

UGRA

Display Analysis & Certification Tool

Report

Basics

Date: 2009-11-20 22:35:30
Report-Version: v1.3.1
Monitor-Name: \\.\DISPLAY1
EDID-Name: SX2462W
EDID-Serial: 24337099
Profile: C:/Windows/system32/spool/.../18.11.09-6000K-22-120cd-trc.icc
Created: 2009-11-18 18:28
Measurement device: DTP94-LCD mode (Intelli Proof 262 excellence)

Summary

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

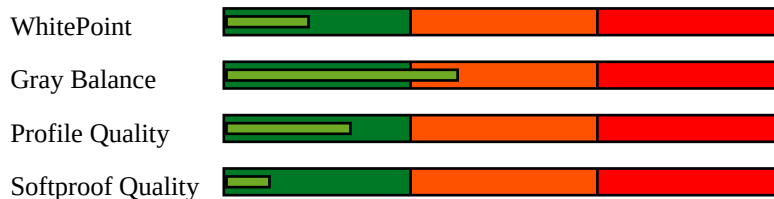
Calibration

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:	111.06 116.15 116.49
XYZ (normalized):	95.61 100.00 100.29
Luminance:	116.2 Cd/m2
Next Temperature:	5930 Kelvin
Assumed Target Whitepoint:	5900 Kelvin
Distance to assumed Target Whitepoint:	0.9 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:	1.9 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	16600	0.18	1.38	1.90	
5	9216	0.30	2.37	1.93	2.27
10	6405	0.86	6.66	1.22	2.24
15	6112	1.94	13.63	0.67	2.21
20	5929	3.47	20.00	0.52	2.22
25	5793	5.33	25.53	1.61	2.24
30	5808	8.00	31.54	1.65	2.23
35	5824	11.27	37.30	1.60	2.23
40	5954	15.14	42.81	1.14	2.23
45	5959	19.57	48.07	0.24	2.24
50	5949	24.80	53.33	0.23	2.24
55	5944	30.75	58.48	0.22	2.23
60	5897	37.51	63.59	0.93	2.23
65	5896	44.35	68.15	0.94	2.26
70	5930	52.34	72.93	0.16	2.24
75	5925	61.13	77.65	0.10	2.24
80	5925	70.87	82.38	0.16	2.22
85	5915	80.41	86.62	0.16	2.27
90	5915	91.67	91.20	0.27	2.27
95	5954	103.17	95.51	0.23	2.30
100	5930	116.15	100.00	0.00	
Average	5920			0.60	2.24
Range				2.50	
Max				1.65	

Tone values = 98.8%

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	1.4 0.0 -1.9	-1.4 -0.0 1.9	2.3
0 0 128	9.0 57.2 -72.4	-0.6 2.3 -1.8	3.0
0 0 255	24.6 100.0 -123.6	-0.1 -1.3 0.6	1.4
0 128 0	44.4 -90.5 48.9	0.8 0.0 1.1	1.3
0 128 128	46.1 -57.1 -12.1	0.4 0.9 -0.6	1.2
0 170 255	62.9 -30.1 -59.7	0.2 0.3 0.5	0.6
0 255 0	85.1 -153.5 84.9	0.4 3.4 -2.0	4.0
0 255 170	86.0 -126.7 23.6	0.3 3.2 -2.1	3.9
0 255 255	87.3 -95.0 -20.5	0.3 1.8 -0.5	1.9
85 85 85	35.6 1.5 -0.6	0.3 -1.5 0.6	1.6
128 0 0	30.1 60.6 45.9	0.1 1.0 3.5	3.6
128 0 128	32.2 71.9 -33.3	0.2 0.6 0.1	0.7
128 128 0	52.4 -12.9 61.4	0.6 -0.1 0.4	0.7
128 128 128	53.7 -0.2 -0.1	0.2 0.2 0.1	0.3
128 128 255	57.3 35.8 -68.8	0.1 -0.7 0.9	1.1
128 255 128	88.8 -95.8 48.5	0.2 1.4 -0.7	1.6
170 0 255	46.7 105.7 -86.2	0.4 -0.6 2.0	2.1
170 170 170	70.0 -0.4 0.7	0.2 0.4 -0.7	0.8
170 255 0	90.7 -78.3 93.7	0.4 1.2 -2.1	2.5
170 255 255	92.8 -44.5 -11.9	0.2 0.5 0.2	0.6
255 0 0	61.0 102.2 91.8	-0.3 -0.1 0.0	0.3
255 0 170	62.4 110.8 -9.6	-0.2 -0.8 0.2	0.9
255 0 255	64.4 121.3 -55.8	-0.1 -1.0 0.8	1.3
255 128 128	72.7 68.1 31.3	-0.2 -0.6 -0.4	0.8
255 170 0	79.5 37.8 94.3	0.2 -1.4 -2.0	2.4
255 170 255	82.2 58.3 -27.0	-0.1 -0.6 0.1	0.7
255 255 0	98.2 -21.6 105.4	0.1 -0.0 -2.9	2.9
255 255 170	99.1 -11.7 43.3	-0.0 -0.6 -0.7	0.9
255 255 255	100.0 0.0 -0.0	0.0 -0.0 0.0	0.0
170 85 85	49.5 50.8 22.5	0.3 -0.5 0.5	0.8
85 170 85	61.7 -70.5 35.9	0.3 0.1 -0.2	0.4
85 85 170	38.1 27.1 -50.1	0.3 -0.9 -0.6	1.1
85 170 170	62.9 -48.0 -10.9	0.3 0.5 -0.9	1.0
170 85 170	51.0 62.1 -28.7	0.3 -0.2 0.0	0.4
170 170 85	68.9 -12.8 47.5	0.3 0.4 -0.1	0.5
Average			1.4
Maximum			4.0

Gamut-Volume

These measurements are only informative.

Gamut-Volume	
ISO	100 %
sRGB	100 %
AdobeRGB	100 %
ECI-RGB v1.0	94 %

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	55.1 -31.8 -49.1	5.3
66.9 -24.7 -37.1	66.6 -23.9 -38.2	1.4
79.7 -12.5 -21.8	79.6 -12.5 -22.3	0.6
48.0 74.0 -3.0	48.0 74.1 -2.7	0.3
60.8 50.6 -6.7	60.8 50.5 -6.3	0.4
76.4 25.8 -6.9	76.3 25.5 -6.7	0.4
89.0 -5.0 93.0	88.8 -5.8 95.0	2.2
90.3 -4.7 62.6	90.4 -5.7 63.6	1.4
92.2 -3.5 31.1	92.0 -2.8 31.7	0.9
53.1 37.7 28.9	53.0 37.3 28.3	0.8
41.5 22.7 16.8	41.1 22.6 16.0	0.9
31.9 40.0 24.0	31.8 39.4 22.9	1.2
32.5 44.5 -1.8	32.6 43.6 -1.8	0.8
51.3 1.3 44.5	50.9 1.3 43.8	0.8
34.6 -36.4 13.9	33.9 -34.5 12.6	2.4
36.0 -26.2 -20.9	35.7 -25.3 -20.8	1.0
20.9 9.6 -23.6	21.2 9.8 -23.0	0.8
89.0 0.0 -1.9	89.2 0.0 -1.4	0.5
82.8 0.0 -1.7	82.7 0.1 -1.6	0.2
69.3 0.0 -1.4	69.1 -0.5 -0.6	0.9
54.1 0.0 -1.0	53.8 0.5 -1.2	0.6
36.6 0.0 -0.5	36.5 1.4 -0.6	1.4
16.0 0.0 0.0	16.5 0.4 -0.4	0.8
24.0 22.0 -46.0	24.0 21.8 -45.7	0.4
40.9 17.9 -36.6	40.6 18.1 -36.1	0.6
63.7 10.3 -23.8	63.4 10.7 -24.1	0.6
47.0 68.0 48.0	47.0 67.3 47.1	1.2
58.5 47.1 37.9	58.6 47.3 38.0	0.3
74.2 22.9 21.4	74.2 22.7 22.1	0.8
50.0 -65.0 27.0	49.8 -65.5 26.8	0.6
62.1 -39.8 21.0	62.0 -40.5 21.0	0.7
77.0 -19.1 11.0	76.7 -19.4 11.4	0.6
71.2 18.9 17.3	71.3 18.3 18.2	1.1
71.2 22.1 73.1	71.1 22.4 74.0	0.9
47.7 71.2 16.2	47.8 71.0 16.1	0.3
38.0 55.4 -20.9	38.0 55.0 -21.0	0.4
73.7 -22.8 67.6	73.5 -23.6 68.1	1.0
52.3 -52.3 -20.1	52.1 -52.9 -19.6	0.8
43.3 -17.0 -48.6	43.2 -16.9 -48.7	0.2
95.0 0.0 -2.0	94.8 1.1 -2.4	1.2
88.5 -0.4 -3.1	88.6 -0.5 -3.0	0.2
82.0 -0.9 -4.1	81.8 -0.7 -4.1	0.3
67.7 -2.0 -4.4	67.6 -2.6 -3.8	0.9
52.2 -2.5 -3.5	52.1 -2.3 -3.3	0.3
37.5 -3.9 -3.1	37.1 -1.5 -3.5	2.4
26.3 -6.8 -3.4	26.1 -5.7 -4.1	1.3
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	111.06 116.15 116.49	85 85 170	16.63 12.03 43.06
0 0 0	0.17 0.18 0.32	85 170 170	22.71 36.86 46.13
12 12 12	0.30 0.30 0.45	170 85 170	38.82 22.34 43.95
25 25 25	0.83 0.86 0.95	170 170 85	38.12 45.24 13.83
38 38 38	1.86 1.94 2.02	0 149 214	20.22 27.45 74.01
51 51 51	3.35 3.47 3.53	102 175 226	34.28 42.64 86.11
63 63 63	5.23 5.33 5.47	168 204 236	57.84 65.44 95.57
76 76 76	7.82 8.00 8.18	181 56 121	37.69 19.14 21.16
89 89 89	10.99 11.27 11.50	194 116 159	49.10 33.41 39.02
102 102 102	14.62 15.14 15.53	212 174 200	67.41 58.37 66.50
114 114 114	18.66 19.57 19.64	242 220 29	76.22 84.87 8.69
127 127 127	23.66 24.80 24.86	242 225 109	80.25 88.84 24.64
140 140 140	29.34 30.75 30.81	241 231 173	86.78 93.42 53.53
153 153 153	35.68 37.51 37.03	169 103 83	32.59 24.08 10.84
165 165 165	42.20 44.35 43.81	123 86 74	16.95 13.71 8.15
178 178 178	49.99 52.34 52.40	114 52 46	12.82 7.94 3.08
191 191 191	58.42 61.13 61.21	115 52 82	14.32 8.45 9.19
204 204 204	67.71 70.87 70.92	134 118 51	20.99 22.08 5.25
216 216 216	76.88 80.41 80.42	53 92 61	5.17 9.26 5.69
229 229 229	87.58 91.67 91.56	41 96 116	7.24 10.45 19.40
242 242 242	98.56 103.17 103.76	50 52 85	4.58 3.90 9.70
0 0 128	4.67 1.35 22.57	222 223 226	82.82 86.54 88.86
0 0 255	21.67 5.87 106.20	204 205 208	68.64 71.67 73.95
0 128 0	4.10 16.46 2.28	167 168 170	43.71 45.89 46.61
0 128 128	8.70 18.04 24.55	128 128 130	24.35 25.34 26.18
0 170 255	29.15 37.53 109.46	87 87 87	10.51 10.78 11.02
0 255 0	18.73 77.01 9.56	44 44 44	2.47 2.56 2.63
0 255 170	27.30 79.57 50.83	50 56 125	7.07 4.93 22.07
0 255 255	40.11 83.11 113.80	94 93 154	16.68 13.69 34.99
85 85 85	9.95 10.20 10.43	151 150 194	39.74 37.40 60.85
128 0 0	15.08 7.06 0.48	180 57 46	33.62 18.08 3.43
128 0 128	19.69 8.28 23.12	195 109 82	43.64 30.44 10.88
128 128 0	19.22 23.62 2.48	213 167 145	60.96 54.17 34.50
128 128 128	24.08 25.24 25.35	59 137 73	9.05 21.29 9.33
128 128 255	41.12 29.96 108.64	115 163 112	22.67 35.29 21.09
128 255 128	39.12 85.87 33.01	172 196 168	48.56 59.26 47.45
170 0 255	49.69 18.82 107.56	199 162 144	53.84 49.15 33.70
170 170 170	45.02 47.26 46.76	213 157 44	54.27 48.53 6.28
170 255 0	47.40 90.20 9.95	182 57 92	36.17 18.91 12.18
170 255 255	69.16 96.55 115.57	132 57 123	21.33 11.67 21.82
255 0 0	70.63 32.81 1.14	175 186 55	40.79 52.94 8.97
255 0 170	79.65 35.12 44.64	30 143 155	13.10 23.88 37.46
255 0 255	92.17 38.43 107.73	16 114 180	13.28 15.88 50.11
255 128 128	79.65 51.08 26.34	239 240 244	97.69 101.38 105.58
255 170 0	78.28 63.87 4.89	219 222 227	81.42 85.34 89.85
255 170 255	99.94 70.33 110.58	199 203 210	66.34 69.58 75.02
255 255 0	89.44 109.93 10.45	159 165 171	40.76 43.49 47.16
255 255 170	98.97 112.83 53.94	120 125 129	22.04 23.55 25.61
170 85 85	32.17 20.51 10.77	84 90 93	10.48 11.15 12.49
85 170 85	16.05 35.00 13.50	57 67 69	4.86 5.57 6.57

Uniformity

The uniformity test shows the luminance (in %) and the color deviation (in Delta C*) from the centre to the 8 measuring points around it. The maximum deviation for the luminance may be 10%. The average value and the chroma deviations are only informative. This test is not taken in consideration for the UDACT certification.

Results of the white measurements:

Absolute Luminance Luminance to Centre Lab-Chroma to Centre	115.47 Cd/m2 101 % 1.80	121.98 Cd/m2 107 % 2.03	128.64 Cd/m2 113 % 1.88
Absolute Luminance Luminance to Centre Lab-Chroma to Centre	108.89 Cd/m2 95 % 0.28	114.08 Cd/m2 100 % 0.00	122.19 Cd/m2 107 % 0.77
Absolute Luminance Luminance to Centre Lab-Chroma to Centre	101.49 Cd/m2 89 % 1.03	106.25 Cd/m2 93 % 1.44	114.54 Cd/m2 100 % 0.82

Results of the gray measurements:

Absolute Luminance Luminance to Centre Lab-Chroma to Centre	24.44 Cd/m2 99 % 0.91	26.15 Cd/m2 106 % 0.89	27.31 Cd/m2 111 % 0.84
Absolute Luminance Luminance to Centre Lab-Chroma to Centre	23.29 Cd/m2 95 % 0.51	24.64 Cd/m2 100 % 0.43	26.04 Cd/m2 106 % 0.67
Absolute Luminance Luminance to Centre Lab-Chroma to Centre	21.52 Cd/m2 87 % 1.19	22.54 Cd/m2 91 % 1.08	24.30 Cd/m2 99 % 0.88

Results of the dark measurements:

Absolute Luminance Luminance to Centre Lab-Chroma to Centre	5.18 Cd/m2 99 % 2.30	5.50 Cd/m2 105 % 2.48	5.73 Cd/m2 110 % 2.40
Absolute Luminance Luminance to Centre Lab-Chroma to Centre	4.94 Cd/m2 95 % 1.45	5.23 Cd/m2 100 % 1.59	5.48 Cd/m2 105 % 1.55
Absolute Luminance Luminance to Centre Lab-Chroma to Centre	4.55 Cd/m2 87 % 0.99	4.76 Cd/m2 91 % 1.14	5.13 Cd/m2 98 % 1.52

Summary:

	Average	Max
Luminance Deviation	6%	13%
Chroma Deviation	1	2