (0.0)
olvi4* 1.0 0.5 0.591 1.0
cmyn4* 0.0 0.5 0.409 0.0

standard and adapted CIELAB
LAB*LAB 75.21 40.74 20.91
LAB*LABa 75.21 40.74 20.91
LAB*TCHa 75.0 45.8 27.17

relative CIELAB lab*
lab*lab 0.788 0.445 0.228
lab*tch 0.75 0.5 0.075
lab*nch 0.0 0.5 0.075

relative Natural Colour (NC)
lab*lrj 0.788 0.5 0.0
lab*tce 0.75 0.5 1.0
lab*nce 0.0 0.5 0.99r

relative Inform. Technology (IT)
olvi3* 0.5 0.0 0.091 (1.0)
cmyn3* 0.5 1.0 0.909 (0.0)
olvi4* 1.0 0.5 0.591 0.5
cmyn4* 0.0 0.5 0.409 0.5

standard and adapted CIELAB
LAB*LAB 27.52 40.74 20.92
LAB*LABa 27.52 40.74 20.92
LAB*TCHa 25.01 45.8 27.18

relative CIELAB lab*
lab*lab 0.288 0.445 0.228
lab*tch 0.25 0.5 0.075
lab*nch 0.5 0.5 0.075

relative Natural Colour (NC)
lab*lrj 0.288 0.5 0.0
lab*tce 0.25 0.5 0.0
lab*nce 0.5 0.5 0.00j

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 1.0 (0.0)
olvi4* 1.0 1.0 1.0 0.0
cmyn4* 0.0 0.0 0.0 1.0

standard and adapted CIELAB
LAB*LAB 18.1 0.67 -0.46
LAB*LABa 18.1 0.0 0.0
LAB*TCHa 0.01 0.01 -

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 -
lab*nch 1.0 0.0 -

relative Natural Colour (NC)
lab*lrj 0.0 0.0 0.0
lab*tce 0.0 0.0 -
lab*nce 1.0 0.0 -

$n^* = 0,00$

blackness n^*

chromaticness c^*

Input: Colorimetric Offset Reflective System ORS18

for hue $h^* = lab^*h = 88/360 = 0.245$

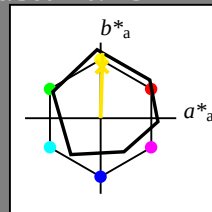
lab^*tch and lab^*nch

D50: hue J

LCH*Ma: 86 86 88

olv*Ma: 1.0 0.9 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 94$

%Regularity

$g^*_{H,rel} = 65$

$g^*_{C,rel} = 60$

relative Inform. Technology (IT)
olvi3* 1.0 1.0 1.0 (1.0)
cmyn3* 0.0 0.0 0.0 (0.0)
olvi4* 1.0 1.0 1.0 1.0
cmyn4* 0.0 0.0 0.0 0.0

standard and adapted CIELAB
LAB*LAB 95.46 -0.39 4.69
LAB*LABa 95.46 0.0 0.0
LAB*TCHa 99.99 0.01 -

relative CIELAB lab*
lab*lab 1.0 0.0 0.0
lab*tch 1.0 0.0 -
lab*nch 0.0 0.0 -

relative Natural Colour (NC)
lab*lrj 1.0 0.0 0.0
lab*tce 1.0 0.0 -
lab*nce 0.0 0.0 -

relative Inform. Technology (IT)
olvi3* 0.5 0.5 0.5 (1.0)
cmyn3* 0.5 0.5 0.5 (0.0)
olvi4* 1.0 1.0 1.0 0.5
cmyn4* 0.0 0.0 0.0 0.5

standard and adapted CIELAB
LAB*LAB 56.78 0.13 2.11
LAB*LABa 56.78 0.0 0.0
LAB*TCHa 50.0 0.01 -

relative CIELAB lab*
lab*lab 0.5 0.0 0.0
lab*tch 0.5 0.0 -
lab*nch 0.5 0.0 -

relative Natural Colour (NC)
lab*lrj 0.5 0.0 0.0
lab*tce 0.5 0.0 -
lab*nce 0.5 0.0 -

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 1.0 (0.0)
olvi4* 1.0 1.0 1.0 0.0
cmyn4* 0.0 0.0 0.0 1.0

standard and adapted CIELAB
LAB*LAB 18.1 0.67 -0.46
LAB*LABa 18.1 0.0 0.0
LAB*TCHa 0.01 0.01 -

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 -
lab*nch 1.0 0.0 -

relative Natural Colour (NC)
lab*lrj 0.0 0.0 0.0
lab*tce 0.0 0.0 -
lab*nce 1.0 0.0 -

$n^* = 1,0$

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O _{Ma}	47.94	65.05	50.54	82.38	38
Y _{Ma}	91.0	-4.72	90.58	90.7	93
L _{Ma}	50.9	-63.18	34.98	72.22	151
C _{Ma}	56.99	-39.34	-48.1	62.16	231
V _{Ma}	25.72	30.89	-44.4	54.09	305
M _{Ma}	49.99	75.76	-4.64	75.9	356
N _{Ma}	18.09	0.0	0.0	0.0	0
W _{Ma}	95.46	0.0	0.0	0.0	0
R _{CIE}	41.88	61.66	30.69	68.88	26
J _{CIE}	81.97	2.02	67.79	67.82	88
G _{CIE}	51.62	-41.32	9.74	42.46	167
B _{CIE}	29.2	-5.79	-49.61	49.96	263

relative Inform. Technology (IT)
olvi3* 1.0 0.948 0.5 (1.0)
cmyn3* 0.0 0.052 0.5 (0.0)
olvi4* 1.0 0.948 0.5 1.0
cmyn4* 0.0 0.052 0.5 0.0

standard and adapted CIELAB
LAB*LAB 90.97 0.94 47.59
LAB*LABa 90.97 1.28 43.19
LAB*TCHa 75.0 43.21 88.3

relative CIELAB lab*
lab*lab 0.942 0.015 0.5
lab*tch 0.75 0.5 0.245
lab*nch 0.0 0.5 0.245

relative Natural Colour (NC)
lab*lrj 0.942 0.0 0.5
lab*tce 0.75 0.5 0.25
lab*nce 0.0 0.5 j00g

relative Inform. Technology (IT)
olvi3* 0.5 0.448 0.0 (1.0)
cmyn3* 0.5 0.552 1.0 (0.0)
olvi4* 1.0 0.948 0.5 0.5
cmyn4* 0.0 0.052 0.5 0.5

standard and adapted CIELAB
LAB*LAB 52.29 1.49 45.0
LAB*LABa 52.29 1.29 43.18
LAB*TCHa 25.01 43.2 88.29

relative CIELAB lab*
lab*lab 0.442 0.015 0.5
lab*tch 0.25 0.5 0.245
lab*nch 0.5 0.5 0.245

relative Natural Colour (NC)
lab*lrj 0.442 0.0 0.5
lab*tce 0.25 0.5 0.25
lab*nce 0.5 0.5 r99j

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 1.0 (0.0)
olvi4* 1.0 1.0 1.0 0.0
cmyn4* 0.0 0.0 0.0 1.0

standard and adapted CIELAB
LAB*LAB 18.1 0.67 -0.46
LAB*LABa 18.1 0.0 0.0
LAB*TCHa 0.01 0.01 -

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 -
lab*nch 1.0 0.0 -

relative Natural Colour (NC)
lab*lrj 0.0 0.0 0.0
lab*tce 0.0 0.0 -
lab*nce 1.0 0.0 -

$n^* = 0,00$

blackness n^*

chromaticness c^*

Output: Colorimetric Television Luminous System TLS00

for hue $h^* = lab^*h = 89/360 = 0.246$

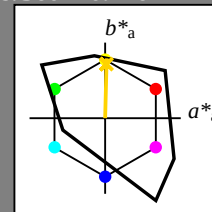
lab^*tch and lab^*nch

D50: hue J

LCH*Ma: 87 79 89

olv*Ma: 1.0 0.83 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 156$

%Regularity

$g^*_{H,rel} = 26$

$g^*_{C,rel} = 45$

relative Inform. Technology (IT)
olvi3* 1.0 1.0 1.0 (1.0)
cmyn3* 0.0 0.0 0.0 (0.0)
olvi4* 1.0 1.0 1.0 1.0
cmyn4* 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*TCHa 99.99 0.01 -

relative CIELAB lab*
lab*lab 1.0 0.0 0.0
lab*tch 1.0 0.0 -
lab*nch 0.0 0.0 -

relative Natural Colour (NC)
lab*lrj 1.0 0.0 0.0
lab*tce 1.0 0.0 -
lab*nce 0.0 0.0 -

relative Inform. Technology (IT)
olvi3* 0.5 0.5 0.5 (1.0)
cmyn3* 0.5 0.5 0.5 (0.0)
olvi4* 1.0 1.0 1.0 0.5
cmyn4* 0.0 0.0 0.0 0.5

standard and adapted CIELAB
LAB*LAB 47.72 0.0 0.0
LAB*LABa 47.72 0.0 0.0
LAB*TCHa 50.0 0.01 -

relative CIELAB lab*
lab*lab 0.5 0.0 0.0
lab*tch 0.5 0.0 -
lab*nch 0.5 0.0 -

relative Natural Colour (NC)
lab*lrj 0.5 0.0 0.0
lab*tce 0.5 0.0 -
lab*nce 0.5 0.0 -

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 1.0 (0.0)
olvi4* 1.0 1.0 1.0 0.0
cmyn4* 0.0 0.0 0.0 1.0

standard and adapted CIELAB
LAB*LAB 0.03 0.0 0.0
LAB*LABa 0.03 0.0 0.0
LAB*TCHa 0.01 0.01 -

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 -
lab*nch 1.0 0.0 -

relative Natural Colour (NC)
lab*lrj 0.0 0.0 0.0
lab*tce 0.0 0.0 -
lab*nce 1.0 0.0 -

$n^* = 1,0$

TLS00; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O _{Ma}	54.19	79.36	63.0	101.33	38
Y _{Ma}	93.44	-14.18	82.59	83.8	100
L _{Ma}	82.82	-83.73	70.41	109.41	140
C _{Ma}	85.22	-55.9	-15.78	58.1	196
V _{Ma}	25.61	67.05	-108.87	127.87	302
M _{Ma}	58.76	91.18	-53.69	105.82	330
N _{Ma}	0.01	0.0	0.0	0.0	0
W _{Ma}	95.41	0.0	0.0	0.0	0
R _{CIE}	41.88	62.0	31.82	69.69	27
J _{CIE}	81.97	1.81	71.59	71.61	89
G _{CIE}	51.62	-41.11	11.52	42.7	164
B _{CIE}	29.2	-5.27	-49.33	49.62	264

relative Inform. Technology (IT)
olvi3* 1.0 0.913 0.5 (1.0)
cmyn3* 0.0 0.087 0.5 (0.0)
olvi4* 1.0 0.914 0.5 1.0
cmyn4* 0.0 0.086 0.5 0.0

standard and adapted CIELAB
LAB*LAB 91.02 0.99 39.59
LAB*LABa 91.02 0.99 39.59
LAB*TCHa 75.0 39.61 88.56

relative CIELAB lab*
lab*lab 0.954 0.013 0.5
lab*tch 0.75 0.5 0.246
lab*nch 0.0 0.5 0.246

relative Natural Colour (NC)
lab*lrj 0.954 0.0 0.5
lab*tce 0.75 0.5 0.25
lab*nce 0.0 0.5 j00g

relative Inform. Technology (IT)
olvi3* 0.5 0.413 0.0 (1.0)
cmyn3* 0.5 0.587 1.0 (0.0)
olvi4* 1.0 0.913 0.5 0.5
cmyn4* 0.0 0.087 0.5 0.5

standard and adapted CIELAB
LAB*LAB 43.33 1.0 39.59
LAB*LABa 43.33 1.0 39.59
LAB*TCHa 25.01 39.6 88.55

relative CIELAB lab*
lab*lab 0.454 0.013 0.5
lab*tch 0.25 0.5 0.246
lab*nch 0.5 0.5 0.246

relative Natural Colour (NC)
lab*lrj 0.454 0.0 0.5
lab*tce 0.25 0.5 0.25
lab*nce 0.5 0.5 r99j

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 1.0 (0.0)
olvi4* 1.0 1.0 1.0 0.0
cmyn4* 0.0 0.0 0.0 1.0

standard and adapted CIELAB
LAB*LAB 0.03 0.0 0.0
LAB*LABa 0.03 0.0 0.0
LAB*TCHa 0.01 0.01 -

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 -
lab*nch 1.0 0.0 -

relative Natural Colour (NC)
lab*lrj 0.0 0.0 0.0
lab*tce 0.0 0.0 -
lab*nce 1.0 0.0 -

$n^* = 0,00$

blackness n^*

chromaticness c^*

PE100-7, 3 step scales for constant CIELAB hue 88/360 = 0.245 (left)

3 step scales for constant CIELAB hue 89/360 = 0.246 (right)

BAM-test chart PE10; Colorimetric systems ORS18 & TLS00

D50: 2 coordinate data of 3 step colour scales for 10 hues

input: olv* setrgbcolor

output: no change compared to input

Input: Colorimetric Offset Reflective System ORS18

for hue $h^* = lab^*h = 167/360 = 0.463$

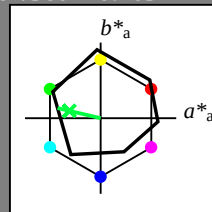
lab^*tch and lab^*nch

D50: hue G

LCH*Ma: 52 59 167

olv*Ma: 0.0 1.0 0.26

triangle lightness t^*



%Gamut

$u^*_{rel} = 94$

%Regularity

$g^*_{H,rel} = 65$

$g^*_{C,rel} = 60$

relative Inform. Technology (IT)
olv3* 1.0 1.0 1.0 (1.0)
cmyn3* 0.0 0.0 0.0 (0.0)
olv4* 1.0 1.0 1.0 1.0
cmyn4* 0.0 0.0 0.0 0.0

standard and adapted CIELAB
LAB*LAB 95.46 -0.39 4.69
LAB*LABa 95.46 0.0 0.0
LAB*TCHa 99.99 0.01 -

relative CIELAB lab*
lab*lab 1.0 0.0 0.0
lab*tch 1.0 0.0 -
lab*nch 0.0 0.0 -

relative Natural Colour (NC)
lab*lrj 1.0 0.0 0.0
lab*tce 1.0 0.0 -
lab*nce 0.0 0.0 -

relative Inform. Technology (IT)
olv3* 0.5 0.5 0.5 (1.0)
cmyn3* 0.5 0.5 0.5 (0.0)
olv4* 1.0 1.0 1.0 0.5
cmyn4* 0.0 0.0 0.0 0.5

standard and adapted CIELAB
LAB*LAB 56.78 0.13 2.11
LAB*LABa 56.78 0.0 0.0
LAB*TCHa 50.0 0.01 -

relative CIELAB lab*
lab*lab 0.5 0.0 0.0
lab*tch 0.5 0.0 -
lab*nch 0.5 0.0 -

relative Natural Colour (NC)
lab*lrj 0.5 0.0 0.0
lab*tce 0.5 0.0 -
lab*nce 0.5 0.0 -

relative Inform. Technology (IT)
olv3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 1.0 (0.0)
olv4* 1.0 1.0 1.0 0.0
cmyn4* 0.0 0.0 0.0 1.0

standard and adapted CIELAB
LAB*LAB 18.1 0.67 -0.46
LAB*LABa 18.1 0.0 0.0
LAB*TCHa 0.01 0.01 -

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 -
lab*nch 1.0 0.0 -

relative Natural Colour (NC)
lab*lrj 0.0 0.0 0.0
lab*tce 0.0 0.0 -
lab*nce 1.0 0.0 -

$n^* = 1,0$

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O _{Ma}	47.94	65.05	50.54	82.38	38
Y _{Ma}	91.0	-4.72	90.58	90.7	93
L _{Ma}	50.9	-63.18	34.98	72.22	151
C _{Ma}	56.99	-39.34	-48.1	62.16	231
V _{Ma}	25.72	30.89	-44.4	54.09	305
M _{Ma}	49.99	75.76	-4.64	75.9	356
N _{Ma}	18.09	0.0	0.0	0.0	0
W _{Ma}	95.46	0.0	0.0	0.0	0
R _{CIE}	41.88	61.66	30.69	68.88	26
J _{CIE}	81.97	2.02	67.79	67.82	88
G _{CIE}	51.62	-41.32	9.74	42.46	167
B _{CIE}	29.2	-5.79	-49.61	49.96	263

relative Inform. Technology (IT)
olv3* 0.5 1.0 0.63 (1.0)
cmyn3* 0.5 0.0 0.37 (0.0)
olv4* 0.5 1.0 0.63 1.0
cmyn4* 0.5 0.0 0.37 0.0

standard and adapted CIELAB
LAB*LAB 73.97 -28.59 9.98
LAB*LABa 73.97 -28.49 6.72
LAB*TCHa 75.0 29.28 166.74

relative CIELAB lab*
lab*lab 0.722 -0.486 0.115
lab*tch 0.75 0.5 0.463
lab*nch 0.0 0.5 0.463

relative Natural Colour (NC)
lab*lrj 0.722 -0.499 0.0
lab*tce 0.75 0.5 0.5
lab*nce 0.0 0.5 g00b

relative Inform. Technology (IT)
olv3* 0.0 0.5 0.13 (1.0)
cmyn3* 1.0 0.5 0.87 (0.0)
olv4* 0.5 1.0 0.63 0.5
cmyn4* 0.5 0.0 0.37 0.5

standard and adapted CIELAB
LAB*LAB 35.29 -28.06 7.41
LAB*LABa 35.29 -28.49 6.73
LAB*TCHa 25.01 29.28 166.72

relative CIELAB lab*
lab*lab 0.222 -0.486 0.115
lab*tch 0.25 0.5 0.463
lab*nch 0.5 0.5 0.463

relative Natural Colour (NC)
lab*lrj 0.222 -0.499 0.0
lab*tce 0.25 0.5 0.5
lab*nce 0.5 0.5 199g

relative Inform. Technology (IT)
olv3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 1.0 (0.0)
olv4* 1.0 1.0 1.0 0.0
cmyn4* 0.0 0.0 0.0 1.0

standard and adapted CIELAB
LAB*LAB 18.1 0.67 -0.46
LAB*LABa 18.1 0.0 0.0
LAB*TCHa 0.01 0.01 -

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 -
lab*nch 1.0 0.0 -

relative Natural Colour (NC)
lab*lrj 0.0 0.0 0.0
lab*tce 0.0 0.0 -
lab*nce 1.0 0.0 -

$n^* = 0,00$

blackness n^*

chromaticness c^*

Output: Colorimetric Television Luminous System TLS00

for hue $h^* = lab^*h = 164/360 = 0.457$

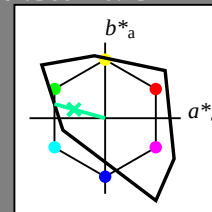
lab^*tch and lab^*nch

D50: hue G

LCH*Ma: 84 70 164

olv*Ma: 0.0 1.0 0.6

triangle lightness t^*



%Gamut

$u^*_{rel} = 156$

%Regularity

$g^*_{H,rel} = 26$

$g^*_{C,rel} = 45$

relative Inform. Technology (IT)
olv3* 1.0 1.0 1.0 (1.0)
cmyn3* 0.0 0.0 0.0 (0.0)
olv4* 1.0 1.0 1.0 1.0
cmyn4* 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*TCHa 99.99 0.01 -

relative CIELAB lab*
lab*lab 1.0 0.0 0.0
lab*tch 1.0 0.0 -
lab*nch 0.0 0.0 -

relative Natural Colour (NC)
lab*lrj 1.0 0.0 0.0
lab*tce 1.0 0.0 -
lab*nce 0.0 0.0 -

relative Inform. Technology (IT)
olv3* 0.5 0.5 0.5 (1.0)
cmyn3* 0.5 0.5 0.5 (0.0)
olv4* 1.0 1.0 1.0 0.5
cmyn4* 0.0 0.0 0.0 0.5

standard and adapted CIELAB
LAB*LAB 47.72 0.0 0.0
LAB*LABa 47.72 0.0 0.0
LAB*TCHa 50.0 0.01 -

relative CIELAB lab*
lab*lab 0.5 0.0 0.0
lab*tch 0.5 0.0 -
lab*nch 0.5 0.0 -

relative Natural Colour (NC)
lab*lrj 0.5 0.0 0.0
lab*tce 0.5 0.0 -
lab*nce 0.5 0.0 -

relative Inform. Technology (IT)
olv3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 1.0 (0.0)
olv4* 1.0 1.0 1.0 0.0
cmyn4* 0.0 0.0 0.0 1.0

standard and adapted CIELAB
LAB*LAB 0.03 0.0 0.0
LAB*LABa 0.03 0.0 0.0
LAB*TCHa 0.01 0.01 -

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 -
lab*nch 1.0 0.0 -

relative Natural Colour (NC)
lab*lrj 0.0 0.0 0.0
lab*tce 0.0 0.0 -
lab*nce 1.0 0.0 -

$n^* = 1,0$

TLS00; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O _{Ma}	54.19	79.36	63.0	101.33	38
Y _{Ma}	93.44	-14.18	82.59	83.8	100
L _{Ma}	82.82	-83.73	70.41	109.41	140
C _{Ma}	85.22	-55.9	-15.78	58.1	196
V _{Ma}	25.61	67.05	-108.87	127.87	302
M _{Ma}	58.76	91.18	-53.69	105.82	330
N _{Ma}	0.01	0.0	0.0	0.0	0
W _{Ma}	95.41	0.0	0.0	0.0	0
R _{CIE}	41.88	62.0	31.82	69.69	27
J _{CIE}	81.97	1.81	71.59	71.61	89
G _{CIE}	51.62	-41.11	11.52	42.7	164
B _{CIE}	29.2	-5.27	-49.33	49.62	264

relative Inform. Technology (IT)
olv3* 0.5 1.0 0.799 (1.0)
cmyn3* 0.5 0.0 0.201 (0.0)
olv4* 0.5 1.0 0.8 1.0
cmyn4* 0.5 0.0 0.2 0.0

standard and adapted CIELAB
LAB*LAB 89.83 -33.52 9.39
LAB*LABa 89.83 -33.52 9.39
LAB*TCHa 75.0 34.82 164.36

relative CIELAB lab*
lab*lab 0.941 -0.48 0.135
lab*tch 0.75 0.5 0.457
lab*nch 0.0 0.5 0.457

relative Natural Colour (NC)
lab*lrj 0.941 -0.499 0.0
lab*tce 0.75 0.5 0.5
lab*nce 0.0 0.5 g00b

relative Inform. Technology (IT)
olv3* 0.0 0.5 0.299 (1.0)
cmyn3* 1.0 0.5 0.701 (0.0)
olv4* 0.5 1.0 0.799 0.5
cmyn4* 0.5 0.0 0.201 0.5

standard and adapted CIELAB
LAB*LAB 42.13 -33.52 9.4
LAB*LABa 42.13 -33.52 9.4
LAB*TCHa 25.01 34.82 164.34

relative CIELAB lab*
lab*lab 0.442 -0.48 0.135
lab*tch 0.25 0.5 0.457
lab*nch 0.5 0.5 0.457

relative Natural Colour (NC)
lab*lrj 0.442 -0.499 0.0
lab*tce 0.25 0.5 0.5
lab*nce 0.5 0.5 199g

$n^* = 0,00$

blackness n^*

chromaticness c^*

BAM-test chart PE10; Colorimetric systems ORS18 & TLS00

D50: 2 coordinate data of 3 step colour scales for 10 hues

3 step scales for constant CIELAB hue 164/360 = 0.457 (right)

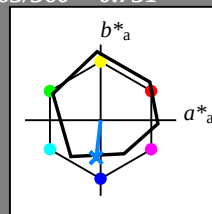
input: olv* setrgbcolor

output: no change compared to input

Input: Colorimetric Offset Reflective System ORS18

for hue $h^* = lab^*h = 263/360 = 0.731$
 lab^*tch and lab^*nch

D50: hue B
LCH*Ma: 42 47 263
olv*Ma: 0.0 0.52 1.0
triangle lightness t^*



%Gamut

$u^*_{rel} = 94$

%Regularity

$g^*_{H,rel} = 65$

$g^*_{C,rel} = 60$

relative Inform. Technology (IT)
olvi3* 1.0 1.0 1.0 (1.0)
cmyn3* 0.0 0.0 0.0 (0.0)
olvi4* 1.0 1.0 1.0 1.0
cmyn4* 0.0 0.0 0.0 0.0

standard and adapted CIELAB
LAB*LAB 95.46 -0.39 4.69
LAB*LABa 95.46 0.0 0.0
LAB*TCHa 99.99 0.01 -

relative CIELAB lab*
lab*lab 1.0 0.0 0.0
lab*tch 1.0 0.0 -
lab*nch 0.0 0.0 -

relative Natural Colour (NC)
lab*lrj 1.0 0.0 0.0
lab*tce 1.0 0.0 -
lab*nce 0.0 0.0 -

relative Inform. Technology (IT)
olvi3* 0.5 0.5 0.5 (1.0)
cmyn3* 0.5 0.5 0.5 (0.0)
olvi4* 1.0 1.0 1.0 0.5
cmyn4* 0.0 0.0 0.0 0.5

standard and adapted CIELAB
LAB*LAB 56.78 0.13 2.11
LAB*LABa 56.78 0.0 0.0
LAB*TCHa 50.0 0.01 -

relative CIELAB lab*
lab*lab 0.5 0.0 0.0
lab*tch 0.5 0.0 -
lab*nch 0.5 0.0 -

relative Natural Colour (NC)
lab*lrj 0.5 0.0 0.0
lab*tce 0.5 0.0 -
lab*nce 0.5 0.0 -

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 1.0 (0.0)
olvi4* 1.0 1.0 1.0 0.0
cmyn4* 0.0 0.0 0.0 1.0

standard and adapted CIELAB
LAB*LAB 18.1 0.67 -0.46
LAB*LABa 18.1 0.0 0.0
LAB*TCHa 0.01 0.01 -

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 -
lab*nch 1.0 0.0 -

relative Natural Colour (NC)
lab*lrj 0.0 0.0 0.0
lab*tce 0.0 0.0 -
lab*nce 1.0 0.0 -

$n^* = 1,0$

ORS18; adapted (a) CIELAB data					
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O _{Ma}	47.94	65.05	50.54	82.38	38
Y _{Ma}	91.0	-4.72	90.58	90.7	93
L _{Ma}	50.9	-63.18	34.98	72.22	151
C _{Ma}	56.99	-39.34	-48.1	62.16	231
V _{Ma}	25.72	30.89	-44.4	54.09	305
M _{Ma}	49.99	75.76	-4.64	75.9	356
N _{Ma}	18.09	0.0	0.0	0.0	0
W _{Ma}	95.46	0.0	0.0	0.0	0
R _{CIE}	41.88	61.66	30.69	68.88	26
J _{CIE}	81.97	2.02	67.79	67.82	88
G _{CIE}	51.62	-41.32	9.74	42.46	167
B _{CIE}	29.2	-5.79	-49.61	49.96	263

relative Inform. Technology (IT)
olvi3* 0.5 0.758 1.0 (1.0)
cmyn3* 0.5 0.242 0.0 (0.0)
olvi4* 0.5 0.758 1.0 1.0
cmyn4* 0.5 0.242 0.0 0.0

standard and adapted CIELAB
LAB*LAB 68.67 -2.73 -20.23
LAB*LABa 68.67 -2.7 -23.15
LAB*TCHa 75.0 23.32 263.33

relative CIELAB lab*
lab*lab 0.654 -0.057 -0.496
lab*tch 0.75 0.5 0.731
lab*nch 0.0 0.5 0.731

relative Natural Colour (NC)
lab*lrj 0.654 0.0 -0.499
lab*tce 0.75 0.5 0.75
lab*nce 0.0 0.5 g99b

relative Inform. Technology (IT)
olvi3* 0.0 0.258 0.5 (1.0)
cmyn3* 1.0 0.742 0.5 (0.0)
olvi4* 0.5 0.758 1.0 0.5
cmyn4* 0.5 0.242 0.0 0.5

standard and adapted CIELAB
LAB*LAB 29.99 -2.19 -22.81
LAB*LABa 29.99 -2.69 -23.15
LAB*TCHa 25.01 23.31 263.35

relative CIELAB lab*
lab*lab 0.154 -0.057 -0.496
lab*tch 0.25 0.5 0.732
lab*nch 0.5 0.5 0.732

relative Natural Colour (NC)
lab*lrj 0.154 0.0 -0.499
lab*tce 0.25 0.5 0.75
lab*nce 0.5 0.5 b00r

0,25 0,50 0,75 1,00
 $n^* = 0,50$
chromaticness c^*

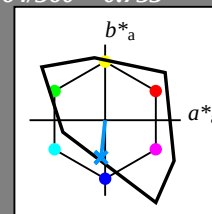
blackness n^*

$n^* = 0,00$

Output: Colorimetric Television Luminous System TLS00

for hue $h^* = lab^*h = 264/360 = 0.733$
 lab^*tch and lab^*nch

D50: hue B
LCH*Ma: 61 54 264
olv*Ma: 0.0 0.59 1.0
triangle lightness t^*



%Gamut

$u^*_{rel} = 156$

%Regularity

$g^*_{H,rel} = 26$

$g^*_{C,rel} = 45$

relative Inform. Technology (IT)
olvi3* 1.0 1.0 1.0 (1.0)
cmyn3* 0.0 0.0 0.0 (0.0)
olvi4* 1.0 1.0 1.0 1.0
cmyn4* 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*TCHa 99.99 0.01 -

relative CIELAB lab*
lab*lab 1.0 0.0 0.0
lab*tch 1.0 0.0 -
lab*nch 0.0 0.0 -

relative Natural Colour (NC)
lab*lrj 1.0 0.0 0.0
lab*tce 1.0 0.0 -
lab*nce 0.0 0.0 -

relative Inform. Technology (IT)
olvi3* 0.5 0.5 0.5 (1.0)
cmyn3* 0.5 0.5 0.5 (0.0)
olvi4* 1.0 1.0 1.0 0.5
cmyn4* 0.0 0.0 0.0 0.5

standard and adapted CIELAB
LAB*LAB 47.72 0.0 0.0
LAB*LABa 47.72 0.0 0.0
LAB*TCHa 50.0 0.01 -

relative CIELAB lab*
lab*lab 0.5 0.0 0.0
lab*tch 0.5 0.0 -
lab*nch 0.5 0.0 -

relative Natural Colour (NC)
lab*lrj 0.5 0.0 0.0
lab*tce 0.5 0.0 -
lab*nce 0.5 0.0 -

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 1.0 (0.0)
olvi4* 1.0 1.0 1.0 0.0
cmyn4* 0.0 0.0 0.0 1.0

standard and adapted CIELAB
LAB*LAB 0.03 0.0 0.0
LAB*LABa 0.03 0.0 0.0
LAB*TCHa 0.01 0.01 -

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 -
lab*nch 1.0 0.0 -

relative Natural Colour (NC)
lab*lrj 0.0 0.0 0.0
lab*tce 0.0 0.0 -
lab*nce 1.0 0.0 -

$n^* = 1,0$

relative Inform. Technology (IT)
olvi3* 0.5 0.796 1.0 (1.0)
cmyn3* 0.5 0.204 0.0 (0.0)
olvi4* 0.5 0.796 1.0 1.0
cmyn4* 0.5 0.204 0.0 0.0

standard and adapted CIELAB
LAB*LAB 78.15 -2.87 -26.86
LAB*LABa 78.15 -2.87 -26.86
LAB*TCHa 75.0 27.02 263.88

relative CIELAB lab*
lab*lab 0.819 -0.052 -0.496
lab*tch 0.75 0.5 0.733
lab*nch 0.0 0.5 0.733

relative Natural Colour (NC)
lab*lrj 0.819 0.0 -0.499
lab*tce 0.75 0.5 0.75
lab*nce 0.0 0.5 g99b

relative Inform. Technology (IT)
olvi3* 0.0 0.296 0.5 (1.0)
cmyn3* 1.0 0.704 0.5 (0.0)
olvi4* 0.5 0.796 1.0 0.5
cmyn4* 0.5 0.204 0.0 0.5

standard and adapted CIELAB
LAB*LAB 30.46 -2.86 -26.87
LAB*LABa 30.46 -2.86 -26.87
LAB*TCHa 25.01 27.03 263.9

relative CIELAB lab*
lab*lab 0.319 -0.052 -0.496
lab*tch 0.25 0.5 0.733
lab*nch 0.5 0.5 0.733

relative Natural Colour (NC)
lab*lrj 0.319 0.0 -0.499
lab*tce 0.25 0.5 0.75
lab*nce 0.5 0.5 b00r

0,25 0,50 0,75 1,00
 $n^* = 0,50$
chromaticness c^*

blackness n^*

$n^* = 0,00$

PE100-7, 3 step scales for constant CIELAB hue 263/360 = 0.731 (left)

3 step scales for constant CIELAB hue 264/360 = 0.733 (right)

BAM-test chart PE10; Colorimetric systems ORS18 & TLS00
D50: 2 coordinate data of 3 step colour scales for 10 hues

input: olv* setrgbcolor
output: no change compared to input