

**Farbmetrische "Norm-Daten": Fernseh-Lichtfarben-System TLS00 für Helligkeit  $L^*=00$  von Schwarz für Lichtart D65**

| System TLS00   | Farbe | $r=olv*_1$ | $g=olv*_2$ | $b=olv*_3$ | $L^*$ | $a^*$  | $b^*$  | $C^*_{ab}$ | $h_{ab}$ | $X=XYZ_1$ | $Y=XYZ_2$ | $Z=XYZ_3$ | x      | y      | Y/88.59 |
|----------------|-------|------------|------------|------------|-------|--------|--------|------------|----------|-----------|-----------|-----------|--------|--------|---------|
| sRGB-System    | O (R) | 1.0        | 0.0        | 0.0        | 50.5  | 76.92  | 64.55  | 100.42     | 40       | 36.54     | 18.84     | 1.71      | 0.64   | 0.33   | 0.2127  |
|                | Y     | 1.0        | 1.0        | 0.0        | 92.66 | -20.69 | 90.75  | 93.08      | 103      | 68.21     | 82.19     | 12.27     | 0.4193 | 0.5053 | 0.9278  |
| D65-Reflexion: | L (G) | 0.0        | 1.0        | 0.0        | 83.63 | -82.75 | 79.9   | 115.04     | 136      | 31.68     | 63.36     | 10.56     | 0.3    | 0.6    | 0.7152  |
|                | C     | 0.0        | 1.0        | 1.0        | 86.88 | -46.16 | -13.55 | 48.12      | 196      | 47.67     | 69.76     | 94.74     | 0.2247 | 0.3288 | 0.7874  |
| $Y_N = 0.0$    | V (B) | 0.0        | 0.0        | 1.0        | 25.72 | 31.45  | -44.29 | 54.33      | 305      | 7.17      | 4.65      | 21.37     | 0.216  | 0.1402 | 0.0525  |
| $L^*_N = 0.01$ | M     | 1.0        | 0.0        | 1.0        | 57.3  | 94.35  | -58.41 | 110.97     | 328      | 52.52     | 25.23     | 85.89     | 0.3209 | 0.1542 | 0.2848  |
|                | N     | 0.0        | 0.0        | 0.0        | 0.01  | 0.0    | 0.0    | 0.01       | 0        | 0.0       | 0.0       | 0.0       | 0.3127 | 0.329  | 0.0     |
|                | W     | 1.0        | 1.0        | 1.0        | 95.41 | 0.0    | 0.0    | 0.01       | 0        | 84.2      | 88.59     | 96.46     | 0.3127 | 0.329  | 1.0     |
|                | N0    | 0.0        | 0.0        | 0.0        | 0.01  | 0.0    | 0.0    | 0.01       | 0        | 0.0       | 0.0       | 0.0       | 0.3127 | 0.329  | 0.0     |
|                | W1    | 1.0        | 1.0        | 1.0        | 95.41 | 0.0    | 0.0    | 0.01       | 0        | 84.2      | 88.59     | 96.46     | 0.3127 | 0.329  | 1.0     |

**Farbmetrische "Adaptierte Daten (a)": Fernseh-Lichtfarben-System TLS00a für Helligkeit  $L^*=00a$  von Schwarz für Lichtart D65**

| System TLS00a  | Farbe | $r=olv*_1$ | $g=olv*_2$ | $b=olv*_3$ | $L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h_{ab,a}$ | $X_a=XYZ_{1a}$ | $Y_a=XYZ_{2a}$ | $Z_a=XYZ_{3a}$ | $x_a$  | $y_a$  | $Y_a/88.59$ |
|----------------|-------|------------|------------|------------|---------|---------|---------|--------------|------------|----------------|----------------|----------------|--------|--------|-------------|
| sRGB-System    | O (R) | 1.0        | 0.0        | 0.0        | 50.5    | 76.92   | 64.55   | 100.42       | 40         | 36.54          | 18.84          | 1.71           | 0.64   | 0.33   | 0.2127      |
|                | Y     | 1.0        | 1.0        | 0.0        | 92.66   | -20.69  | 90.75   | 93.08        | 103        | 68.21          | 82.19          | 12.27          | 0.4193 | 0.5053 | 0.9278      |
| D65-Reflexion: | L (G) | 0.0        | 1.0        | 0.0        | 83.63   | -82.75  | 79.9    | 115.04       | 136        | 31.68          | 63.36          | 10.56          | 0.3    | 0.6    | 0.7152      |
|                | C     | 0.0        | 1.0        | 1.0        | 86.88   | -46.16  | -13.55  | 48.12        | 196        | 47.67          | 69.76          | 94.74          | 0.2247 | 0.3288 | 0.7874      |
| $Y_N = 0.0$    | V (B) | 0.0        | 0.0        | 1.0        | 25.72   | 31.45   | -44.29  | 54.33        | 305        | 7.17           | 4.65           | 21.37          | 0.216  | 0.1402 | 0.0525      |
| $L^*_N = 0.01$ | M     | 1.0        | 0.0        | 1.0        | 57.3    | 94.35   | -58.41  | 110.97       | 328        | 52.52          | 25.23          | 85.89          | 0.3209 | 0.1542 | 0.2848      |
|                | N     | 0.0        | 0.0        | 0.0        | 0.01    | 0.0     | 0.0     | 0.01         | 0          | 0.0            | 0.0            | 0.0            | 0.3127 | 0.329  | 0.0         |
|                | W     | 1.0        | 1.0        | 1.0        | 95.41   | 0.0     | 0.0     | 0.01         | 0          | 84.2           | 88.59          | 96.46          | 0.3127 | 0.329  | 1.0         |
|                | N0    | 0.0        | 0.0        | 0.0        | 0.01    | 0.0     | 0.0     | 0.01         | 0          | 0.0            | 0.0            | 0.0            | 0.3127 | 0.329  | 0.0         |
|                | W1    | 1.0        | 1.0        | 1.0        | 95.41   | 0.0     | 0.0     | 0.01         | 0          | 84.2           | 88.59          | 96.46          | 0.3127 | 0.329  | 1.0         |

**Farbmetrische "Adaptierte Daten (a0)": Fernseh-Lichtfarben-System TLS00a0 für Helligkeit  $L^*=00a0$  von Schwarz für Lichtart D65**

| System TLS00a0 | Farbe | $r=olv*_1$ | $g=olv*_2$ | $b=olv*_3$ | $L^*_{a0}$ | $a^*_{a0}$ | $b^*_{a0}$ | $C^*_{ab,a0}$ | $h_{ab,a0}$ | $X_{a0}=XYZ_{1a0}$ | $Y_{a0}=XYZ_{2a0}$ | $Z_{a0}=XYZ_{3a0}$ | $x_{a0}$ | $y_{a0}$ | $Y_{a0}/88.59$ |
|----------------|-------|------------|------------|------------|------------|------------|------------|---------------|-------------|--------------------|--------------------|--------------------|----------|----------|----------------|
| sRGB-System    | O (R) | 1.0        | 0.0        | 0.0        | 50.5       | 76.92      | 64.55      | 100.42        | 40          | 36.54(=36.53+0.0)  | 18.84(=18.84+0.0)  | 1.71(=1.71+0.0)    | 0.64     | 0.33     | 0.2127         |
|                | Y     | 1.0        | 1.0        | 0.0        | 92.66      | -20.69     | 90.75      | 93.08         | 103         | 68.21(=68.21+0.0)  | 82.19(=82.19+0.0)  | 12.27(=12.27+0.0)  | 0.4193   | 0.5053   | 0.9278         |
| D65-Reflexion: | L (G) | 0.0        | 1.0        | 0.0        | 83.63      | -82.75     | 79.9       | 115.04        | 136         | 31.68(=31.68+0.0)  | 63.36(=63.36+0.0)  | 10.56(=10.55+0.0)  | 0.3      | 0.6      | 0.7152         |
|                | C     | 0.0        | 1.0        | 1.0        | 86.88      | -46.16     | -13.55     | 48.12         | 196         | 47.67(=47.67+0.0)  | 69.76(=69.76+0.0)  | 94.74(=94.74+0.0)  | 0.2247   | 0.3288   | 0.7874         |
| $Y_N = 0.0$    | V (B) | 0.0        | 0.0        | 1.0        | 25.72      | 31.45      | -44.29     | 54.33         | 305         | 7.17(=7.17+0.0)    | 4.65(=4.65+0.0)    | 21.37(=21.37+0.0)  | 0.216    | 0.1402   | 0.0525         |
| $L^*_N = 0.0$  | M     | 1.0        | 0.0        | 1.0        | 57.3       | 94.35      | -58.41     | 110.97        | 328         | 52.52(=52.52+0.0)  | 25.23(=25.23+0.0)  | 85.89(=85.89+0.0)  | 0.3209   | 0.1542   | 0.2848         |
|                | N     | 0.0        | 0.0        | 0.0        | 0.01       | 0.0        | 0.0        | 0.01          | 0           | 0.0(=0.0+0.0)      | 0.0(=0.0+0.0)      | 0.0(=0.0+0.0)      | 0.3118   | 0.3281   | 0.0            |
|                | W     | 1.0        | 1.0        | 1.0        | 95.41      | 0.0        | 0.0        | 0.01          | 0           | 84.2(=84.2+0.0)    | 88.59(=88.59+0.0)  | 96.46(=96.46+0.0)  | 0.3127   | 0.329    | 1.0            |
|                | N0    | 0.0        | 0.0        | 0.0        | 0.01       | 0.0        | 0.0        | 0.01          | 0           | 0.0(=0.0+0.0)      | 0.0(=0.0+0.0)      | 0.0(=0.0+0.0)      | 0.3118   | 0.3281   | 0.0            |
|                | W1    | 1.0        | 1.0        | 1.0        | 95.41      | 0.0        | 0.0        | 0.01          | 0           | 84.2(=84.2+0.0)    | 88.59(=88.59+0.0)  | 96.46(=96.46+0.0)  | 0.3127   | 0.329    | 1.0            |

Farbmetrische "Adaptierte Daten (a0)": Fernseh-Lichtfarben-System TLS00a0 für Helligkeit  $L^*=00$  von Schwarz für Lichtart D65

| System TLS00a0 | Farbe | $r=olv*_1$ | $g=olv*_2$ | $b=olv*_3$ | $L^*_{a0}$ | $a^*_{a0}$ | $b^*_{a0}$ | $C^*_{ab,a0}$ | $h_{ab,a}$ | $X_{a0}=XYZ_{1a0}$ | $Y_{a0}=XYZ_{2a0}$ | $Z_{a0}=XYZ_{3a0}$ | $x_{a0}$ | $y_{a0}$ | $Y_{a0}/88.59$ |
|----------------|-------|------------|------------|------------|------------|------------|------------|---------------|------------|--------------------|--------------------|--------------------|----------|----------|----------------|
| sRGB-System    | O (R) | 1.0        | 0.0        | 0.0        | 50.5       | 76.92      | 64.55      | 100.42        | 40         | 36.54(=36.53+0.0)  | 18.84(=18.84+0.0)  | 1.71(=1.71+0.0)    | 0.64     | 0.33     | 0.2127         |
|                | Y     | 1.0        | 1.0        | 0.0        | 92.66      | -20.69     | 90.75      | 93.08         | 103        | 68.21(=68.21+0.0)  | 82.19(=82.19+0.0)  | 12.27(=12.27+0.0)  | 0.4193   | 0.5053   | 0.9278         |
| D65-Reflexion: | L (G) | 0.0        | 1.0        | 0.0        | 83.63      | -82.75     | 79.9       | 115.04        | 136        | 31.68(=31.68+0.0)  | 63.36(=63.36+0.0)  | 10.56(=10.55+0.0)  | 0.3      | 0.6      | 0.7152         |
|                | C     | 0.0        | 1.0        | 1.0        | 86.88      | -46.16     | -13.55     | 48.12         | 196        | 47.67(=47.67+0.0)  | 69.76(=69.76+0.0)  | 94.74(=94.74+0.0)  | 0.2247   | 0.3288   | 0.7874         |
| $Y_N = 0.0$    | V (B) | 0.0        | 0.0        | 1.0        | 25.72      | 31.45      | -44.29     | 54.33         | 305        | 7.17(=7.17+0.0)    | 4.65(=4.65+0.0)    | 21.37(=21.37+0.0)  | 0.216    | 0.1402   | 0.0525         |
|                | M     | 1.0        | 0.0        | 1.0        | 57.3       | 94.35      | -58.41     | 110.97        | 328        | 52.52(=52.52+0.0)  | 25.23(=25.23+0.0)  | 85.89(=85.89+0.0)  | 0.3209   | 0.1542   | 0.2848         |
| $L^*_N = 0.0$  | N     | 0.0        | 0.0        | 0.0        | 0.01       | 0.0        | 0.0        | 0.01          | 0          | 0.0(=0.0+0.0)      | 0.0(=0.0+0.0)      | 0.0(=0.0+0.0)      | 0.3118   | 0.3281   | 0.0            |
|                | W     | 1.0        | 1.0        | 1.0        | 95.41      | 0.0        | 0.0        | 0.01          | 0          | 84.2(=84.2+0.0)    | 88.59(=88.59+0.0)  | 96.46(=96.46+0.0)  | 0.3127   | 0.329    | 1.0            |
|                | N0    | 0.0        | 0.0        | 0.0        | 0.01       | 0.0        | 0.0        | 0.01          | 0          | 0.0(=0.0+0.0)      | 0.0(=0.0+0.0)      | 0.0(=0.0+0.0)      | 0.3118   | 0.3281   | 0.0            |
|                | W1    | 1.0        | 1.0        | 1.0        | 95.41      | 0.0        | 0.0        | 0.01          | 0          | 84.2(=84.2+0.0)    | 88.59(=88.59+0.0)  | 96.46(=96.46+0.0)  | 0.3127   | 0.329    | 1.0            |

Berechnete farbmetrische Daten: Fernseh-Lichtfarben-Systeme TLSxxa für Helligkeit  $L^*=00, 06, 11, 18$  von Schwarz für Lichtart D65

| System TLS00a  | Farbe | $r=olv*_1$ | $g=olv*_2$ | $b=olv*_3$ | $L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h_{ab,a}$ | $X_a=XYZ_{1a}$    | $Y_a=XYZ_{2a}$    | $Z_a=XYZ_{3a}$    | $x_a$  | $y_a$  | $Y_a/88.59$ |
|----------------|-------|------------|------------|------------|---------|---------|---------|--------------|------------|-------------------|-------------------|-------------------|--------|--------|-------------|
| sRGB-System    | O (R) | 1.0        | 0.0        | 0.0        | 50.5    | 76.92   | 64.55   | 100.42       | 40         | 36.54(=36.54+0.0) | 18.84(=18.84+0.0) | 1.71(=1.71+0.0)   | 0.64   | 0.33   | 0.2127      |
|                | Y     | 1.0        | 1.0        | 0.0        | 92.66   | -20.69  | 90.75   | 93.08        | 103        | 68.21(=68.21+0.0) | 82.19(=82.19+0.0) | 12.27(=12.27+0.0) | 0.4193 | 0.5053 | 0.9278      |
| D65-Reflexion: | L (G) | 0.0        | 1.0        | 0.0        | 83.63   | -82.75  | 79.9    | 115.04       | 136        | 31.68(=31.68+0.0) | 63.36(=63.36+0.0) | 10.56(=10.56+0.0) | 0.3    | 0.6    | 0.7152      |
|                | C     | 0.0        | 1.0        | 1.0        | 86.88   | -46.16  | -13.55  | 48.12        | 196        | 47.67(=47.67+0.0) | 69.76(=69.76+0.0) | 94.74(=94.74+0.0) | 0.2247 | 0.3288 | 0.7874      |
| $Y_N = 0.0$    | V (B) | 0.0        | 0.0        | 1.0        | 25.72   | 31.45   | -44.29  | 54.33        | 305        | 7.17(=7.17+0.0)   | 4.65(=4.65+0.0)   | 21.37(=21.37+0.0) | 0.216  | 0.1402 | 0.0525      |
|                | M     | 1.0        | 0.0        | 1.0        | 57.3    | 94.35   | -58.41  | 110.97       | 328        | 52.52(=52.52+0.0) | 25.23(=25.23+0.0) | 85.89(=85.89+0.0) | 0.3209 | 0.1542 | 0.2848      |
| $L^*_N = 0.0$  | N     | 0.0        | 0.0        | 0.0        | 0.01    | 0.0     | 0.0     | 0.0          | 0          | 0.0(=0.0+0.0)     | 0.0(=0.0+0.0)     | 0.0(=0.0+0.0)     | 0.3037 | 0.3195 | 0.0         |
|                | W     | 1.0        | 1.0        | 1.0        | 95.41   | 0.0     | 0.0     | 0.0          | 0          | 84.2(=84.2+0.0)   | 88.59(=88.59+0.0) | 96.46(=96.46+0.0) | 0.3127 | 0.329  | 1.0         |
|                | N0    | 0.0        | 0.0        | 0.0        | 0.01    | 0.0     | 0.0     | 0.0          | 0          | 0.0(=0.0+0.0)     | 0.0(=0.0+0.0)     | 0.0(=0.0+0.0)     | 0.3037 | 0.3195 | 0.0         |
|                | W1    | 1.0        | 1.0        | 1.0        | 95.41   | 0.0     | 0.0     | 0.0          | 0          | 84.2(=84.2+0.0)   | 88.59(=88.59+0.0) | 96.46(=96.46+0.0) | 0.3127 | 0.329  | 1.0         |

| System TLS06a  | Farbe | $r=olv*_1$ | $g=olv*_2$ | $b=olv*_3$ | $L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h_{ab,a}$ | $X_a=XYZ_{1a}$    | $Y_a=XYZ_{2a}$     | $Z_a=XYZ_{3a}$     | $x_a$  | $y_a$  | $Y_a/88.59$ |
|----------------|-------|------------|------------|------------|---------|---------|---------|--------------|------------|-------------------|--------------------|--------------------|--------|--------|-------------|
| sRGB-System    | O (R) | 1.0        | 0.0        | 0.0        | 51.08   | 75.55   | 59.69   | 96.28        | 38         | 36.87(=36.28+0.6) | 19.34(=18.71+0.63) | 2.39(=1.7+0.69)    | 0.6293 | 0.33   | 0.2183      |
|                | Y     | 1.0        | 1.0        | 0.0        | 92.68   | -20.53  | 89.24   | 91.57        | 103        | 68.32(=67.72+0.6) | 82.24(=81.61+0.63) | 12.87(=12.18+0.69) | 0.4181 | 0.5032 | 0.9283      |
| D65-Reflexion: | L (G) | 0.0        | 1.0        | 0.0        | 83.72   | -81.8   | 78.32   | 113.26       | 136        | 32.05(=31.45+0.6) | 63.54(=62.91+0.63) | 11.17(=10.48+0.69) | 0.3002 | 0.5952 | 0.7172      |
|                | C     | 0.0        | 1.0        | 1.0        | 86.95   | -45.72  | -13.44  | 47.67        | 196        | 47.93(=47.33+0.6) | 69.9(=69.27+0.63)  | 94.75(=94.07+0.69) | 0.2255 | 0.3288 | 0.789       |
| $Y_N = 0.63$   | V (B) | 0.0        | 0.0        | 1.0        | 27.43   | 29.31   | -42.3   | 51.47        | 305        | 7.72(=7.12+0.6)   | 5.25(=4.62+0.63)   | 21.9(=21.22+0.69)  | 0.2213 | 0.1505 | 0.0592      |
|                | M     | 1.0        | 0.0        | 1.0        | 57.73   | 93.07   | -57.72  | 109.52       | 328        | 52.74(=52.14+0.6) | 25.68(=25.05+0.63) | 85.97(=85.28+0.69) | 0.3208 | 0.1562 | 0.2899      |
| $L^*_N = 5.69$ | N     | 0.0        | 0.0        | 0.0        | 5.7     | 0.0     | 0.0     | 0.0          | 0          | 0.6(=0.0+0.6)     | 0.63(=0.0+0.63)    | 0.69(=0.0+0.69)    | 0.3127 | 0.329  | 0.0071      |
|                | W     | 1.0        | 1.0        | 1.0        | 95.41   | 0.0     | 0.0     | 0.0          | 0          | 84.2(=83.6+0.6)   | 88.59(=87.96+0.63) | 96.46(=95.77+0.69) | 0.3127 | 0.329  | 1.0         |
|                | N0    | 0.0        | 0.0        | 0.0        | 5.7     | 0.0     | 0.0     | 0.0          | 0          | 0.6(=0.0+0.6)     | 0.63(=0.0+0.63)    | 0.69(=0.0+0.69)    | 0.3127 | 0.329  | 0.0071      |
|                | W1    | 1.0        | 1.0        | 1.0        | 95.41   | 0.0     | 0.0     | 0.0          | 0          | 84.2(=83.6+0.6)   | 88.59(=87.96+0.63) | 96.46(=95.77+0.69) | 0.3127 | 0.329  | 1.0         |

| System TLS11a  | Farbe | $r=olv*_1$ | $g=olv*_2$ | $b=olv*_3$ | $L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h_{ab,a}$ | $X_a=XYZ_{1a}$    | $Y_a=XYZ_{2a}$     | $Z_a=XYZ_{3a}$     | $x_a$  | $y_a$  | $Y_a/88.59$ |
|----------------|-------|------------|------------|------------|---------|---------|---------|--------------|------------|-------------------|--------------------|--------------------|--------|--------|-------------|
| sRGB-System    | O (R) | 1.0        | 0.0        | 0.0        | 51.65   | 74.21   | 55.83   | 92.87        | 37         | 37.21(=36.02+1.2) | 19.83(=18.57+1.26) | 3.06(=1.69+1.37)   | 0.6191 | 0.33   | 0.2239      |
|                | Y     | 1.0        | 1.0        | 0.0        | 92.7    | -20.37  | 87.77   | 90.11        | 103        | 68.44(=67.24+1.2) | 82.28(=81.02+1.26) | 13.46(=12.09+1.37) | 0.4168 | 0.5012 | 0.9288      |
| D65-Reflexion: | L (G) | 0.0        | 1.0        | 0.0        | 83.82   | -80.86  | 76.81   | 111.53       | 136        | 32.43(=31.23+1.2) | 63.72(=62.46+1.26) | 11.78(=10.4+1.37)  | 0.3005 | 0.5904 | 0.7192      |
|                | C     | 0.0        | 1.0        | 1.0        | 87.01   | -45.29  | -13.34  | 47.23        | 196        | 48.19(=47.01+1.2) | 70.03(=68.77+1.26) | 94.77(=93.39+1.37) | 0.2263 | 0.3288 | 0.7905      |
| $Y_N = 1.26$   | V (B) | 0.0        | 0.0        | 1.0        | 29.02   | 27.48   | -40.5   | 48.95        | 304        | 8.27(=7.07+1.2)   | 5.85(=4.59+1.26)   | 22.44(=21.07+1.37) | 0.2262 | 0.1599 | 0.066       |
|                | M     | 1.0        | 0.0        | 1.0        | 58.16   | 91.8    | -57.03  | 108.08       | 328        | 52.97(=51.77+1.2) | 26.13(=24.87+1.26) | 86.04(=84.67+1.37) | 0.3207 | 0.1582 | 0.295       |
| $L^*_N = 11.0$ | N     | 0.0        | 0.0        | 0.0        | 11.0    | 0.0     | 0.0     | 0.0          | 0          | 1.2(=0.0+1.2)     | 1.26(=0.0+1.26)    | 1.37(=0.0+1.37)    | 0.3127 | 0.329  | 0.0142      |
|                | W     | 1.0        | 1.0        | 1.0        | 95.41   | 0.0     | 0.0     | 0.0          | 0          | 84.2(=83.0+1.2)   | 88.59(=87.33+1.26) | 96.46(=95.09+1.37) | 0.3127 | 0.329  | 1.0         |
|                | N0    | 0.0        | 0.0        | 0.0        | 11.0    | 0.0     | 0.0     | 0.0          | 0          | 1.2(=0.0+1.2)     | 1.26(=0.0+1.26)    | 1.37(=0.0+1.37)    | 0.3127 | 0.329  | 0.0142      |
|                | W1    | 1.0        | 1.0        | 1.0        | 95.41   | 0.0     | 0.0     | 0.0          | 0          | 84.2(=83.0+1.2)   | 88.59(=87.33+1.26) | 96.46(=95.09+1.37) | 0.3127 | 0.329  | 1.0         |

| System TLS18a   | Farbe | $r=olv*_1$ | $g=olv*_2$ | $b=olv*_3$ | $L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h_{ab,a}$ | $X_a=XYZ_{1a}$    | $Y_a=XYZ_{2a}$     | $Z_a=XYZ_{3a}$     | $x_a$  | $y_a$  | $Y_a/88.59$ |
|-----------------|-------|------------|------------|------------|---------|---------|---------|--------------|------------|-------------------|--------------------|--------------------|--------|--------|-------------|
| sRGB-System     | O (R) | 1.0        | 0.0        | 0.0        | 52.76   | 71.63   | 49.88   | 87.29        | 35         | 37.89(=35.5+2.4)  | 20.82(=18.3+2.52)  | 4.41(=1.66+2.74)   | 0.6003 | 0.3299 | 0.2351      |
|                 | Y     | 1.0        | 1.0        | 0.0        | 92.74   | -20.04  | 84.97   | 87.31        | 103        | 68.66(=66.27+2.4) | 82.38(=79.86+2.52) | 14.66(=11.92+2.74) | 0.4144 | 0.4971 | 0.9298      |
| D65-Reflexion:  | L (G) | 0.0        | 1.0        | 0.0        | 84.0    | -79.0   | 73.94   | 108.21       | 137        | 33.17(=30.78+2.4) | 64.08(=61.56+2.52) | 13.0(=10.25+2.74)  | 0.3009 | 0.5812 | 0.7233      |
|                 | C     | 0.0        | 1.0        | 1.0        | 87.14   | -44.43  | -13.13  | 46.34        | 196        | 48.71(=46.32+2.4) | 70.3(=67.78+2.52)  | 94.79(=92.05+2.74) | 0.2278 | 0.3288 | 0.7935      |
| $Y_N = 2.52$    | V (B) | 0.0        | 0.0        | 1.0        | 31.9    | 24.46   | -37.39  | 44.69        | 303        | 9.36(=6.97+2.4)   | 7.04(=4.52+2.52)   | 23.51(=20.76+2.74) | 0.2346 | 0.1764 | 0.0795      |
|                 | M     | 1.0        | 0.0        | 1.0        | 59.01   | 89.33   | -55.69  | 105.27       | 328        | 53.42(=51.02+2.4) | 27.03(=24.51+2.52) | 86.19(=83.45+2.74) | 0.3205 | 0.1622 | 0.3051      |
| $L^*_N = 18.01$ | N     | 0.0        | 0.0        | 0.0        | 18.01   | 0.0     | 0.0     | 0.0          | 0          | 2.4(=0.0+2.4)     | 2.52(=0.0+2.52)    | 2.74(=0.0+2.74)    | 0.3127 | 0.329  | 0.0285      |
|                 | W     | 1.0        | 1.0        | 1.0        | 95.41   | 0.0     | 0.0     | 0.0          | 0          | 84.2(=81.8+2.4)   | 88.59(=86.07+2.52) | 96.46(=93.72+2.74) | 0.3127 | 0.329  | 1.0         |
|                 | N0    | 0.0        | 0.0        | 0.0        | 18.01   | 0.0     | 0.0     | 0.0          | 0          | 2.4(=0.0+2.4)     | 2.52(=0.0+2.52)    | 2.74(=0.0+2.74)    | 0.3127 | 0.329  | 0.0285      |
|                 | W1    | 1.0        | 1.0        | 1.0        | 95.41   | 0.0     | 0.0     | 0.0          | 0          | 84.2(=81.8+2.4)   | 88.59(=86.07+2.52) | 96.46(=93.72+2.74) | 0.3127 | 0.329  | 1.0         |

JG310-7N, Farbmetrische Daten des Fernseh-Lichtfarben-Systems TLS00a für CIE-Normlichtart D65; sRGB System; Seite: 2/3

TUB-Prüfvorlage JG31; 8 Basis-Farben OYLCVMNW, TLS00 Eingabe:  $olv^*$  setrgbcolor  
Berechnung von CIE-Daten für sRGB-Display für 8 Reflexionen Ausgabe: keine Eingabe-Änderung

Farbmetrische "Adaptierte Daten (a0)": Fernseh-Lichtfarben-System TLS00a0 für Helligkeit  $L^*=00$  von Schwarz für Lichtart D65

| System TLS00a0  | Farbe | $r=olv*_1$ | $g=olv*_2$ | $b=olv*_3$ | $L^*_{a0}$ | $a^*_{a0}$ | $b^*_{a0}$ | $C^*_{ab,a0}$ | $h_{ab,a}$ | $X_{a0}=XYZ1a0$   | $Y_{a0}=XYZ2a0$   | $Z_{a0}=XYZ3a0$   | $x_{a0}$ | $y_{a0}$ | $Y_{a0}/88.59$ |
|-----------------|-------|------------|------------|------------|------------|------------|------------|---------------|------------|-------------------|-------------------|-------------------|----------|----------|----------------|
| sRGB-System     | O (R) | 1.0        | 0.0        | 0.0        | 50.5       | 76.92      | 64.55      | 100.42        | 40         | 36.54(=36.53+0.0) | 18.84(=18.84+0.0) | 1.71(=1.71+0.0)   | 0.64     | 0.33     | 0.2127         |
|                 | Y     | 1.0        | 1.0        | 0.0        | 92.66      | -20.69     | 90.75      | 93.08         | 103        | 68.21(=68.21+0.0) | 82.19(=82.19+0.0) | 12.27(=12.27+0.0) | 0.4193   | 0.5053   | 0.9278         |
| D65-Reflexion:  | L (G) | 0.0        | 1.0        | 0.0        | 83.63      | -82.75     | 79.9       | 115.04        | 136        | 31.68(=31.68+0.0) | 63.36(=63.36+0.0) | 10.56(=10.55+0.0) | 0.3      | 0.6      | 0.7152         |
|                 | C     | 0.0        | 1.0        | 1.0        | 86.88      | -46.16     | -13.55     | 48.12         | 196        | 47.67(=47.67+0.0) | 69.76(=69.76+0.0) | 94.74(=94.74+0.0) | 0.2247   | 0.3288   | 0.7874         |
| $Y_N = 0.0$     | V (B) | 0.0        | 0.0        | 1.0        | 25.72      | 31.45      | -44.29     | 54.33         | 305        | 7.17(=7.17+0.0)   | 4.65(=4.65+0.0)   | 21.37(=21.37+0.0) | 0.216    | 0.1402   | 0.0525         |
|                 | M     | 1.0        | 0.0        | 1.0        | 57.3       | 94.35      | -58.41     | 110.97        | 328        | 52.52(=52.52+0.0) | 25.23(=25.23+0.0) | 85.89(=85.89+0.0) | 0.3209   | 0.1542   | 0.2848         |
| $L^*_{N} = 0.0$ | N     | 0.0        | 0.0        | 0.0        | 0.01       | 0.0        | 0.0        | 0.01          | 0          | 0.0(=0.0+0.0)     | 0.0(=0.0+0.0)     | 0.0(=0.0+0.0)     | 0.3118   | 0.3281   | 0.0            |
|                 | W     | 1.0        | 1.0        | 1.0        | 95.41      | 0.0        | 0.0        | 0.01          | 0          | 84.2(=84.2+0.0)   | 88.59(=88.59+0.0) | 96.46(=96.46+0.0) | 0.3127   | 0.329    | 1.0            |
|                 | N0    | 0.0        | 0.0        | 0.0        | 0.01       | 0.0        | 0.0        | 0.01          | 0          | 0.0(=0.0+0.0)     | 0.0(=0.0+0.0)     | 0.0(=0.0+0.0)     | 0.3118   | 0.3281   | 0.0            |
|                 | W1    | 1.0        | 1.0        | 1.0        | 95.41      | 0.0        | 0.0        | 0.01          | 0          | 84.2(=84.2+0.0)   | 88.59(=88.59+0.0) | 96.46(=96.46+0.0) | 0.3127   | 0.329    | 1.0            |

Berechnete farbmetrische Daten: Fernseh-Lichtfarben-Systeme TLSxxa für Helligkeit  $L^*=27, 33, 52, 70$  von Schwarz für Lichtart D65

| System TLS27a     | Farbe | $r=olv*_1$ | $g=olv*_2$ | $b=olv*_3$ | $L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h_{ab,a}$ | $X_a=XYZ1a$        | $Y_a=XYZ2a$        | $Z_a=XYZ3a$        | $x_a$  | $y_a$  | $Y_a/88.59$ |
|-------------------|-------|------------|------------|------------|---------|---------|---------|--------------|------------|--------------------|--------------------|--------------------|--------|--------|-------------|
| sRGB-System       | O (R) | 1.0        | 0.0        | 0.0        | 54.87   | 66.84   | 41.69   | 78.78        | 32         | 39.12(=34.46+4.79) | 22.81(=17.77+5.04) | 7.1(=1.61+5.49)    | 0.5675 | 0.3298 | 0.2575      |
|                   | Y     | 1.0        | 1.0        | 0.0        | 92.82   | -19.4   | 79.81   | 82.13        | 104        | 69.25(=64.33+4.79) | 82.56(=77.52+5.04) | 17.06(=11.57+5.49) | 0.4096 | 0.4893 | 0.9319      |
| D65-Reflexion:    | L (G) | 0.0        | 1.0        | 0.0        | 84.38   | -75.4   | 68.76   | 102.05       | 138        | 34.67(=29.88+4.79) | 64.79(=59.75+5.04) | 15.44(=9.95+5.49)  | 0.3017 | 0.5639 | 0.7314      |
|                   | C     | 0.0        | 1.0        | 1.0        | 87.4    | -42.73  | -12.71  | 44.59        | 197        | 49.75(=44.96+4.79) | 70.83(=65.79+5.04) | 94.84(=89.35+5.49) | 0.2309 | 0.3288 | 0.7995      |
| $Y_N = 5.04$      | V (B) | 0.0        | 0.0        | 1.0        | 36.79   | 20.12   | -32.47  | 38.21        | 302        | 11.55(=6.76+4.79)  | 9.43(=4.39+5.04)   | 25.64(=20.16+5.49) | 0.2478 | 0.2022 | 0.1064      |
|                   | M     | 1.0        | 0.0        | 1.0        | 60.64   | 84.61   | -53.09  | 99.89        | 328        | 54.32(=49.53+4.79) | 28.84(=23.8+5.04)  | 86.49(=81.01+5.49) | 0.3202 | 0.17   | 0.3255      |
| $L^*_{N} = 26.85$ | N     | 0.0        | 0.0        | 0.0        | 26.85   | 0.0     | 0.0     | 0.0          | 0          | 4.79(=0.0+4.79)    | 5.04(=0.0+5.04)    | 5.49(=0.0+5.49)    | 0.3127 | 0.329  | 0.0569      |
|                   | W     | 1.0        | 1.0        | 1.0        | 95.41   | 0.0     | 0.0     | 0.0          | 0          | 84.2(=79.41+4.79)  | 88.59(=83.55+5.04) | 96.46(=90.97+5.49) | 0.3127 | 0.329  | 1.0         |
|                   | N0    | 0.0        | 0.0        | 0.0        | 26.85   | 0.0     | 0.0     | 0.0          | 0          | 4.79(=0.0+4.79)    | 5.04(=0.0+5.04)    | 5.49(=0.0+5.49)    | 0.3127 | 0.329  | 0.0569      |
|                   | W1    | 1.0        | 1.0        | 1.0        | 95.41   | 0.0     | 0.0     | 0.0          | 0          | 84.2(=79.41+4.79)  | 88.59(=83.55+5.04) | 96.46(=90.97+5.49) | 0.3127 | 0.329  | 1.0         |

| System TLS38a     | Farbe | $r=olv*_1$ | $g=olv*_2$ | $b=olv*_3$ | $L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h_{ab,a}$ | $X_a=XYZ1a$        | $Y_a=XYZ2a$         | $Z_a=XYZ3a$         | $x_a$  | $y_a$  | $Y_a/88.59$ |
|-------------------|-------|------------|------------|------------|---------|---------|---------|--------------|------------|--------------------|---------------------|---------------------|--------|--------|-------------|
| sRGB-System       | O (R) | 1.0        | 0.0        | 0.0        | 58.77   | 58.45   | 31.72   | 66.5         | 28         | 41.96(=32.38+9.58) | 26.78(=16.7+10.08)  | 12.49(=1.52+10.98)  | 0.5166 | 0.3297 | 0.3022      |
|                   | Y     | 1.0        | 1.0        | 0.0        | 92.98   | -18.12  | 70.81   | 73.1         | 104        | 70.03(=60.45+9.58) | 82.92(=72.84+10.08) | 21.85(=10.87+10.98) | 0.4006 | 0.4744 | 0.936       |
| D65-Reflexion:    | L (G) | 0.0        | 1.0        | 0.0        | 85.11   | -68.59  | 60.02   | 91.15        | 139        | 37.66(=28.08+9.58) | 66.23(=56.15+10.08) | 20.33(=9.35+10.98)  | 0.3032 | 0.5332 | 0.7476      |
|                   | C     | 0.0        | 1.0        | 1.0        | 87.92   | -39.43  | -11.88  | 41.19        | 197        | 51.83(=42.25+9.58) | 71.9(=61.82+10.08)  | 94.94(=83.96+10.98) | 0.237  | 0.3288 | 0.8116      |
| $Y_N = 10.08$     | V (B) | 0.0        | 0.0        | 1.0        | 44.52   | 14.84   | -25.66  | 29.65        | 300        | 15.93(=6.35+9.58)  | 14.2(=4.12+10.08)   | 29.91(=18.94+10.98) | 0.2653 | 0.2365 | 0.1603      |
|                   | M     | 1.0        | 0.0        | 1.0        | 63.71   | 75.92   | -48.22  | 89.95        | 328        | 56.12(=46.54+9.58) | 32.44(=22.36+10.08) | 87.1(=76.12+10.98)  | 0.3195 | 0.1847 | 0.3662      |
| $L^*_{N} = 37.99$ | N     | 0.0        | 0.0        | 0.0        | 37.99   | 0.0     | 0.0     | 0.0          | 0          | 9.58(=0.0+9.58)    | 10.08(=0.0+10.08)   | 10.98(=0.0+10.98)   | 0.3127 | 0.329  | 0.1138      |
|                   | W     | 1.0        | 1.0        | 1.0        | 95.41   | 0.0     | 0.0     | 0.0          | 0          | 84.2(=74.62+9.58)  | 88.59(=78.51+10.08) | 96.46(=85.48+10.98) | 0.3127 | 0.329  | 1.0         |
|                   | N0    | 0.0        | 0.0        | 0.0        | 37.99   | 0.0     | 0.0     | 0.0          | 0          | 9.58(=0.0+9.58)    | 10.08(=0.0+10.08)   | 10.98(=0.0+10.98)   | 0.3127 | 0.329  | 0.1138      |
|                   | W1    | 1.0        | 1.0        | 1.0        | 95.41   | 0.0     | 0.0     | 0.0          | 0          | 84.2(=74.62+9.58)  | 88.59(=78.51+10.08) | 96.46(=85.48+10.98) | 0.3127 | 0.329  | 1.0         |

| System TLS52a     | Farbe | $r=olv*_1$ | $g=olv*_2$ | $b=olv*_3$ | $L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h_{ab,a}$ | $X_a=XYZ1a$         | $Y_a=XYZ2a$         | $Z_a=XYZ3a$         | $x_a$  | $y_a$  | $Y_a/88.59$ |
|-------------------|-------|------------|------------|------------|---------|---------|---------|--------------|------------|---------------------|---------------------|---------------------|--------|--------|-------------|
| sRGB-System       | O (R) | 1.0        | 0.0        | 0.0        | 65.52   | 45.07   | 20.98   | 49.71        | 25         | 47.38(=28.22+19.16) | 34.71(=14.55+20.16) | 23.27(=1.32+21.95)  | 0.4497 | 0.3294 | 0.3918      |
|                   | Y     | 1.0        | 1.0        | 0.0        | 93.3    | -15.62  | 56.27   | 58.4         | 106        | 71.85(=52.69+19.16) | 83.65(=63.49+20.16) | 31.43(=9.48+21.95)  | 0.3844 | 0.4475 | 0.9442      |
| D65-Reflexion:    | L (G) | 0.0        | 1.0        | 0.0        | 86.55   | -56.32  | 46.52   | 73.06        | 140        | 43.63(=24.47+19.16) | 69.1(=48.94+20.16)  | 30.1(=8.15+21.95)   | 0.3055 | 0.4838 | 0.78        |
|                   | C     | 0.0        | 1.0        | 1.0        | 88.94   | -33.2   | -10.25  | 34.76        | 197        | 55.99(=36.83+19.16) | 74.05(=53.89+20.16) | 95.13(=73.18+21.95) | 0.2486 | 0.3289 | 0.8358      |
| $Y_N = 20.16$     | V (B) | 0.0        | 0.0        | 1.0        | 55.84   | 9.42    | -17.5   | 19.89        | 298        | 24.77(=5.54+19.16)  | 23.75(=3.59+20.16)  | 38.46(=16.51+21.95) | 0.2842 | 0.2733 | 0.2681      |
|                   | M     | 1.0        | 0.0        | 1.0        | 69.22   | 60.95   | -39.57  | 72.67        | 327        | 59.73(=40.57+19.16) | 39.65(=19.49+20.16) | 88.3(=66.35+21.95)  | 0.3182 | 0.2113 | 0.4475      |
| $L^*_{N} = 52.02$ | N     | 0.0        | 0.0        | 0.0        | 52.02   | 0.0     | 0.0     | 0.0          | 0          | 19.16(=0.0+19.16)   | 20.16(=0.0+20.16)   | 21.95(=0.0+21.95)   | 0.3127 | 0.329  | 0.2276      |
|                   | W     | 1.0        | 1.0        | 1.0        | 95.41   | 0.0     | 0.0     | 0.0          | 0          | 84.2(=65.04+19.16)  | 88.59(=68.43+20.16) | 96.46(=74.51+21.95) | 0.3127 | 0.329  | 1.0         |
|                   | N0    | 0.0        | 0.0        | 0.0        | 52.02   | 0.0     | 0.0     | 0.0          | 0          | 19.16(=0.0+19.16)   | 20.16(=0.0+20.16)   | 21.95(=0.0+21.95)   | 0.3127 | 0.329  | 0.2276      |
|                   | W1    | 1.0        | 1.0        | 1.0        | 95.41   | 0.0     | 0.0     | 0.0          | 0          | 84.2(=65.04+19.16)  | 88.59(=68.43+20.16) | 96.46(=74.51+21.95) | 0.3127 | 0.329  | 1.0         |

| System TLS70a    | Farbe | $r=olv*_1$ | $g=olv*_2$ | $b=olv*_3$ | $L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h_{ab,a}$ | $X_a=XYZ1a$         | $Y_a=XYZ2a$         | $Z_a=XYZ3a$        | $x_a$  | $y_a$  | $Y_a/88.59$ |
|------------------|-------|------------|------------|------------|---------|---------|---------|--------------|------------|---------------------|---------------------|--------------------|--------|--------|-------------|
| sRGB-System      | O (R) | 1.0        | 0.0        | 0.0        | 76.43   | 26.27   | 10.57   | 28.31        | 22         | 58.23(=19.91+38.32) | 50.59(=10.27+40.32) | 44.83(=0.93+43.9)  | 0.379  | 0.3292 | 0.571       |
|                  | Y     | 1.0        | 1.0        | 0.0        | 93.93   | -10.77  | 34.63   | 36.27        | 107        | 75.49(=37.17+38.32) | 85.11(=44.79+40.32) | 50.58(=6.68+43.9)  | 0.3575 | 0.403  | 0.9606      |
| D65-Reflexion:   | L (G) | 0.0        | 1.0        | 0.0        | 89.32   | -35.82  | 27.64   | 45.25        | 142        | 55.58(=17.26+38.32) | 74.84(=34.52+40.32) | 49.65(=5.75+43.9)  | 0.3087 | 0.4156 | 0.8448      |
|                  | C     | 0.0        | 1.0        | 1.0        | 90.93   | -21.97  | -7.09   | 23.1         | 198        | 64.3(=25.98+38.32)  | 78.33(=38.01+40.32) | 95.52(=51.62+43.9) | 0.27   | 0.3289 | 0.8842      |
| $Y_N = 40.32$    | V (B) | 0.0        | 0.0        | 1.0        | 71.46   | 4.57    | -9.01   | 10.11        | 297        | 42.23(=3.91+38.32)  | 42.85(=2.53+40.32)  | 55.55(=11.64+43.9) | 0.3003 | 0.3047 | 0.4837      |
|                  | M     | 1.0        | 0.0        | 1.0        | 78.5    | 37.52   | -25.24  | 45.23        | 326        | 66.94(=28.62+38.32) | 54.07(=13.75+40.32) | 90.7(=46.8+43.9)   | 0.3162 | 0.2554 | 0.6103      |
| $L^*_{N} = 69.7$ | N     | 0.0        | 0.0        | 0.0        | 69.7    | 0.0     | 0.0     | 0.0          | 0          | 38.32(=0.0+38.32)   | 40.32(=0.0+40.32)   | 43.9(=0.0+43.9)    | 0.3127 | 0.329  | 0.4551      |
|                  | W     | 1.0        | 1.0        | 1.0        | 95.41   | 0.0     | 0.0     | 0.0          | 0          | 84.2(=45.88+38.32)  | 88.59(=48.27+40.32) | 96.46(=52.56+43.9) | 0.3127 | 0.329  | 1.0         |
|                  | N0    | 0.0        | 0.0        | 0.0        | 69.7    | 0.0     | 0.0     | 0.0          | 0          | 38.32(=0.0+38.32)   | 40.32(=0.0+40.32)   | 43.9(=0.0+43.9)    | 0.3127 | 0.329  | 0.4551      |
|                  | W1    | 1.0        | 1.0        | 1.0        | 95.41   | 0.0     | 0.0     | 0.0          | 0          | 84.2(=45.88+38.32)  | 88.59(=48.27+40.32) | 96.46(=52.56+43.9) | 0.3127 | 0.329  | 1.0         |

JG310-7N, Farbmetrische Daten des Fernseh-Lichtfarben-Systems TLS00a für CIE-Normlichtart D65; sRGB System; Seite: 3/3

TUB-Prüfvorlage JG31; 8 Basis-Farben OYL CVMNW, TLS00 Eingabe:  $olv^*$  setrgbcolor  
Berechnung von CIE-Daten für sRGB-Display für 8 Reflexionen Ausgabe: keine Eingabe-Änderung