

| X                                  | Y     | Z      | x     | y     | L*    | a*     | b*     | a'     | b'      | OYLCVM_ONW_0             |
|------------------------------------|-------|--------|-------|-------|-------|--------|--------|--------|---------|--------------------------|
| <b>CIE Illuminant E</b>            |       |        |       |       |       |        |        |        |         |                          |
| 61.49                              | 35.75 | 0.03   | 0.632 | 0.367 | 66.3  | 70.3   | 113.7  | 0.2581 | -0.0089 | %O=JR 00 575_770         |
| 83.16                              | 86.74 | 1.54   | 0.485 | 0.505 | 94.6  | -6.6   | 140.9  | 0.2124 | -0.0224 | %Y=J=JG+JR 01 515_770    |
| 21.66                              | 50.98 | 1.5    | 0.292 | 0.687 | 76.6  | -99.1  | 110.4  | 0.1619 | -0.0266 | %L=JG 02 515_575         |
| 8.5                                | 25.04 | 11.07  | 0.19  | 0.561 | 57.1  | -95.3  | 30.0   | 0.1502 | -0.0656 | %Gs 03 0,35*JG+0,65*BG   |
| 1.41                               | 11.08 | 16.22  | 0.049 | 0.385 | 39.7  | -119.2 | -13.0  | 0.1084 | -0.0978 | %Cs=BG 04 475_515        |
| 16.83                              | 13.25 | 98.45  | 0.13  | 0.103 | 43.1  | 21.1   | -96.9  | 0.2333 | -0.1681 | %V=B=BR+BG 05 380_515    |
| 15.41                              | 2.17  | 82.23  | 0.154 | 0.021 | 16.3  | 128.5  | -131.5 | 0.4139 | -0.2892 | %Ms=BR 06 380_475        |
| 55.04                              | 31.05 | 11.54  | 0.563 | 0.318 | 62.5  | 71.1   | 38.0   | 0.2607 | -0.0619 | %Rs 07 0,14*BR+0,86*JR   |
| 61.49                              | 35.75 | 0.03   | 0.632 | 0.367 | 66.3  | 70.3   | 113.7  | 0.2581 | -0.0089 | %O=JR 08 575_770         |
| 0.1                                | 0.1   | 0.1    | 0.332 | 0.332 | 0.9   | 0.0    | 0.0    | 0.2154 | -0.0861 | %N0 (β=0,001) 09 380_770 |
| 100.0                              | 100.0 | 100.0  | 0.333 | 0.333 | 100.0 | 0.0    | 0.0    | 0.2154 | -0.0861 | %W1 (β=1,000) 10 380_770 |
| <b>CIE Standard Illuminant D65</b> |       |        |       |       |       |        |        |        |         |                          |
| 54.81                              | 32.31 | 0.03   | 0.628 | 0.37  | 63.6  | 73.0   | 109.1  | 0.2613 | -0.0087 | %O=JR 00 575_770         |
| 76.89                              | 85.27 | 1.63   | 0.469 | 0.52  | 94.0  | -8.2   | 140.2  | 0.2116 | -0.0224 | %Y=J=JG+JR 01 515_770    |
| 22.07                              | 52.96 | 1.6    | 0.288 | 0.69  | 77.8  | -97.1  | 112.7  | 0.1636 | -0.0261 | %L=JG 02 515_575         |
| 8.78                               | 26.49 | 12.51  | 0.183 | 0.554 | 58.5  | -95.0  | 31.2   | 0.1516 | -0.0652 | %Gs 03 0,35*JG+0,65*BG   |
| 1.61                               | 12.23 | 18.38  | 0.05  | 0.379 | 41.5  | -119.5 | -11.2  | 0.1116 | -0.0959 | %Cs=BG 04 475_515        |
| 18.14                              | 14.72 | 107.25 | 0.129 | 0.105 | 45.2  | 23.9   | -93.3  | 0.2349 | -0.1623 | %V=B=BR+BG 05 380_515    |
| 16.52                              | 2.48  | 88.86  | 0.153 | 0.023 | 17.8  | 133.2  | -128.5 | 0.4121 | -0.276  | %Ms=BR 06 380_475        |
| 49.45                              | 28.13 | 12.47  | 0.549 | 0.312 | 60.0  | 74.5   | 33.9   | 0.2644 | -0.0638 | %Rs 07 0,14*BR+0,86*JR   |
| 54.81                              | 32.31 | 0.03   | 0.628 | 0.37  | 63.6  | 73.0   | 109.1  | 0.2613 | -0.0087 | %O=JR 08 575_770         |
| 0.09                               | 0.1   | 0.1    | 0.311 | 0.327 | 0.9   | 0.0    | 0.0    | 0.2154 | -0.0861 | %N0 (β=0,001) 09 380_770 |
| 95.04                              | 100.0 | 108.89 | 0.312 | 0.329 | 100.0 | 0.0    | 0.0    | 0.2154 | -0.0861 | %W1 (β=1,000) 10 380_770 |
| <b>CIE Illuminant A</b>            |       |        |       |       |       |        |        |        |         |                          |
| 83.51                              | 46.75 | 0.04   | 0.64  | 0.358 | 74.0  | 68.2   | 125.5  | 0.2533 | -0.0122 | %O=JR 00 575_770         |
| 104.38                             | 92.56 | 1.2    | 0.526 | 0.467 | 97.0  | 4.2    | 130.1  | 0.2173 | -0.0286 | %Y=J=JG+JR 01 515_770    |
| 20.87                              | 45.8  | 1.15   | 0.307 | 0.675 | 73.4  | -97.9  | 90.3   | 0.1606 | -0.0356 | %L=JG 02 515_575         |
| 7.77                               | 20.34 | 5.93   | 0.228 | 0.597 | 52.2  | -87.2  | 7.5    | 0.1515 | -0.0806 | %Gs 03 0,35*JG+0,65*BG   |
| 0.71                               | 6.63  | 8.5    | 0.045 | 0.418 | 30.9  | -108.0 | -43.1  | 0.0993 | -0.1321 | %Cs=BG 04 475_515        |
| 5.45                               | 7.43  | 34.37  | 0.115 | 0.157 | 32.7  | -26.3  | -113.6 | 0.1883 | -0.2026 | %V=B=BR+BG 05 380_515    |
| 4.74                               | 0.8   | 25.87  | 0.151 | 0.025 | 7.2   | 75.2   | -139.7 | 0.3775 | -0.387  | %Ms=BR 06 380_475        |
| 72.48                              | 40.32 | 3.66   | 0.622 | 0.346 | 69.7  | 65.9   | 54.0   | 0.2538 | -0.0546 | %Rs 07 0,14*BR+0,86*JR   |
| 83.51                              | 46.75 | 0.04   | 0.64  | 0.358 | 74.0  | 68.2   | 125.5  | 0.2533 | -0.0122 | %O=JR 08 575_770         |
| 0.1                                | 0.09  | 0.03   | 0.445 | 0.405 | 0.9   | 0.0    | 0.0    | 0.2154 | -0.0861 | %N0 (β=0,001) 09 380_770 |
| 109.84                             | 99.99 | 35.58  | 0.447 | 0.407 | 99.9  | 0.0    | 0.0    | 0.2154 | -0.0861 | %W1 (β=1,000) 10 380_770 |

$$a^* = 500 \left[ \left( \frac{X}{X_n} \right)^{1/3} - \left( \frac{Y}{Y_n} \right)^{1/3} \right] \quad b^* = 200 \left[ \left( \frac{Y}{Y_n} \right)^{1/3} - \left( \frac{Z}{Z_n} \right)^{1/3} \right] \quad a' = \left( \frac{1}{X_n} \right)^{1/3} (x/y)^{1/3} \quad b' = -0,4 \left( \frac{1}{Z_n} \right)^{1/3} (z/y)^{1/3} \quad (X, Y, Z \geq 0,89)$$

$$= 500 (a' - a'_n) Y^{1/3} \quad = 500 (b' - b'_n) Y^{1/3} \quad = 0,2191 (x/y)^{1/3} \quad = -0,08376 (z/y)^{1/3} \quad \text{CIELAB für } n=D65$$

| X                                  | Y     | Z      | x     | y     | L*    | a*    | b*     | a'     | b'      | OYLCVM_ONW_1              |
|------------------------------------|-------|--------|-------|-------|-------|-------|--------|--------|---------|---------------------------|
| <b>CIE Illuminant E</b>            |       |        |       |       |       |       |        |        |         |                           |
| 61.49                              | 35.75 | 0.03   | 0.632 | 0.367 | 66.3  | 70.3  | 113.7  | 0.2581 | -0.0089 | %O=JR 00 575_770          |
| 83.16                              | 86.74 | 1.54   | 0.485 | 0.505 | 94.6  | -6.6  | 140.9  | 0.2124 | -0.0224 | %Y=J=JG+JR 01 515_770     |
| 21.66                              | 50.98 | 1.5    | 0.292 | 0.687 | 76.6  | -99.1 | 110.4  | 0.1619 | -0.0266 | %L=JG 02 515_575          |
| 26.71                              | 54.96 | 31.04  | 0.237 | 0.487 | 79.0  | -87.5 | 28.4   | 0.1693 | -0.0712 | %G 03 0,70*L+0,30*C       |
| 38.5                               | 64.24 | 99.96  | 0.189 | 0.316 | 84.0  | -67.6 | -27.4  | 0.1816 | -0.0998 | %C=L+V 04 380_575         |
| 16.83                              | 13.25 | 98.45  | 0.13  | 0.103 | 43.1  | 21.1  | -96.9  | 0.2333 | -0.1681 | %V=B=BR+BG 05 380_515     |
| 78.33                              | 49.01 | 98.49  | 0.346 | 0.217 | 75.4  | 66.6  | -41.3  | 0.2518 | -0.1087 | %M=V+O 06 380_515+575_770 |
| 64.52                              | 38.14 | 17.76  | 0.535 | 0.316 | 68.1  | 69.4  | 32.6   | 0.2567 | -0.0667 | %R 07 0,18*M+0,82*O       |
| 61.49                              | 35.75 | 0.03   | 0.632 | 0.367 | 66.3  | 70.3  | 113.7  | 0.2581 | -0.0089 | %O=JR 08 575_770          |
| 0.1                                | 0.1   | 0.1    | 0.332 | 0.332 | 0.9   | 0.0   | 0.0    | 0.2154 | -0.0861 | %N0 (β=0,001) 09 380_770  |
| 100.0                              | 100.0 | 100.0  | 0.333 | 0.333 | 100.0 | 0.0   | 0.0    | 0.2154 | -0.0861 | %W1 (β=1,000) 10 380_770  |
| <b>CIE Standard Illuminant D65</b> |       |        |       |       |       |       |        |        |         |                           |
| 54.81                              | 32.31 | 0.03   | 0.628 | 0.37  | 63.6  | 73.0  | 109.1  | 0.2613 | -0.0087 | %O=JR 00 575_770          |
| 76.89                              | 85.27 | 1.63   | 0.469 | 0.52  | 94.0  | -8.2  | 140.2  | 0.2116 | -0.0224 | %Y=J=JG+JR 01 515_770     |
| 22.07                              | 52.96 | 1.6    | 0.288 | 0.69  | 77.8  | -97.1 | 112.7  | 0.1636 | -0.0261 | %L=JG 02 515_575          |
| 27.52                              | 57.37 | 33.77  | 0.231 | 0.483 | 80.3  | -84.6 | 30.8   | 0.1715 | -0.0702 | %G 03 0,70*L+0,30*C       |
| 40.22                              | 67.68 | 108.85 | 0.185 | 0.312 | 85.8  | -63.5 | -24.3  | 0.1842 | -0.0981 | %C=L+V 04 380_575         |
| 18.14                              | 14.72 | 107.25 | 0.129 | 0.105 | 45.2  | 23.9  | -93.3  | 0.2349 | -0.1623 | %V=B=BR+BG 05 380_515     |
| 72.96                              | 47.03 | 107.28 | 0.321 | 0.206 | 74.2  | 68.9  | -43.4  | 0.2536 | -0.1102 | %M=V+O 06 380_515+575_770 |
| 58.08                              | 34.96 | 19.34  | 0.516 | 0.311 | 65.7  | 72.0  | 28.4   | 0.2595 | -0.0687 | %R 07 0,18*M+0,82*O       |
| 54.81                              | 32.31 | 0.03   | 0.628 | 0.37  | 63.6  | 73.0  | 109.1  | 0.2613 | -0.0087 | %O=JR 08 575_770          |
| 0.09                               | 0.1   | 0.1    | 0.311 | 0.327 | 0.9   | 0.0   | 0.0    | 0.2154 | -0.0861 | %N0 (β=0,001) 09 380_770  |
| 95.04                              | 100.0 | 108.89 | 0.312 | 0.329 | 100.0 | 0.0   | 0.0    | 0.2154 | -0.0861 | %W1 (β=1,000) 10 380_770  |
| <b>CIE Illuminant A</b>            |       |        |       |       |       |       |        |        |         |                           |
| 83.51                              | 46.75 | 0.04   | 0.64  | 0.358 | 74.0  | 68.2  | 125.5  | 0.2533 | -0.0122 | %O=JR 00 575_770          |
| 104.38                             | 92.56 | 1.2    | 0.526 | 0.467 | 97.0  | 4.2   | 130.1  | 0.2173 | -0.0286 | %Y=J=JG+JR 01 515_770     |
| 20.87                              | 45.8  | 1.15   | 0.307 | 0.675 | 73.4  | -97.9 | 90.3   | 0.1606 | -0.0356 | %L=JG 02 515_575          |
| 22.51                              | 48.03 | 11.47  | 0.274 | 0.585 | 74.8  | -96.7 | 19.4   | 0.1621 | -0.0754 | %G 03 0,70*L+0,30*C       |
| 26.33                              | 53.24 | 35.53  | 0.228 | 0.462 | 78.0  | -94.6 | -37.8  | 0.1651 | -0.1062 | %C=L+V 04 380_575         |
| 5.45                               | 7.43  | 34.37  | 0.115 | 0.157 | 32.7  | -26.3 | -113.6 | 0.1883 | -0.2026 | %V=B=BR+BG 05 380_515     |
| 88.97                              | 54.19 | 34.42  | 0.501 | 0.305 | 78.5  | 58.4  | -34.7  | 0.2463 | -0.1045 | %M=V+O 06 380_515+575_770 |
| 84.49                              | 48.09 | 6.23   | 0.608 | 0.346 | 74.8  | 66.3  | 44.7   | 0.2519 | -0.0615 | %R 07 0,18*M+0,82*O       |
| 83.51                              | 46.75 | 0.04   | 0.64  | 0.358 | 74.0  | 68.2  | 125.5  | 0.2533 | -0.0122 | %O=JR 08 575_770          |
| 0.1                                | 0.09  | 0.03   | 0.445 | 0.405 | 0.9   | 0.0   | 0.0    | 0.2154 | -0.0861 | %N0 (β=0,001) 09 380_770  |
| 109.84                             | 99.99 | 35.58  | 0.447 | 0.407 | 99.9  | 0.0   | 0.0    | 0.2154 | -0.0861 | %W1 (β=1,000) 10 380_770  |

$$\begin{aligned}
 a^* &= 500 \left[ \left( \frac{X}{X_n} \right)^{1/3} - \left( \frac{Y}{Y_n} \right)^{1/3} \right] & b^* &= 200 \left[ \left( \frac{Y}{Y_n} \right)^{1/3} - \left( \frac{Z}{Z_n} \right)^{1/3} \right] & a' &= \left( \frac{1}{X_n} \right)^{1/3} (x/y)^{1/3} & b' &= -0,4 \left( \frac{1}{Z_n} \right)^{1/3} (z/y)^{1/3} & (X, Y, Z \geq 0,89) \\
 &= 500 (a' - a'_n) Y^{1/3} & &= 500 (b' - b'_n) Y^{1/3} & &= 0,2191 (x/y)^{1/3} & &= -0,08376 (z/y)^{1/3} & \text{CIELAB für } n=D65
 \end{aligned}$$

Siehe Original/Kopie: http://web.me.com/klaus.richter/JG55/JG55L0NA.TXT /PS  
Technische Information: http://www.ps.bam.de oder http://130.149.60.45/~farbmetrik

TUB-Registrierung: 20100301-JG55/JG55L0NA.TXT /PS TUB-Material: Code=rh4ta  
Anwendung für Beurteilung und Messung von Drucker- oder Monitorsystemen