

UGRA

Display Analysis & Certification Tool

Report

Basics

Date: 2009-9-26 15:48:13
Report-Version: v1.3.1
Monitor-Name: \\.\DISPLAY1
EDID-Name:
EDID-Serial:
Profile: C:/WINDOWS/System32/spool/.../23.09.09-6500K-22-140cd-trc.icc
Created: 2009-9-23 21:21
Measurement device: DTP94-LCD mode

Summary

The monitor has passed the certification according to the UGRA DACT specifications.

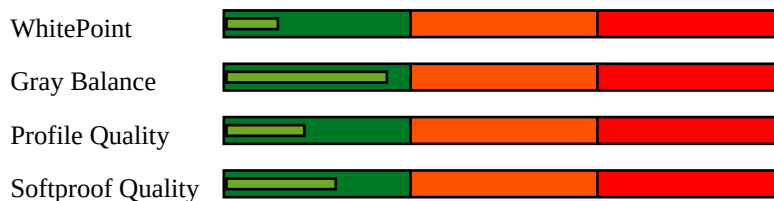
Calibration

White Point	yes
Gray balance	yes
Profile quality	yes

Softproofing

MultiColor, HighBody	no
Offset/Gravure Paper Type 1/2	yes
Offset on uncoated paper	yes
Newspaper Printing	yes
sRGB	yes
AdobeRGB	no
ECI-RGB	no

Diagram



Whitepoint

The whitepoint should be as close as possible to the black body curve and the calibration target. The maximum allowed distance to the target whitepoint is DeltaE 2.0.

XYZ:	131.55 138.30 151.79
XYZ (normalized):	95.12 100.00 109.76
Luminance:	138.3 Cd/m2
Next Temperature:	6550 Kelvin
Assumed Target Whitepoint:	6500 Kelvin
Distance to assumed Target Whitepoint:	0.6 deltaE

Blackpoint

The blackpoint is not defined in ISO 12646. Therefore UDACT does only measure but not assess it.

Luminance:	0.2 Cd/m2
Chromaticity:	1.6 Chroma (Lab)

Gray balance

Average and maximum calculation will respect measurements with 1% minimum luminance only. The maximum allowed deviations to comply with this test are an average of DeltaC 1.0 and a range of DeltaC 2.0.

%	Kelvin	Cd/m2	L	Chroma	Gamma
0	17087	0.20	1.31	1.63	
5	8854	0.40	2.61	1.46	2.19
10	6918	1.10	7.18	0.81	2.20
15	6542	2.40	14.03	0.17	2.20
20	6413	4.30	20.48	0.67	2.20
25	6480	6.60	26.08	0.39	2.23
30	6440	9.80	32.00	0.47	2.22
35	6550	13.80	37.80	0.00	2.21
40	6614	18.50	43.33	0.29	2.21
45	6597	24.20	48.88	0.59	2.20
50	6614	30.00	53.70	0.35	2.21
55	6614	37.50	59.08	0.37	2.19
60	6623	44.90	63.73	0.74	2.20
65	6558	52.70	68.10	0.46	2.24
70	6605	63.00	73.25	0.44	2.21
75	6534	74.40	78.34	1.04	2.18
80	6605	85.10	82.66	0.48	2.18
85	6597	95.70	86.60	0.94	2.29
90	6605	109.80	91.41	0.52	2.19
95	6550	123.60	95.74	0.00	2.20
100	6550	138.30	100.00	0.00	
Average	6561			0.44	2.21
Range				1.73	
Max				1.04	

Tone values = 95.6%

Through the calibration of a display tone values can be lost. A display for the printing industry should show at least 95% of the incoming tone values.

Profile Quality

This test displays and measures RGB values and compares them with the transformation of the profile. The maximum allowed deviations to comply with this test are an average of DeltaE 3.0 and a maximum of DeltaE 6.0.

The assumed chromatic adaptation is: Bradford

RGB	Lab	deltaLab	deltaE
0 0 0	1.3 0.3 -1.6	-1.3 -0.3 1.6	2.1
0 0 128	9.8 48.2 -71.4	-1.0 -0.0 -0.8	1.3
0 0 255	25.7 81.4 -118.7	-0.5 -1.6 -0.9	1.9
0 128 0	45.9 -51.2 48.1	0.5 0.6 0.9	1.2
0 128 128	47.6 -33.0 -9.7	0.1 0.4 -0.4	0.6
0 170 255	64.5 -14.5 -55.6	0.1 -1.2 0.5	1.3
0 255 0	87.5 -85.5 82.7	0.0 1.7 -1.6	2.3
0 255 170	88.3 -72.0 25.8	0.1 1.3 -1.4	1.9
0 255 255	89.5 -54.1 -15.9	0.1 0.1 -0.8	0.8
85 85 85	35.9 -0.2 -0.1	-0.1 0.2 0.1	0.3
128 0 0	27.9 46.8 39.4	-0.1 1.0 2.3	2.5
128 0 128	30.6 57.5 -36.2	-0.2 -0.1 0.2	0.3
128 128 0	52.6 -10.1 56.7	0.3 0.3 0.5	0.6
128 128 128	54.1 -0.1 -0.4	-0.1 0.1 0.4	0.4
128 128 255	57.9 27.9 -65.9	-0.4 -0.6 -0.1	0.7
128 255 128	90.5 -58.4 48.8	-0.0 0.6 -0.5	0.7
170 0 255	45.2 85.8 -87.1	-0.2 -1.6 1.0	1.9
170 170 170	70.0 0.4 -0.3	0.2 -0.4 0.3	0.5
170 255 0	92.2 -50.4 89.0	-0.0 0.8 -1.8	2.0
170 255 255	94.1 -27.8 -9.3	-0.0 0.3 -0.2	0.3
255 0 0	56.8 78.6 72.8	-0.2 0.7 -0.2	0.7
255 0 170	58.6 85.9 -16.3	-0.2 0.4 0.5	0.7
255 0 255	60.7 95.2 -61.0	0.1 0.1 1.4	1.5
255 128 128	70.4 48.5 25.0	-0.1 0.6 0.5	0.8
255 170 0	77.9 24.3 82.9	0.3 0.2 -0.9	1.0
255 170 255	80.8 42.5 -28.7	0.0 -0.3 0.2	0.4
255 255 0	98.2 -17.5 96.8	0.1 1.2 -1.9	2.3
255 255 170	98.9 -10.4 40.9	0.1 1.0 -0.2	1.0
255 255 255	100.0 0.0 0.0	0.0 0.0 0.0	0.0
170 85 85	48.1 36.0 18.9	-0.1 0.7 0.2	0.7
85 170 85	62.7 -43.4 36.3	0.3 0.3 -0.3	0.5
85 85 170	38.8 20.7 -48.9	-0.3 -0.3 -0.4	0.6
85 170 170	64.0 -28.7 -9.7	0.2 -0.2 0.3	0.4
170 85 170	50.0 46.7 -30.5	-0.2 -0.1 -0.1	0.2
170 170 85	68.9 -9.5 44.8	0.3 0.2 0.2	0.4
Average			1.0
Maximum			2.5

Gamut-Volume

These measurements are only informative.

Gamut-Volume	
ISO	93 %
sRGB	100 %
AdobeRGB	80 %
ECI-RGB v1.0	73 %

ISO-Gamut

This test displays and measures Lab values and compares them with the reference. The maximum allowed deviations to comply with this test are an average of DeltaE 4.0 and a minimum Gamut volume of 90% for ISOcoated.

Reference	Lab	deltaLab
55.0 -37.0 -50.0	58.1 -18.4 -44.3	19.7
66.9 -24.7 -37.1	67.0 -24.4 -36.9	0.4
79.7 -12.5 -21.8	79.9 -12.5 -22.2	0.4
48.0 74.0 -3.0	48.1 72.6 -3.8	1.6
60.8 50.6 -6.7	61.1 49.6 -6.6	1.0
76.4 25.8 -6.9	76.2 26.3 -7.9	1.2
89.0 -5.0 93.0	88.9 -6.0 89.5	3.7
90.3 -4.7 62.6	90.4 -5.9 62.7	1.2
92.2 -3.5 31.1	92.5 -4.9 31.5	1.5
53.1 37.7 28.9	53.3 36.8 28.7	1.0
41.5 22.7 16.8	41.9 23.2 17.0	0.6
31.9 40.0 24.0	32.5 38.7 23.3	1.5
32.5 44.5 -1.8	33.1 43.7 -1.2	1.1
51.3 1.3 44.5	51.5 0.7 44.3	0.6
34.6 -36.4 13.9	34.4 -35.1 13.9	1.4
36.0 -26.2 -20.9	36.8 -20.8 -19.2	5.7
20.9 9.6 -23.6	21.8 8.9 -22.4	1.7
89.0 0.0 -1.9	89.0 -1.2 -1.9	1.2
82.8 0.0 -1.7	82.8 -0.2 -1.5	0.3
69.3 0.0 -1.4	69.1 0.2 -1.6	0.3
54.1 0.0 -1.0	54.1 0.7 -1.8	1.1
36.6 0.0 -0.5	36.7 -0.4 -0.9	0.5
16.0 0.0 0.0	17.1 -0.1 0.4	1.1
24.0 22.0 -46.0	24.8 21.7 -45.4	1.0
40.9 17.9 -36.6	41.2 17.9 -36.0	0.7
63.7 10.3 -23.8	63.7 10.8 -24.3	0.7
47.0 68.0 48.0	47.0 67.0 46.9	1.5
58.5 47.1 37.9	58.6 46.1 37.4	1.1
74.2 22.9 21.4	74.0 23.0 20.7	0.7
50.0 -65.0 27.0	51.7 -50.9 30.6	14.6
62.1 -39.8 21.0	61.9 -40.0 20.7	0.4
77.0 -19.1 11.0	77.2 -20.4 11.5	1.4
71.2 18.9 17.3	70.9 18.1 16.1	1.4
71.2 22.1 73.1	71.0 22.0 73.4	0.5
47.7 71.2 16.2	47.7 70.0 15.5	1.4
38.0 55.4 -20.9	38.4 54.4 -21.3	1.1
73.7 -22.8 67.6	73.9 -24.5 68.4	1.9
52.3 -52.3 -20.1	55.0 -34.3 -14.7	19.0
43.3 -17.0 -48.6	45.2 -8.5 -45.5	9.3
95.0 0.0 -2.0	95.0 0.2 -2.0	0.2
88.5 -0.4 -3.1	88.5 -0.5 -3.1	0.1
82.0 -0.9 -4.1	82.1 -1.0 -3.6	0.5
67.7 -2.0 -4.4	67.5 -1.9 -4.6	0.3
52.2 -2.5 -3.5	52.5 -1.8 -3.5	0.7
37.5 -3.9 -3.1	37.6 -4.0 -2.9	0.4
26.3 -6.8 -3.4	26.8 -7.0 -2.9	0.8
Average		2.4
Gamut-Volume		93 %

Measurement Data

This table lists all RGB measurements. The XYZ values represent the values from the measurement device.

RGB	XYZ	RGB	XYZ
255 255 255	131.55 138.30 151.79	85 85 170	19.65 15.10 56.22
0 0 0	0.21 0.20 0.37	85 170 170	34.18 45.90 61.15
12 12 12	0.40 0.40 0.57	170 85 170	39.17 25.50 57.34
25 25 25	1.06 1.10 1.28	170 170 85	45.76 53.60 19.49
38 38 38	2.28 2.40 2.62	0 153 217	31.63 37.10 96.89
51 51 51	4.07 4.30 4.58	52 178 228	41.97 51.80 110.97
63 63 63	6.26 6.60 7.14	154 206 237	69.86 78.90 125.20
76 76 76	9.38 9.80 10.70	210 0 122	44.06 22.70 28.61
89 89 89	13.13 13.80 15.15	218 105 159	58.27 40.10 51.81
102 102 102	17.59 18.50 20.48	227 169 201	80.14 69.20 88.46
114 114 114	22.88 24.20 26.48	245 221 0	88.72 100.70 13.60
127 127 127	28.53 30.00 33.21	244 226 102	93.67 105.50 32.69
140 140 140	35.67 37.50 41.51	241 232 171	101.94 112.50 71.10
153 153 153	42.83 44.90 50.00	188 96 81	38.53 28.90 14.21
165 165 165	50.28 52.70 58.18	135 82 73	20.77 16.90 10.75
178 178 178	59.73 63.00 69.34	130 43 45	15.45 9.80 4.18
191 191 191	70.34 74.40 80.71	132 40 82	17.34 10.30 12.13
204 204 204	80.69 85.10 93.66	138 118 46	25.02 26.90 6.95
216 216 216	90.46 95.70 104.72	0 95 60	6.26 11.40 7.28
229 229 229	104.11 109.80 120.85	0 98 116	9.94 13.30 25.48
242 242 242	117.57 123.60 135.66	52 51 86	5.70 4.90 12.85
0 0 128	5.55 1.90 29.80	221 223 226	97.01 102.70 116.29
0 0 255	24.47 8.10 132.74	204 205 208	81.39 85.60 96.40
0 128 0	9.93 21.00 3.55	167 168 170	52.17 54.70 61.96
0 128 128	15.33 23.10 32.21	128 128 130	29.27 30.50 34.95
0 170 255	43.18 47.80 139.94	86 87 88	12.32 13.00 14.68
0 255 0	46.24 97.90 15.31	44 44 44	3.04 3.20 3.43
0 255 170	55.91 101.00 68.54	56 53 127	9.13 6.30 29.56
0 255 255	70.40 105.60 146.94	100 90 155	20.68 16.90 46.50
85 85 85	11.76 12.40 13.65	155 149 195	48.16 45.20 80.49
128 0 0	13.29 7.20 0.88	208 18 41	39.28 21.30 4.56
128 0 128	18.81 9.00 30.25	218 99 79	50.38 35.80 14.38
128 128 0	23.33 28.30 4.19	228 163 143	71.41 63.80 46.04
128 128 128	29.01 30.50 33.76	0 142 70	14.18 27.50 11.82
128 128 255	48.27 37.10 138.12	81 167 110	26.72 41.90 27.48
128 255 128	65.32 106.90 45.50	159 199 167	57.94 71.80 62.75
170 0 255	49.66 21.40 136.71	211 159 143	62.57 57.60 45.35
170 170 170	53.72 56.30 62.15	229 153 26	62.84 57.20 8.21
170 255 0	71.48 111.30 16.33	210 8 91	41.88 22.10 16.09
170 255 255	95.51 119.20 149.82	153 40 124	25.59 14.10 29.09
255 0 0	60.87 32.70 2.89	165 189 41	47.88 63.80 11.72
255 0 170	70.84 36.00 58.29	0 148 156	22.09 32.20 48.92
255 0 255	84.34 40.20 138.20	0 115 182	19.71 21.10 65.75
255 128 128	76.41 56.00 36.27	239 240 244	115.59 121.20 137.29
255 170 0	79.27 71.90 8.97	219 222 227	96.08 101.10 116.80
255 170 255	104.06 80.50 142.67	198 203 210	79.27 83.70 97.78
255 255 0	106.76 130.20 17.84	157 165 171	48.61 51.70 62.27
255 255 170	116.60 133.40 73.00	118 125 129	26.71 28.50 34.13
170 85 85	31.22 22.90 14.65	81 91 93	12.42 13.70 16.42
85 170 85	26.34 43.20 18.26	53 68 69	5.97 7.00 8.57