

# 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 83 38

olv\*Ma: 1.0 0.0 0.0

triangle lightness  $t^*$



% Gamut

$u^*_{rel} = 93$

% Regularity

$g^*_{rel} = 57$

$g^*_{Crel} = 59$

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 -0.98 4.75  
LAB\*LABo 95.41 0.0 0.0  
LAB\*TCHo 99.99 0.01 -

relative CIELAB lab\*  
lab\*lab 1.0 0.5 0.0 (1.0)  
lab\*tch 1.0 0.0 - (0.0)  
lab\*nch 0.0 0.0 - (0.0)  
relative Natural Colour (NC)  
lab\*lrj 1.0 0.0 0.0 (1.0)  
lab\*tce 1.0 0.0 0.0 (1.0)  
lab\*nce 0.0 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 56.71 -0.24 2.14  
LAB\*LABo 56.71 0.0 0.0  
LAB\*TCHo 50.0 0.01 -

relative CIELAB lab\*  
lab\*lab 0.5 0.0 0.0 (1.0)  
lab\*tch 0.5 0.0 - (0.0)  
lab\*nch 0.5 0.0 - (0.0)  
relative Natural Colour (NC)  
lab\*lrj 0.5 0.0 0.0 (1.0)  
lab\*tce 0.5 0.0 0.0 (1.0)  
lab\*nce 0.5 0.0 - (0.0)

relative Inform. Technology (IT)  
olvi3\* 0.0 1.0 0.0 (0.0)  
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 18.02 0.5 -0.47  
LAB\*LABo 18.02 0.0 0.0  
LAB\*TCHo 0.01 0.01 -

relative CIELAB lab\*  
lab\*lab 0.0 0.0 0.0 (0.0)  
lab\*tch 0.0 0.0 - (0.0)  
lab\*nch 1.0 0.0 - (0.0)  
relative Natural Colour (NC)  
lab\*lrj 0.0 0.0 0.0 (0.0)  
lab\*tce 0.0 0.0 - (0.0)  
lab\*nce 1.0 0.0 - (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 0.0 (0.5)  
cmyn4\* 0.0 0.5 0.0 (0.5)  
standard and adapted CIELAB  
LAB\*LAB 71.67 32.15 28.41  
LAB\*LABo 71.67 32.69 25.25  
LAB\*TCHo 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\*lrj 0.693 0.477 0.15  
lab\*tce 0.75 0.5 0.048  
lab\*nce 0.0 0.5 r19

relative Inform. Technology (IT)  
olvi3\* 0.5 0.0 0.0 (1.0)  
cmyn3\* 0.5 0.0 0.0 (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 32.98 32.9 25.8  
LAB\*LABo 32.98 32.69 25.25  
LAB\*TCHo 25.01 41.31 37.69

relative CIELAB lab\*  
lab\*lab 0.193 0.396 0.306  
lab\*tch 0.25 0.5 0.105  
lab\*nch 0.0 0.5 0.105  
relative Natural Colour (NC)  
lab\*lrj 0.193 0.477 0.15  
lab\*tce 0.25 0.5 0.048  
lab\*nce 0.0 0.5 r19

relative Inform. Technology (IT)  
olvi3\* 0.0 0.0 0.0 (0.0)  
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 18.02 0.5 -0.47  
LAB\*LABo 18.02 0.0 0.0  
LAB\*TCHo 0.01 0.01 -

relative CIELAB lab\*  
lab\*lab 0.0 0.0 0.0 (0.0)  
lab\*tch 0.0 0.0 - (0.0)  
lab\*nch 1.0 0.0 - (0.0)  
relative Natural Colour (NC)  
lab\*lrj 0.0 0.0 0.0 (0.0)  
lab\*tce 0.0 0.0 - (0.0)  
lab\*nce 1.0 0.0 - (0.0)

relative Inform. Technology (IT)  
olvi3\* 1.0 0.0 0.0 (1.0)  
cmyn3\* 0.0 1.0 0.0 (0.0)  
olvi4\* 1.0 0.0 0.0 (0.0)  
cmyn4\* 0.0 0.0 0.0 (1.0)  
standard and adapted CIELAB  
LAB\*LAB 47.94 65.3 52.06  
LAB\*LABo 47.94 65.37 50.51  
LAB\*TCHo 50.0 82.63 37.69

relative CIELAB lab\*  
lab\*lab 0.387 0.791 0.611  
lab\*tch 0.387 0.54 0.299  
lab\*nch 0.0 1.0 0.105  
relative Natural Colour (NC)  
lab\*lrj 0.387 0.54 0.299  
lab\*tce 0.5 1.0 0.048  
lab\*nce 0.0 1.0 r19

$n^* = 0.00$

blackness  $n^*$

relative Inform. Technology (IT)  
olvi3\* 0.0 0.0 0.0 (0.0)  
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 (0.0)  
LAB\*LABo 0.03 0.0 0.0 (0.0)  
LAB\*TCHo 0.01 0.01 -

relative CIELAB lab\*  
lab\*lab 0.0 0.0 0.0 (0.0)  
lab\*tch 1.0 0.0 - (0.0)  
lab\*nch 0.0 0.0 - (0.0)  
relative Natural Colour (NC)  
lab\*lrj 0.0 0.0 0.0 (0.0)  
lab\*tce 0.0 0.0 - (0.0)  
lab\*nce 1.0 0.0 - (0.0)

# Output: Colorimetric Television Luminous System TLS00

for hue  $h^* = lab^*h = 40/360 = 0.111$

$lab^*tch$  and  $lab^*nch$

D50: hue O

LCH\*Ma: 51 100 40

olv\*Ma: 1.0 0.0 0.0

triangle lightness  $t^*$



% Gamut

$u^*_{rel} = 158$

% Regularity

$g^*_{rel} = 20$

$g^*_{Crel} = 37$

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\*LABo 95.41 0.0 0.0  
LAB\*TCHo 99.99 0.01 -

relative CIELAB lab\*  
lab\*lab 1.0 0.0 0.0 (1.0)  
lab\*tch 1.0 0.0 - (0.0)  
lab\*nch 0.0 0.0 - (0.0)  
relative Natural Colour (NC)  
lab\*lrj 1.0 0.0 0.0 (1.0)  
lab\*tce 1.0 0.0 0.0 (1.0)  
lab\*nce 0.0 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 0.5 0.5 (0.5)  
standard and adapted CIELAB  
LAB\*LAB 47.72 0.0 0.0  
LAB\*LABo 47.72 0.0 0.0  
LAB\*TCHo 50.0 0.01 -

relative CIELAB lab\*  
lab\*lab 0.5 0.0 0.0 (1.0)  
lab\*tch 0.5 0.0 - (0.0)  
lab\*nch 0.5 0.0 - (0.0)  
relative Natural Colour (NC)  
lab\*lrj 0.5 0.0 0.0 (1.0)  
lab\*tce 0.5 0.0 0.0 (1.0)  
lab\*nce 0.5 0.0 - (0.0)

relative Inform. Technology (IT)  
olvi3\* 0.0 0.0 0.0 (0.0)  
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 (0.0)  
LAB\*LABo 0.03 0.0 0.0 (0.0)  
LAB\*TCHo 0.01 0.01 -

relative CIELAB lab\*  
lab\*lab 0.0 0.0 0.0 (0.0)  
lab\*tch 1.0 0.0 - (0.0)  
lab\*nch 0.0 0.0 - (0.0)  
relative Natural Colour (NC)  
lab\*lrj 0.0 0.0 0.0 (0.0)  
lab\*tce 0.0 0.0 - (0.0)  
lab\*nce 1.0 0.0 - (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 0.0 (0.5)  
cmyn4\* 0.0 0.5 0.0 (0.5)  
standard and adapted CIELAB  
LAB\*LAB 72.95 38.45 32.27  
LAB\*LABo 72.95 38.45 32.27  
LAB\*TCHo 75.0 50.2 40.0

relative CIELAB lab\*  
lab\*lab 0.765 0.383 0.321  
lab\*tch 0.75 0.5 0.111  
lab\*nch 0.0 0.5 0.111  
relative Natural Colour (NC)  
lab\*lrj 0.765 0.471 0.167  
lab\*tce 0.75 0.5 0.054  
lab\*nce 0.0 0.5 r21

relative Inform. Technology (IT)  
olvi3\* 0.5 0.0 0.0 (1.0)  
cmyn3\* 0.5 1.0 0.0 (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 25.26 38.45 32.27  
LAB\*LABo 25.26 38.45 32.27  
LAB\*TCHo 25.01 40.2 40.0

relative CIELAB lab\*  
lab\*lab 0.265 0.383 0.321  
lab\*tch 0.25 0.5 0.111  
lab\*nch 0.0 0.5 0.111  
relative Natural Colour (NC)  
lab\*lrj 0.265 0.471 0.167  
lab\*tce 0.25 0.5 0.054  
lab\*nce 0.0 0.5 r21

relative Inform. Technology (IT)  
olvi3\* 0.0 0.0 0.0 (0.0)  
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 (0.0)  
LAB\*LABo 0.03 0.0 0.0 (0.0)  
LAB\*TCHo 0.01 0.01 -

relative CIELAB lab\*  
lab\*lab 0.0 0.0 0.0 (0.0)  
lab\*tch 1.0 0.0 - (0.0)  
lab\*nch 0.0 0.0 - (0.0)  
relative Natural Colour (NC)  
lab\*lrj 0.0 0.0 0.0 (0.0)  
lab\*tce 0.0 0.0 - (0.0)  
lab\*nce 1.0 0.0 - (0.0)

relative Inform. Technology (IT)  
olvi3\* 1.0 1.0 1.0 (1.0)  
cmyn3\* 0.0 1.0 1.0 (0.0)  
olvi4\* 1.0 0.0 0.0 (0.0)  
cmyn4\* 0.0 1.0 1.0 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 50.5 76.9 64.54  
LAB\*LABo 50.5 76.9 64.54  
LAB\*TCHo 50.0 100.4 40.0

relative CIELAB lab\*  
lab\*lab 0.529 0.766 0.643  
lab\*tch 0.529 0.942 0.325  
lab\*nch 0.0 1.0 0.111  
relative Natural Colour (NC)  
lab\*lrj 0.529 0.942 0.325  
lab\*tce 0.5 1.0 0.054  
lab\*nce 0.0 1.0 r21

relative Inform. Technology (IT)  
olvi3\* 0.5 0.0 0.0 (1.0)  
cmyn3\* 0.5 1.0 0.0 (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 25.26 38.45 32.27  
LAB\*LABo 25.26 38.45 32.27  
LAB\*TCHo 25.01 40.2 40.0

relative CIELAB lab\*  
lab\*lab 0.265 0.383 0.321  
lab\*tch 0.25 0.5 0.111  
lab\*nch 0.0 0.5 0.111  
relative Natural Colour (NC)  
lab\*lrj 0.265 0.471 0.167  
lab\*tce 0.25 0.5 0.054  
lab\*nce 0.0 0.5 r21

relative Inform. Technology (IT)  
olvi3\* 0.0 0.0 0.0 (0.0)  
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 (0.0)  
LAB\*LABo 0.03 0.0 0.0 (0.0)  
LAB\*TCHo 0.01 0.01 -

relative CIELAB lab\*  
lab\*lab 0.0 0.0 0.0 (0.0)  
lab\*tch 1.0 0.0 - (0.0)  
lab\*nch 0.0 0.0 - (0.0)  
relative Natural Colour (NC)  
lab\*lrj 0.0 0.0 0.0 (0.0)  
lab\*tce 0.0 0.0 - (0.0)  
lab\*nce 1.0 0.0 - (0.0)

$n^* = 0.00$

blackness  $n^*$

relative Inform. Technology (IT)  
olvi3\* 0.0 0.0 0.0 (0.0)  
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 (0.0)  
LAB\*LABo 0.03 0.0 0.0 (0.0)  
LAB\*TCHo 0.01 0.01 -

relative CIELAB lab\*  
lab\*lab 0.0 0.0 0.0 (0.0)  
lab\*tch 1.0 0.0 - (0.0)  
lab\*nch 0.0 0.0 - (0.0)  
relative Natural Colour (NC)  
lab\*lrj 0.0 0.0 0.0 (0.0)  
lab\*tce 0.0 0.0 - (0.0)  
lab\*nce 1.0 0.0 - (0.0)