

UGRA

Display Analysis & Certification Tool

Report

Basics

Date: 2010-4-16 12:11:59
Report-Version: v1.3.1
Monitor-Name: \\.\DISPLAY2
Profile: C:/.../20100416-PA241W-sRGB_Modus-6500K-sRGB-100%-trc.icc
Created: 2010-4-16 12:03
Measurement device: DTP94-LCD mode (Wide Gamut S-IPS (generic))

Summary

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

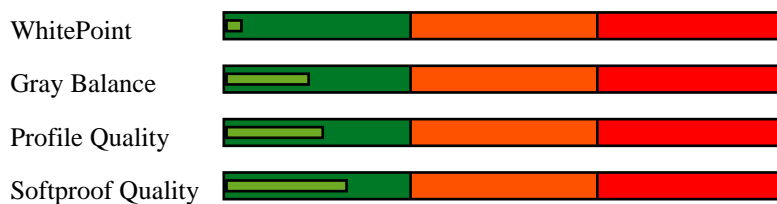
Calibration

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:	72.86 76.62 84.68
XYZ (normalized):	95.09 100.00 110.51
Luminance:	76.6 Cd/m2
Next Temperature:	6603 Kelvin
Assumed Target Whitepoint:	6600 Kelvin
Distance to assumed Target Whitepoint:	0.2 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	16646	0.16	1.93	1.91	
5	7984	0.45	5.28	1.33	1.88
10	6826	0.91	10.50	0.40	2.02
15	6488	1.69	16.56	0.50	2.08
20	6541	2.73	22.17	0.31	2.12
25	6596	3.97	27.24	0.15	2.17
30	6553	5.71	32.82	0.21	2.19
35	6599	7.85	38.27	0.39	2.20
40	6572	10.38	43.58	0.15	2.20
45	6555	13.16	48.48	0.40	2.23
50	6606	16.50	53.54	0.44	2.23
55	6581	20.28	58.47	0.14	2.24
60	6589	24.61	63.44	0.15	2.24
65	6548	29.19	68.09	0.61	2.26
70	6564	34.47	72.88	0.67	2.26
75	6594	40.16	77.53	0.59	2.27
80	6570	46.33	82.09	0.37	2.27
85	6581	52.66	86.37	0.35	2.33
90	6545	60.19	91.03	0.61	2.33
95	6592	68.17	95.57	0.42	2.33
100	6603	76.62	100.00	0.00	
Average	6584			0.36	2.20
Range				0.89	
Max				0.67	

Tone values = 98.6%

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	1.9 -0.5 -1.9	-1.9 0.5 1.9	2.7
0 0 128	15.4 28.1 -59.9	-1.1 0.6 -1.9	2.3
0 0 255	35.3 49.5 -102.2	-0.8 -1.7 -0.8	2.0
0 128 0	45.9 -44.6 45.9	-0.3 -0.3 1.3	1.4
0 128 128	48.3 -31.1 -8.7	-0.3 0.8 0.0	0.8
0 170 255	66.9 -19.6 -51.2	-0.2 1.7 0.3	1.8
0 255 0	86.8 -74.9 78.9	-0.0 0.1 -0.1	0.1
0 255 170	88.4 -64.7 25.6	0.0 0.6 -0.5	0.8
0 255 255	90.7 -51.3 -14.9	0.0 0.8 0.4	0.9
85 85 85	36.6 -0.2 0.2	-0.4 0.2 -0.2	0.5
128 0 0	26.7 47.4 34.8	-0.6 1.1 2.9	3.1
128 0 128	31.1 50.5 -34.4	-0.3 0.8 0.0	0.9
128 128 0	52.0 -7.5 53.6	-0.4 0.2 0.5	0.6
128 128 128	53.9 -0.3 0.2	-0.3 0.3 -0.2	0.5
128 128 255	60.1 18.3 -61.7	-0.2 1.0 0.4	1.1
128 255 128	90.1 -51.8 47.6	-0.1 -0.4 -0.2	0.4
170 0 255	48.5 67.4 -80.3	0.0 0.6 0.7	0.9
170 170 170	70.0 -0.4 0.9	-0.4 0.4 -0.9	1.1
170 255 0	91.1 -42.8 84.3	-0.1 -1.3 -0.6	1.4
170 255 255	94.8 -26.5 -8.4	-0.1 -0.0 0.0	0.1
255 0 0	54.3 80.7 65.6	-0.2 0.3 -0.3	0.5
255 0 170	57.5 82.5 -16.2	-0.1 0.3 -0.3	0.4
255 0 255	61.9 85.2 -57.8	0.0 0.4 0.6	0.7
255 128 128	69.0 49.1 23.2	-0.3 0.2 -0.3	0.4
255 170 0	76.5 27.4 77.6	-0.4 -0.2 -1.0	1.1
255 170 255	81.4 37.7 -27.9	-0.4 1.0 -0.1	1.1
255 255 0	96.9 -12.8 91.1	-0.2 0.7 -0.8	1.1
255 255 170	98.4 -7.8 39.9	-0.3 0.8 -0.5	1.0
255 255 255	100.0 0.0 0.0	0.0 0.0 -0.0	0.0
170 85 85	47.5 35.5 16.7	-0.6 0.1 -0.3	0.7
85 170 85	63.0 -38.0 34.6	-0.7 0.2 -0.4	0.8
85 85 170	41.0 13.2 -44.0	-0.4 0.6 -0.4	0.8
85 170 170	65.1 -27.6 -7.2	-0.6 0.9 -0.9	1.4
170 85 170	50.6 40.6 -28.3	-0.5 0.5 -0.5	0.8
170 170 85	68.5 -6.9 42.5	-0.7 0.1 -0.6	1.0
Average			1.0
Maximum			3.1

Gamut-Volume

These measurements are only informative.

Gamut-Volume	
ISO	91 %
sRGB	96 %
AdobeRGB	72 %
ECI-RGB v1.0	69 %

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	58.2 -18.2 -44.9	19.7
66.9 -24.7 -37.1	67.3 -26.6 -36.6	1.9
79.7 -12.5 -21.8	79.8 -12.8 -21.7	0.3
48.0 74.0 -3.0	48.6 72.6 -2.5	1.6
60.8 50.6 -6.7	61.2 50.0 -6.9	0.7
76.4 25.8 -6.9	76.8 25.0 -6.3	1.0
89.0 -5.0 93.0	89.3 -3.8 85.6	7.5
90.3 -4.7 62.6	90.7 -4.5 63.1	0.7
92.2 -3.5 31.1	92.6 -3.6 31.8	0.8
53.1 37.7 28.9	53.4 37.3 29.1	0.5
41.5 22.7 16.8	42.0 23.0 16.8	0.5
31.9 40.0 24.0	32.8 38.6 23.9	1.6
32.5 44.4 -1.8	33.2 43.2 -1.5	1.4
51.3 1.3 44.5	51.7 1.5 44.4	0.5
34.6 -36.4 13.9	35.5 -32.4 14.6	4.2
36.0 -26.2 -20.9	37.3 -20.0 -19.4	6.5
20.9 9.6 -23.6	22.1 8.2 -22.5	2.1
89.0 0.0 -1.8	89.0 -0.4 -1.6	0.5
82.8 0.0 -1.7	82.7 -0.1 -1.5	0.2
69.3 0.0 -1.4	69.6 -0.5 -1.0	0.7
54.1 0.0 -1.0	54.5 -0.3 -0.8	0.5
36.6 -0.0 -0.5	37.1 -0.3 -0.4	0.6
16.0 0.0 0.0	17.5 -0.3 0.5	1.6
24.0 22.0 -46.0	24.9 20.3 -44.9	2.2
40.9 17.9 -36.6	41.3 17.6 -36.7	0.5
63.7 10.3 -23.8	63.9 10.2 -23.6	0.3
47.0 68.0 48.0	47.4 67.2 47.8	0.9
58.5 47.1 37.9	58.9 47.1 38.3	0.5
74.2 22.9 21.4	74.6 22.8 21.3	0.4
50.0 -65.0 27.0	52.1 -45.7 29.6	19.6
62.1 -39.8 21.0	62.7 -40.3 21.4	0.8
77.0 -19.1 11.0	77.1 -18.9 11.5	0.5
71.2 18.8 17.3	71.5 18.7 17.6	0.5
71.2 22.2 73.1	71.5 22.1 72.8	0.4
47.7 71.2 16.2	48.2 70.5 16.2	0.9
38.0 55.4 -20.9	38.7 54.6 -20.4	1.2
73.7 -22.8 67.6	74.0 -22.1 67.7	0.8
52.3 -52.3 -20.2	55.3 -31.8 -16.0	21.1
43.3 -17.0 -48.6	45.3 -9.7 -45.5	8.2
95.0 0.0 -2.0	95.2 -0.8 -1.5	1.0
88.5 -0.4 -3.1	88.6 -0.9 -2.8	0.7
82.0 -0.9 -4.1	81.9 -1.5 -3.8	0.7
67.7 -2.0 -4.4	68.0 -2.7 -3.9	0.9
52.2 -2.5 -3.5	52.7 -2.8 -3.5	0.6
37.5 -3.9 -3.1	37.9 -4.1 -3.1	0.5
26.3 -6.8 -3.4	26.8 -6.4 -3.3	0.6
Average		2.6
Gamut-Volume		91 %

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	72.86 76.62 84.68	85 85 170	11.10 9.40 30.69
0 0 0	0.15 0.16 0.28	85 170 170	19.83 26.38 33.57
12 12 12	0.42 0.45 0.56	170 85 170	21.04 14.55 31.28
25 25 25	0.86 0.91 1.03	170 170 85	25.56 29.27 11.41
38 38 38	1.60 1.69 1.83	0 147 219	17.72 20.69 54.92
51 51 51	2.59 2.73 2.98	28 175 230	23.18 29.10 62.25
63 63 63	3.78 3.97 4.40	152 204 238	38.58 43.67 69.23
76 76 76	5.43 5.71 6.27	218 0 122	24.86 12.88 15.84
89 89 89	7.43 7.85 8.61	224 104 161	32.48 22.30 29.19
102 102 102	9.87 10.38 11.42	231 170 202	44.73 39.06 48.81
114 114 114	12.49 13.16 14.41	245 228 0	50.55 56.51 8.90
127 127 127	15.63 16.50 18.14	244 232 98	52.76 58.93 18.30
140 140 140	19.30 20.28 22.38	242 236 171	56.97 62.41 39.48
153 153 153	23.39 24.61 27.12	193 99 78	21.49 16.06 7.88
165 165 165	27.69 29.19 31.90	138 83 71	11.53 9.42 6.09
178 178 178	32.67 34.47 37.70	134 42 39	8.69 5.55 2.33
191 191 191	38.06 40.16 44.09	136 35 81	9.56 5.72 6.86
204 204 204	44.01 46.33 50.88	139 122 38	14.07 15.03 3.90
216 216 216	50.01 52.66 57.91	0 96 57	3.89 6.71 4.26
229 229 229	57.17 60.19 65.88	0 95 118	5.73 7.57 14.57
242 242 242	64.70 68.17 75.00	50 44 86	3.19 2.78 7.31
0 0 128	3.21 1.72 15.83	222 223 227	53.99 56.86 64.45
0 0 255	14.69 7.58 73.99	205 206 209	44.98 47.29 53.68
0 128 0	6.04 11.63 2.24	168 169 172	29.20 30.80 34.71
0 128 128	8.99 13.21 18.08	129 129 131	16.30 17.18 19.37
0 170 255	24.93 28.88 77.86	86 86 87	6.99 7.37 8.24
0 255 0	27.39 53.19 9.38	40 40 40	1.75 1.85 1.99
0 255 170	32.86 56.07 38.48	56 39 128	5.00 3.52 16.34
0 255 255	41.21 60.44 83.19	102 83 158	11.52 9.43 26.47
85 85 85	6.76 7.12 7.83	158 147 197	26.75 25.25 44.67
128 0 0	6.92 3.65 0.62	215 30 31	22.03 11.96 2.51
128 0 128	9.90 5.18 16.52	224 103 75	28.43 20.07 7.94
128 128 0	12.89 15.21 2.59	232 167 144	40.21 36.05 25.91
128 128 128	15.88 16.76 18.45	0 145 68	8.57 15.53 7.02
128 128 255	26.72 22.41 76.54	67 170 110	15.28 23.97 15.60
128 255 128	37.47 58.44 25.68	157 201 168	32.32 39.61 34.90
170 0 255	26.60 13.80 74.91	215 162 143	35.46 32.58 25.07
170 170 170	29.59 31.25 33.91	232 161 0	35.38 32.23 4.86
170 255 0	40.52 59.84 10.06	218 15 90	23.75 12.56 9.05
170 255 255	54.28 67.18 83.82	159 26 125	14.38 7.94 16.09
255 0 0	31.57 16.31 1.91	163 195 27	27.10 35.40 6.74
255 0 170	37.03 19.13 31.28	0 147 159	12.81 18.11 28.44
255 0 255	45.31 23.42 75.86	0 109 184	10.83 11.71 36.69
255 128 128	40.68 29.51 19.89	239 241 244	63.96 67.55 76.36
255 170 0	42.98 38.01 5.62	219 222 228	53.18 56.17 64.94
255 170 255	56.85 45.46 79.90	199 204 211	43.56 46.17 54.45
255 255 0	58.81 69.65 11.13	158 166 173	27.21 29.17 34.88
255 255 170	64.65 72.86 40.80	118 126 131	14.79 15.94 19.19
170 85 85	16.79 12.33 8.49	79 90 93	6.97 7.69 9.37
85 170 85	15.55 24.11 10.85	48 65 67	3.33 3.86 4.84