

UGRA

Display Analysis & Certification Tool

Report

Basics

Date: 2011-1-5 21:19:46
Report-Version: v1.3.1
Monitor-Name: PA241W
EDID-Name: PA241W
EDID-Serial: 06101400UB
Profile: /Library/ColorSync/Profiles/NEC-05.01.11-6500K-22-120cd-trc.icc
Created: 2011-1-5 21:12
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:	113.62 119.58 130.39
XYZ (normalized):	95.02 100.00 109.04
Luminance:	119.6 Cd/m2
Next Temperature:	6516 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:	2.1 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	23399	0.22	1.62	2.08	
5	10556	0.35	2.62	1.85	2.28
10	7081	0.96	7.29	0.97	2.22
15	6483	2.11	14.20	0.20	2.20
20	6532	3.75	20.60	0.04	2.20
25	6585	5.68	26.02	0.41	2.23
30	6475	8.56	32.17	0.24	2.21
35	6444	12.02	37.94	0.28	2.21
40	6513	16.15	43.51	0.14	2.20
45	6491	20.55	48.49	0.23	2.22
50	6507	25.99	53.74	0.17	2.21
55	6486	32.16	58.88	0.31	2.21
60	6506	38.94	63.81	0.15	2.20
65	6468	46.03	68.38	0.36	2.22
70	6490	54.42	73.23	0.26	2.22
75	6520	63.55	77.96	0.09	2.21
80	6519	73.04	82.42	0.28	2.21
85	6522	83.03	86.72	0.05	2.25
90	6483	94.51	91.25	0.28	2.24
95	6493	106.79	95.71	0.58	2.17
100	6516	119.58	100.00	0.00	
Average	6502			0.23	2.22
Range				0.75	
Max				0.58	

Tone values = 98.0%

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	1.6 -0.2 -2.1	-1.6 0.2 2.1	2.6
0 0 128	11.4 43.8 -68.7	-0.8 2.4 -1.7	3.1
0 0 255	28.1 76.7 -116.7	-0.0 -0.1 0.1	0.1
0 128 0	45.0 -77.1 48.3	0.3 -1.2 2.0	2.3
0 128 128	46.9 -51.8 -11.5	0.0 0.1 -0.2	0.3
0 170 255	64.1 -31.7 -57.3	0.1 0.0 0.2	0.2
0 255 0	85.5 -130.0 83.2	0.1 0.2 0.1	0.2
0 255 170	86.8 -110.1 22.9	0.0 0.6 -0.5	0.8
0 255 255	88.4 -86.1 -19.3	-0.0 0.5 -0.2	0.6
85 85 85	36.2 0.2 0.0	-0.4 -0.2 -0.0	0.4
128 0 0	29.5 59.8 44.1	-0.2 1.0 3.4	3.5
128 0 128	32.4 67.4 -33.4	-0.1 0.7 -0.1	0.7
128 128 0	52.5 -9.8 60.0	0.1 -0.7 1.2	1.4
128 128 128	54.2 0.1 -0.0	-0.2 -0.1 0.0	0.2
128 128 255	58.5 28.0 -66.0	-0.3 0.2 -0.2	0.4
128 255 128	89.2 -83.7 48.1	-0.1 -0.3 0.0	0.3
170 0 255	47.8 94.4 -83.1	0.0 -0.1 0.3	0.3
170 170 170	70.2 0.5 -0.0	-0.0 -0.5 0.0	0.5
170 255 0	90.9 -67.6 91.6	0.1 -0.4 -0.3	0.5
170 255 255	93.5 -41.0 -10.8	-0.1 -0.2 -0.1	0.3
255 0 0	59.2 100.9 87.6	-0.0 -0.0 0.1	0.2
255 0 170	61.1 106.2 -11.2	0.1 -0.2 0.1	0.2
255 0 255	63.8 113.2 -55.9	0.1 -0.3 0.4	0.5
255 128 128	71.8 65.6 28.9	-0.1 0.0 0.3	0.3
255 170 0	78.7 37.7 91.1	0.2 -0.8 -0.6	1.0
255 170 255	82.0 53.5 -27.2	0.0 -0.1 0.1	0.2
255 255 0	97.7 -17.2 102.3	0.1 -0.2 -0.8	0.8
255 255 170	98.7 -9.9 42.0	-0.0 -0.1 -0.0	0.1
255 255 255	100.0 0.0 0.0	0.0 0.0 -0.0	0.0
170 85 85	49.3 48.8 21.7	-0.2 0.2 0.2	0.3
85 170 85	62.0 -61.6 35.5	0.1 -1.0 0.4	1.1
85 85 170	39.4 20.9 -48.8	-0.3 0.2 -0.6	0.7
85 170 170	63.5 -43.6 -11.0	0.0 -0.7 -0.0	0.7
170 85 170	51.4 57.3 -28.6	-0.2 0.3 -0.3	0.5
170 170 85	68.9 -9.3 46.5	0.1 -0.6 0.4	0.7
Average			0.7
Maximum			3.5

Gamut-Volume

These measurements are only informative.

Gamut-Volume	
ISO	99 %
sRGB	100 %
AdobeRGB	100 %
ECI-RGB v1.0	92 %

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	55.8 -30.8 -48.6	6.4
66.9 -24.7 -37.1	66.8 -24.6 -37.0	0.2
79.7 -12.5 -21.8	79.7 -12.1 -22.0	0.5
48.0 74.0 -3.0	48.3 73.3 -2.8	0.8
60.8 50.6 -6.7	60.9 50.6 -6.8	0.1
76.4 25.8 -6.9	76.5 25.7 -7.1	0.2
89.0 -5.0 93.0	89.0 -4.2 93.6	1.0
90.3 -4.7 62.6	90.3 -3.8 62.3	1.0
92.2 -3.5 31.1	92.3 -3.0 31.5	0.6
53.1 37.7 28.9	53.3 38.0 28.8	0.4
41.5 22.7 16.8	41.8 23.0 16.5	0.5
31.9 40.0 24.0	32.4 38.9 22.9	1.6
32.5 44.4 -1.8	33.0 43.4 -1.9	1.2
51.3 1.3 44.5	51.5 1.4 44.1	0.4
34.6 -36.4 13.9	34.8 -35.0 13.4	1.5
36.0 -26.2 -20.9	36.3 -25.9 -20.7	0.5
20.9 9.6 -23.6	21.8 8.4 -22.5	1.9
89.0 0.0 -1.8	89.1 -0.0 -1.6	0.3
82.8 0.0 -1.7	82.7 0.1 -1.7	0.1
69.3 0.0 -1.4	69.4 0.1 -1.2	0.2
54.1 0.0 -1.0	54.2 0.5 -1.2	0.5
36.6 -0.0 -0.5	37.1 0.4 -0.6	0.6
16.0 0.0 0.0	17.2 -0.0 0.2	1.2
24.0 22.0 -46.0	24.6 21.7 -45.3	1.0
40.9 17.9 -36.6	41.2 17.3 -36.2	0.8
63.7 10.3 -23.8	63.9 10.3 -23.7	0.2
47.0 68.0 48.0	47.2 67.3 46.9	1.3
58.5 47.1 37.9	58.8 46.9 37.9	0.4
74.2 22.9 21.4	74.4 22.8 21.0	0.4
50.0 -65.0 27.0	50.1 -64.0 26.3	1.2
62.1 -39.8 21.0	62.4 -39.5 20.8	0.5
77.0 -19.1 11.0	77.2 -18.8 11.2	0.4
71.2 18.8 17.3	71.4 19.2 16.9	0.5
71.2 22.2 73.1	71.2 22.4 73.1	0.2
47.7 71.2 16.2	48.0 70.8 16.0	0.6
38.0 55.4 -20.9	38.6 54.7 -20.6	0.9
73.7 -22.8 67.6	73.7 -22.7 67.6	0.1
52.3 -52.3 -20.2	52.3 -50.8 -20.1	1.5
43.3 -17.0 -48.6	43.5 -17.2 -48.4	0.3
95.0 0.0 -2.0	95.1 0.7 -2.4	0.8
88.5 -0.4 -3.1	88.8 -0.9 -2.9	0.6
82.0 -0.9 -4.1	82.0 -0.6 -4.4	0.4
67.7 -2.0 -4.4	67.8 -1.3 -4.6	0.7
52.2 -2.5 -3.5	52.5 -2.6 -3.4	0.4
37.5 -3.9 -3.1	37.7 -3.6 -3.1	0.4
26.3 -6.8 -3.4	26.8 -6.2 -3.5	0.8
Average		0.8
Gamut-Volume		99 %

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	113.62 119.58 130.39	85 85 170	17.48 13.48 49.34
0 0 0	0.20 0.22 0.41	85 170 170	25.26 39.08 52.95
12 12 12	0.34 0.35 0.53	170 85 170	38.94 23.40 49.92
25 25 25	0.92 0.96 1.13	170 170 85	39.62 46.37 15.90
38 38 38	2.01 2.11 2.31	0 147 215	22.43 29.41 83.82
51 51 51	3.57 3.75 4.10	99 173 226	35.93 44.54 95.09
63 63 63	5.42 5.68 6.29	167 203 236	60.09 67.78 106.68
76 76 76	8.16 8.56 9.33	186 54 121	38.66 19.85 24.26
89 89 89	11.45 12.02 13.03	198 114 159	50.46 34.43 44.39
102 102 102	15.32 16.15 17.56	215 173 201	69.68 60.51 75.69
114 114 114	19.57 20.55 22.41	241 223 24	77.83 87.30 10.16
127 127 127	24.73 25.99 28.37	241 227 109	81.99 91.02 28.28
140 140 140	30.65 32.16 35.08	240 233 173	88.65 96.74 60.64
153 153 153	37.05 38.94 42.49	172 103 82	33.61 24.92 12.15
165 165 165	43.86 46.03 50.07	125 86 74	17.85 14.54 9.36
178 178 178	51.67 54.42 59.06	116 53 46	13.36 8.46 3.65
191 191 191	60.34 63.55 69.27	117 51 82	14.83 8.84 10.59
204 204 204	69.51 73.04 79.88	134 120 50	21.78 23.26 6.00
216 216 216	78.89 83.03 90.61	48 93 61	5.57 10.08 6.58
229 229 229	89.95 94.51 102.83	36 95 116	7.81 11.22 22.27
242 242 242	101.83 106.79 116.72	51 51 85	4.88 4.24 11.07
0 0 128	4.92 1.88 25.60	222 223 226	84.60 88.96 99.51
0 0 255	22.23 8.02 117.75	204 205 208	70.22 73.78 82.92
0 128 0	5.39 17.44 2.74	167 168 170	45.41 47.71 53.34
0 128 128	10.23 19.46 28.13	128 128 130	25.33 26.51 29.79
0 170 255	32.10 40.91 122.15	87 87 88	10.96 11.47 12.76
0 255 0	24.42 80.45 11.41	44 44 44	2.67 2.81 3.03
0 255 170	33.43 83.96 58.99	54 52 125	7.81 5.39 25.23
0 255 255	46.56 88.73 128.67	96 90 154	17.81 14.68 40.26
85 85 85	10.40 10.91 11.88	153 149 194	41.75 39.42 68.93
128 0 0	14.64 6.86 0.61	184 58 45	34.24 18.54 3.97
128 0 128	19.54 8.61 26.21	198 110 81	44.25 31.29 12.33
128 128 0	20.13 24.36 2.99	215 168 145	62.49 56.00 39.94
128 128 128	25.18 26.46 28.88	46 138 73	9.52 22.27 10.75
128 128 255	42.56 32.84 120.79	110 164 112	23.70 36.92 24.05
128 255 128	44.33 89.37 37.66	170 197 168	50.56 61.94 54.12
170 0 255	49.61 20.65 118.52	201 162 144	55.37 50.64 38.98
170 170 170	46.76 49.02 53.52	214 159 42	54.90 49.84 7.26
170 255 0	52.02 93.15 11.84	186 56 92	36.88 19.40 13.87
170 255 255	74.41 101.54 129.52	136 54 123	22.41 12.35 24.87
255 0 0	66.93 30.89 1.43	172 188 53	41.74 54.79 10.26
255 0 170	75.94 34.08 49.55	0 142 156	14.24 24.99 42.75
255 0 255	89.03 38.75 119.35	13 111 180	14.38 16.83 56.34
255 128 128	77.36 50.53 30.07	239 240 244	100.51 105.17 119.02
255 170 0	76.84 63.45 5.85	219 222 227	83.55 88.29 100.89
255 170 255	99.21 71.96 123.82	199 203 210	68.41 72.11 84.82
255 255 0	91.28 111.27 12.44	159 164 171	42.60 45.16 54.04
255 255 170	100.58 114.86 61.04	119 125 129	22.96 24.73 29.30
170 85 85	31.84 20.80 12.33	83 90 93	10.86 11.93 14.32
85 170 85	18.15 36.42 15.42	57 67 69	5.21 6.03 7.53