

X	Y	Z	x	y	L*	a*	b*	a'	b'	OYLCVM_ONW_0	
CIE Illuminant E											
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
CIE Standard Illuminant D65											
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
CIE Illuminant A											
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

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

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

X	Y	Z	x	y	L*	a*	b*	a'	b'	OYLCVM_ONW_1	
CIE Illuminant E											
61.49	35.75	0.03	0.632	0.367	66.3	70.3	113.7	0.2581	-0.0089	%0=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	%0=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
CIE Standard Illuminant D65											
54.81	32.31	0.03	0.628	0.37	63.6	73.0	109.1	0.2613	-0.0087	%0=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	%0=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
CIE Illuminant A											
83.51	46.75	0.04	0.64	0.358	74.0	68.2	125.5	0.2533	-0.0122	%0=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	%0=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

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

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