

UGRA

Display Analysis & Certification Tool

Report

Basics

Date: 2011-3-2 21:58:02
Report-Version: v1.3.1
Monitor-Name: \\.\DISPLAY4
Profile: C:/Windows/system32/spool/.../PA241-full-6500K-22-140cd-trc.icc
Created: 2011-3-2 21:49
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	yes
Offset/Gravure Paper Type 1/2	yes
Offset on uncoated paper	yes
Newspaper Printing	yes
sRGB	yes
AdobeRGB	yes
ECI-RGB	yes

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:	131.42 138.31 150.55
XYZ (normalized):	95.02 100.00 108.85
Luminance:	138.3 Cd/m2
Next Temperature:	6504 Kelvin
Assumed Target Whitepoint:	6500 Kelvin
Distance to assumed Target Whitepoint:	0.1 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:	1.7 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	21465	0.22	1.41	1.67	
5	10154	0.40	2.60	1.47	2.25
10	6886	1.07	6.96	0.62	2.23
15	6776	2.35	13.84	0.80	2.20
20	6595	4.23	20.29	0.65	2.21
25	6712	6.49	25.85	1.09	2.22
30	6535	9.92	32.19	0.54	2.21
35	6519	13.76	37.75	0.19	2.21
40	6491	18.51	43.33	0.23	2.21
45	6469	23.63	48.37	0.32	2.22
50	6550	29.88	53.60	0.32	2.22
55	6507	37.26	58.92	0.15	2.20
60	6528	44.87	63.70	0.25	2.21
65	6463	53.28	68.41	0.53	2.23
70	6572	62.32	72.93	0.56	2.23
75	6567	73.25	77.85	0.53	2.22
80	6516	84.88	82.58	0.14	2.19
85	6586	95.85	86.65	0.65	2.26
90	6511	109.39	91.27	0.16	2.22
95	6500	123.30	95.64	0.16	2.23
100	6504	138.31	100.00	0.00	
Average	6550			0.41	2.22
Range				1.62	
Max				1.09	

Tone values = 98.4%

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 -0.4 -1.7	-1.4 0.4 1.7	2.2
0 0 128	11.6 41.8 -67.9	-0.6 2.1 -1.5	2.7
0 0 255	28.9 72.5 -115.2	-0.0 0.3 0.0	0.3
0 128 0	44.6 -78.2 47.6	0.4 -1.2 1.8	2.2
0 128 128	46.6 -52.6 -11.9	0.1 0.1 -0.3	0.3
0 170 255	63.8 -32.8 -57.7	0.2 -0.3 0.4	0.5
0 255 0	84.9 -131.5 81.9	0.1 -0.0 0.1	0.2
0 255 170	86.2 -111.5 21.8	0.0 0.5 -0.4	0.6
0 255 255	87.6 -87.0 -20.5	0.3 -0.0 0.3	0.4
85 85 85	36.2 -1.4 0.1	-0.3 1.4 -0.1	1.4
128 0 0	29.7 59.0 44.7	0.2 1.3 3.4	3.6
128 0 128	32.6 65.9 -32.7	0.2 0.9 0.3	0.9
128 128 0	52.3 -9.9 59.6	0.3 -0.1 1.3	1.3
128 128 128	54.0 -0.4 -0.2	-0.0 0.4 0.2	0.5
128 128 255	58.7 26.8 -65.6	-0.2 0.2 -0.2	0.4
128 255 128	88.7 -84.5 47.1	0.0 0.0 0.1	0.1
170 0 255	48.6 91.7 -81.8	0.1 0.1 0.4	0.4
170 170 170	70.1 0.6 -0.4	0.1 -0.6 0.4	0.7
170 255 0	90.5 -68.2 90.5	0.1 0.3 -0.2	0.4
170 255 255	93.3 -41.7 -11.3	-0.1 0.0 -0.0	0.1
255 0 0	59.8 99.5 88.1	0.1 0.3 0.3	0.5
255 0 170	61.9 104.4 -10.3	0.2 0.2 0.6	0.6
255 0 255	64.8 110.7 -54.0	0.0 -0.0 0.2	0.2
255 128 128	72.1 65.1 29.4	0.0 0.3 0.6	0.7
255 170 0	78.9 38.3 90.9	0.3 -1.1 -0.5	1.2
255 170 255	82.4 51.8 -26.6	-0.0 1.0 0.1	1.0
255 255 0	97.5 -16.9 101.4	0.2 0.2 -0.5	0.6
255 255 170	98.5 -10.0 41.3	0.1 0.5 0.5	0.7
255 255 255	100.0 0.0 0.0	-0.0 0.0 -0.0	0.0
170 85 85	49.5 47.6 22.1	-0.1 1.2 0.3	1.2
85 170 85	61.8 -63.2 35.0	0.0 0.3 0.2	0.3
85 85 170	39.4 20.1 -48.9	-0.2 0.1 -0.1	0.2
85 170 170	63.2 -44.0 -11.8	0.2 -0.8 0.4	0.9
170 85 170	51.7 56.6 -28.2	-0.1 0.2 0.1	0.3
170 170 85	68.8 -10.2 46.2	0.0 0.6 0.4	0.7
Average			0.8
Maximum			3.6

Gamut-Volume

These measurements are only informative.

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

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	55.7 -32.4 -48.7	4.9
66.9 -24.7 -37.1	66.6 -23.8 -37.6	1.1
79.7 -12.5 -21.8	79.8 -12.3 -22.0	0.3
48.0 74.0 -3.0	48.0 73.3 -3.0	0.7
60.8 50.6 -6.7	60.9 50.5 -6.9	0.2
76.4 25.8 -6.9	76.2 26.4 -7.8	1.1
89.0 -5.0 93.0	88.6 -3.9 93.3	1.2
90.3 -4.7 62.6	90.5 -4.8 62.7	0.3
92.2 -3.5 31.1	92.3 -3.4 31.1	0.2
53.1 37.7 28.9	53.1 37.1 28.6	0.7
41.5 22.7 16.8	41.7 22.8 16.7	0.1
31.9 40.0 24.0	32.4 39.4 23.5	0.9
32.5 44.4 -1.8	33.0 43.6 -1.6	1.0
51.3 1.3 44.5	51.3 1.6 44.0	0.6
34.6 -36.4 13.9	34.9 -35.5 13.7	1.0
36.0 -26.2 -20.9	36.0 -26.1 -20.8	0.2
20.9 9.6 -23.6	21.5 9.2 -22.9	1.0
89.0 0.0 -1.8	89.1 -0.6 -2.0	0.6
82.8 0.0 -1.7	82.8 -0.1 -1.9	0.2
69.3 0.0 -1.4	69.2 0.5 -1.7	0.6
54.1 0.0 -1.0	54.0 -0.1 -1.4	0.5
36.6 -0.0 -0.5	37.1 -1.2 -0.6	1.3
16.0 0.0 0.0	16.9 0.1 0.2	0.9
24.0 22.0 -46.0	24.5 20.6 -44.9	1.9
40.9 17.9 -36.6	40.9 17.8 -36.5	0.1
63.7 10.3 -23.8	63.6 10.0 -24.0	0.4
47.0 68.0 48.0	46.8 67.0 47.0	1.4
58.5 47.1 37.9	58.6 47.1 37.9	0.2
74.2 22.9 21.4	73.9 23.5 20.6	1.0
50.0 -65.0 27.0	50.1 -65.1 27.0	0.2
62.1 -39.8 21.0	62.1 -39.0 20.6	0.9
77.0 -19.1 11.0	76.9 -18.9 10.7	0.4
71.2 18.8 17.3	71.3 18.7 16.9	0.4
71.2 22.2 73.1	71.2 22.8 73.0	0.6
47.7 71.2 16.2	47.7 70.4 15.6	1.0
38.0 55.4 -20.9	38.2 54.4 -20.7	1.0
73.7 -22.8 67.6	73.6 -23.7 67.1	1.0
52.3 -52.3 -20.2	52.3 -52.6 -19.8	0.4
43.3 -17.0 -48.6	43.5 -17.1 -48.4	0.3
95.0 0.0 -2.0	95.0 0.0 -2.1	0.1
88.5 -0.4 -3.1	88.6 -1.4 -3.3	1.0
82.0 -0.9 -4.1	81.9 -1.0 -4.4	0.3
67.7 -2.0 -4.4	67.6 -2.1 -4.9	0.6
52.2 -2.5 -3.5	52.3 -2.7 -3.4	0.3
37.5 -3.9 -3.1	37.6 -3.3 -3.2	0.5
26.3 -6.8 -3.4	26.8 -7.1 -3.1	0.7
Average		0.7
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	131.42 138.31 150.55	85 85 170	20.06 15.59 57.08
0 0 0	0.20 0.22 0.39	85 170 170	28.66 44.57 61.29
12 12 12	0.35 0.40 0.55	170 85 170	45.28 27.45 57.85
25 25 25	1.01 1.07 1.22	170 170 85	45.42 53.55 18.44
38 38 38	2.25 2.35 2.68	0 147 215	25.51 33.95 96.82
51 51 51	3.97 4.23 4.58	101 173 226	41.50 51.09 110.16
63 63 63	6.22 6.49 7.36	168 203 236	69.52 78.59 123.47
76 76 76	9.35 9.92 10.72	185 50 121	44.20 22.64 27.72
89 89 89	13.09 13.76 15.05	197 113 159	58.37 39.86 51.38
102 102 102	17.63 18.51 20.19	214 172 201	80.14 69.22 87.48
114 114 114	22.53 23.63 25.73	240 223 20	89.13 99.79 11.58
127 127 127	28.30 29.88 32.58	241 228 108	94.65 105.78 32.53
140 140 140	35.36 37.26 40.50	240 233 173	102.24 111.79 70.50
153 153 153	42.54 44.87 48.85	171 103 82	38.21 28.55 13.94
165 165 165	50.51 53.28 57.46	124 86 74	20.46 16.72 10.63
178 178 178	59.26 62.32 68.57	116 52 46	15.48 9.73 4.06
191 191 191	69.34 73.25 79.99	117 50 82	17.21 10.23 12.10
204 204 204	80.68 84.88 92.61	134 120 50	25.03 26.68 6.87
216 216 216	90.73 95.85 104.94	49 94 61	6.41 11.71 7.51
229 229 229	104.00 109.39 119.32	38 95 116	8.86 12.77 25.43
242 242 242	117.27 123.30 134.35	51 50 85	5.56 4.75 12.65
0 0 128	5.60 2.23 29.32	222 223 226	97.41 102.81 115.56
0 0 255	25.43 9.67 135.61	204 205 208	81.38 85.63 96.24
0 128 0	5.95 19.76 3.16	167 168 170	52.40 54.86 61.85
0 128 128	11.49 22.16 32.29	128 128 130	28.95 30.45 34.32
0 170 255	36.44 46.87 140.88	87 87 88	12.39 13.25 14.71
0 255 0	27.11 91.40 13.34	44 44 44	2.99 3.14 3.39
0 255 170	37.50 95.67 68.40	54 52 125	8.82 6.19 28.65
0 255 255	52.25 100.57 148.42	96 89 154	20.33 16.63 46.10
85 85 85	11.74 12.58 13.65	153 148 194	47.67 45.10 79.21
128 0 0	16.90 8.03 0.67	183 55 45	39.04 21.11 4.44
128 0 128	22.51 10.13 30.12	197 109 81	50.98 35.93 14.09
128 128 0	22.98 27.87 3.46	214 167 145	71.56 63.74 45.74
128 128 128	28.76 30.39 33.22	48 139 72	10.82 25.73 12.08
128 128 255	49.02 38.23 139.20	111 164 112	27.27 42.31 27.64
128 255 128	50.08 101.89 43.60	170 197 168	57.95 71.05 62.62
170 0 255	57.56 24.70 136.67	200 162 144	63.56 58.36 44.78
170 170 170	53.92 56.47 62.03	214 159 42	63.62 57.55 8.41
170 255 0	59.09 106.50 13.89	185 53 92	42.02 22.10 15.91
170 255 255	85.13 116.71 149.69	135 52 123	25.36 13.96 28.24
255 0 0	78.19 36.71 1.69	172 189 53	47.59 63.03 11.94
255 0 170	88.63 40.60 57.61	0 143 156	16.14 28.91 49.03
255 0 255	104.13 46.52 137.58	22 111 180	16.61 19.44 64.97
255 128 128	89.97 59.09 34.81	239 240 244	115.22 121.11 136.14
255 170 0	89.82 73.86 6.90	219 222 227	95.68 101.42 116.50
255 170 255	114.74 84.28 143.08	199 203 210	78.88 83.36 97.84
255 255 0	105.28 128.06 14.65	159 164 171	48.58 51.84 62.29
255 255 170	115.71 132.22 70.99	119 125 129	26.28 28.33 33.51
170 85 85	36.74 24.33 14.22	84 90 93	12.50 13.68 16.46
85 170 85	20.41 41.77 17.84	57 67 69	5.95 7.00 8.58