

UGRA

Display Analysis & Certification Tool

Report

Basics

Date: 2009-5-16 23:06:52
Report-Version: v1.3.1
Monitor-Name: \\.\DISPLAY1
EDID-Name: DELL 2709W
EDID-Serial: TR0708C406PS
Profile: C:/Windows/system32/spool/.../16.05.09-6500K-22-120cd-trc.icc
Created: 2009-5-16 22:59
Measurement device: DTP94-LCD mode

Summary

The monitor has not passed the certification according to the UGRA DACT specifications.

Calibration

White Point	yes
Gray balance	no
Profile quality	yes

Softproofing

MultiColor, HighBody	no
Offset/Gravure Paper Type 1/2	no
Offset on uncoated paper	no
Newspaper Printing	no
sRGB	no
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:	108.72 114.30 125.45
XYZ (normalized):	95.12 100.00 109.76
Luminance:	114.3 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:	0.1 Cd/m2
Chromaticity:	0.4 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	9308	0.10	0.79	0.35	
5	7218	0.30	2.37	0.55	2.11
10	6726	0.90	7.11	0.27	2.16
15	6597	1.90	13.60	0.27	2.19
20	6426	3.50	20.29	0.36	2.19
25	6326	5.40	25.93	0.71	2.22
30	6597	8.10	32.00	0.44	2.21
35	6534	11.60	38.11	0.59	2.19
40	6480	15.50	43.60	0.55	2.19
45	6480	19.60	48.45	0.60	2.22
50	6480	24.80	53.70	0.65	2.22
55	6379	30.80	58.92	0.93	2.20
60	6480	37.40	63.93	0.74	2.20
65	6495	44.00	68.38	0.41	2.22
70	6487	51.90	73.16	0.44	2.23
75	6542	60.40	77.78	0.52	2.23
80	6542	69.90	82.46	0.54	2.22
85	6542	79.60	86.82	0.57	2.25
90	6480	90.60	91.35	0.99	2.27
95	6542	101.90	95.64	0.61	2.30
100	6550	114.30	100.00	0.00	
Average	6498			0.55	2.21
Range				1.25	
Max				0.99	

Tone values = 94.0%

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	0.8 -0.2 -0.3	-0.8 0.2 0.3	0.9
0 0 128	12.5 40.4 -67.3	0.5 -2.2 0.9	2.5
0 0 255	32.9 60.6 -109.3	-0.8 2.6 -0.7	2.9
0 128 0	44.4 -80.2 48.7	-0.2 1.2 -0.1	1.2
0 128 128	46.3 -52.7 -12.7	0.1 0.9 -0.1	0.9
0 170 255	64.6 -34.8 -57.0	-0.2 1.8 -0.2	1.8
0 255 0	83.7 -130.5 82.0	0.2 -0.3 -1.6	1.6
0 255 170	85.1 -109.3 19.6	0.3 -0.5 0.2	0.6
0 255 255	87.4 -86.3 -21.2	0.1 0.4 -0.0	0.4
85 85 85	36.2 0.0 0.3	-0.3 -0.0 -0.3	0.4
128 0 0	30.5 58.3 49.0	-0.1 0.0 1.5	1.5
128 0 128	33.8 64.5 -29.9	0.0 -1.2 -0.8	1.4
128 128 0	52.7 -10.8 61.5	-0.4 1.3 -0.2	1.4
128 128 128	54.2 -0.2 0.6	-0.2 0.2 -0.6	0.7
128 128 255	60.2 23.3 -63.3	-0.7 1.6 -1.2	2.1
128 255 128	87.7 -81.9 46.2	0.2 -1.2 -0.3	1.2
170 0 255	51.4 84.2 -77.1	-0.7 1.1 -0.9	1.6
170 170 170	70.3 0.1 0.4	-0.1 -0.1 -0.4	0.4
170 255 0	89.6 -66.1 91.1	0.2 -0.4 -1.3	1.4
170 255 255	93.0 -40.1 -11.7	-0.1 -0.8 -0.3	0.9
255 0 0	60.9 96.9 96.2	-0.0 -0.3 0.2	0.3
255 0 170	63.2 101.4 -7.1	0.1 -1.3 -0.1	1.3
255 0 255	66.9 104.2 -50.8	-0.2 0.6 0.0	0.7
255 128 128	72.9 63.1 31.8	-0.2 0.5 -0.4	0.7
255 170 0	79.4 35.9 93.8	-0.2 0.9 -0.9	1.3
255 170 255	83.5 49.8 -24.9	-0.4 0.9 -0.4	1.1
255 255 0	97.0 -15.4 103.7	0.2 -0.4 -2.1	2.1
255 255 170	98.1 -8.0 41.8	0.2 -0.9 -0.2	1.0
255 255 255	100.0 0.0 0.0	0.0 0.0 -0.0	0.0
170 85 85	50.2 47.0 23.7	-0.4 0.4 -0.2	0.6
85 170 85	61.3 -62.0 34.4	-0.2 0.0 -0.1	0.2
85 85 170	40.1 19.1 -47.6	-0.2 -0.5 -0.5	0.7
85 170 170	63.1 -43.9 -11.8	-0.1 -0.2 -0.3	0.4
170 85 170	52.6 54.3 -26.2	-0.2 0.0 -0.5	0.6
170 170 85	68.7 -9.2 46.6	-0.2 0.3 -0.1	0.3
Average			1.1
Maximum			2.9

Gamut-Volume

These measurements are only informative.

Gamut-Volume	
ISO	100 %
sRGB	100 %
AdobeRGB	99 %
ECI-RGB v1.0	95 %

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	55.3 -31.3 -49.2	5.7
66.9 -24.7 -37.1	67.0 -24.0 -37.3	0.8
79.7 -12.5 -21.8	79.8 -12.2 -21.1	0.7
48.0 74.0 -3.0	47.9 74.1 -2.8	0.2
60.8 50.6 -6.7	60.9 50.1 -6.3	0.6
76.4 25.8 -6.9	76.5 25.4 -6.8	0.4
89.0 -5.0 93.0	89.1 -5.7 93.5	0.9
90.3 -4.7 62.6	90.5 -5.6 63.0	1.0
92.2 -3.5 31.1	92.3 -4.0 31.8	0.8
53.1 37.7 28.9	53.5 36.8 29.3	1.1
41.5 22.7 16.8	41.8 22.5 16.6	0.3
31.9 40.0 24.0	32.5 39.6 23.7	0.7
32.5 44.5 -1.8	32.9 44.4 -1.1	0.8
51.3 1.3 44.5	51.5 2.0 44.1	0.9
34.6 -36.4 13.9	35.3 -37.0 14.6	1.2
36.0 -26.2 -20.9	36.3 -26.7 -20.0	1.0
20.9 9.6 -23.6	21.4 10.4 -23.3	1.0
89.0 0.0 -1.9	89.2 -0.7 -1.2	0.9
82.8 0.0 -1.7	82.8 -0.2 -1.5	0.3
69.3 0.0 -1.4	69.5 -0.1 -0.9	0.6
54.1 0.0 -1.0	54.3 -0.1 -0.7	0.3
36.6 0.0 -0.5	37.2 -0.2 0.2	0.9
16.0 0.0 0.0	16.9 0.6 0.1	1.1
24.0 22.0 -46.0	24.2 22.3 -45.0	1.0
40.9 17.9 -36.6	41.1 18.3 -36.2	0.6
63.7 10.3 -23.8	63.6 10.8 -23.4	0.6
47.0 68.0 48.0	47.3 67.5 46.8	1.3
58.5 47.1 37.9	58.8 46.5 37.7	0.7
74.2 22.9 21.4	74.3 21.7 22.0	1.4
50.0 -65.0 27.0	50.0 -64.5 26.6	0.6
62.1 -39.8 21.0	62.4 -40.1 21.7	0.8
77.0 -19.1 11.0	76.9 -18.8 11.2	0.3
71.2 18.9 17.3	71.4 17.5 18.1	1.6
71.2 22.1 73.1	71.5 21.3 72.7	1.0
47.7 71.2 16.2	47.9 71.0 16.1	0.3
38.0 55.4 -20.9	38.3 55.8 -19.8	1.3
73.7 -22.8 67.6	73.7 -22.6 67.8	0.2
52.3 -52.3 -20.1	52.1 -52.7 -20.3	0.5
43.3 -17.0 -48.6	43.4 -17.1 -48.4	0.2
95.0 0.0 -2.0	95.0 -0.2 -1.7	0.4
88.5 -0.4 -3.1	88.8 -1.3 -2.5	1.2
82.0 -0.9 -4.1	81.9 -1.1 -4.1	0.2
67.7 -2.0 -4.4	67.7 -1.8 -4.2	0.2
52.2 -2.5 -3.5	52.3 -3.0 -3.0	0.8
37.5 -3.9 -3.1	37.9 -3.5 -3.0	0.6
26.3 -6.8 -3.4	26.9 -6.0 -3.0	1.1
Average		0.9
Gamut-Volume		100 %

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	108.72 114.30 125.45	85 85 170	16.98 13.40 47.52
0 0 0	0.09 0.10 0.14	85 170 170	23.75 36.80 50.96
12 12 12	0.29 0.30 0.37	170 85 170	37.91 23.60 47.75
25 25 25	0.85 0.90 1.00	170 170 85	37.70 44.10 15.12
38 38 38	1.80 1.90 2.08	0 146 214	21.02 27.60 80.35
51 51 51	3.33 3.50 3.78	101 173 226	34.82 42.80 92.22
63 63 63	5.19 5.40 5.83	168 203 236	57.69 65.10 101.69
76 76 76	7.66 8.10 8.86	184 40 122	36.65 18.60 22.90
89 89 89	10.97 11.60 12.58	197 110 159	48.06 32.90 42.26
102 102 102	14.70 15.50 16.77	214 171 201	66.34 57.70 72.22
114 114 114	18.59 19.60 21.20	241 225 28	73.91 83.80 9.89
127 127 127	23.52 24.80 26.83	241 229 109	77.71 87.30 26.86
140 140 140	29.49 30.80 33.33	240 234 173	84.10 92.30 57.86
153 153 153	35.47 37.40 40.46	171 102 83	32.11 24.10 11.68
165 165 165	41.99 44.00 48.16	124 85 75	16.97 13.90 8.96
178 178 178	49.38 51.90 56.47	116 50 47	12.91 8.10 3.39
191 191 191	57.28 60.40 65.91	117 47 82	14.29 8.40 9.87
204 204 204	66.29 69.90 76.27	134 120 51	20.93 22.20 5.77
216 216 216	75.49 79.60 86.86	49 95 61	5.31 9.90 6.21
229 229 229	85.93 90.60 98.01	38 95 115	7.38 10.70 20.97
242 242 242	96.63 101.90 111.19	51 49 85	4.67 3.90 10.64
0 0 128	4.83 2.00 24.92	222 223 226	80.85 85.30 95.50
0 0 255	22.21 10.00 114.85	204 205 208	67.22 70.70 79.62
0 128 0	4.69 16.20 2.42	167 168 170	43.55 45.80 51.14
0 128 128	9.41 18.10 27.18	128 128 130	24.15 25.40 28.36
0 170 255	30.63 39.90 118.57	87 87 87	10.43 11.00 12.00
0 255 0	21.38 72.70 10.22	44 44 44	2.50 2.60 2.85
0 255 170	30.33 76.40 57.22	53 49 125	7.34 5.00 23.63
0 255 255	43.25 82.50 124.25	96 87 154	17.10 13.90 38.50
85 85 85	9.89 10.40 11.32	153 147 194	39.72 37.30 65.35
128 0 0	14.41 7.00 0.33	183 50 48	32.92 17.80 3.88
128 0 128	19.32 9.00 24.62	197 107 83	42.16 29.90 11.93
128 128 0	19.11 23.40 2.67	214 167 145	58.99 53.30 37.43
128 128 128	24.00 25.30 27.37	49 140 72	9.00 21.20 10.18
128 128 255	41.54 33.50 116.39	111 166 111	22.51 35.30 22.60
128 255 128	40.77 81.70 35.56	170 198 168	47.94 58.70 51.58
170 0 255	49.39 23.20 114.50	200 162 144	52.24 48.40 36.47
170 170 170	44.71 47.00 51.14	214 159 45	52.41 48.00 7.21
170 255 0	48.12 85.70 10.69	185 46 93	35.26 18.50 13.27
170 255 255	70.83 95.90 124.76	135 46 123	21.35 11.60 23.09
255 0 0	65.35 31.60 0.88	173 190 54	39.86 52.30 9.79
255 0 170	74.52 35.30 47.07	0 144 155	13.25 23.70 41.01
255 0 255	87.39 41.50 115.22	19 110 179	13.74 16.00 54.03
255 128 128	74.92 50.10 28.19	239 240 244	95.36 100.30 112.95
255 170 0	74.00 62.00 5.23	219 222 227	79.62 84.30 96.27
255 170 255	96.48 72.00 119.52	199 203 210	65.14 68.80 81.06
255 255 0	86.55 104.30 10.89	159 164 171	40.53 43.10 51.48
255 255 170	95.71 108.00 57.79	119 125 129	21.66 23.40 27.61
170 85 85	30.96 20.70 11.65	84 90 93	10.50 11.50 13.83
85 170 85	16.75 33.90 14.79	57 67 69	5.03 5.80 7.13