

# UGRA

## Display Analysis & Certification Tool

### Report

#### Basics

Date: 2010-4-15 8:34:41  
Report-Version: v1.3.1  
Monitor-Name: \\.\DISPLAY2  
Profile: C:/Windows/system32/.../20100415-PA241W-6500K-22-100%-trc.icc  
Created: 2010-4-15 8:26  
Measurement device: DTP94-LCD mode (Wide Gamut S-IPS (generic))

#### Summary

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

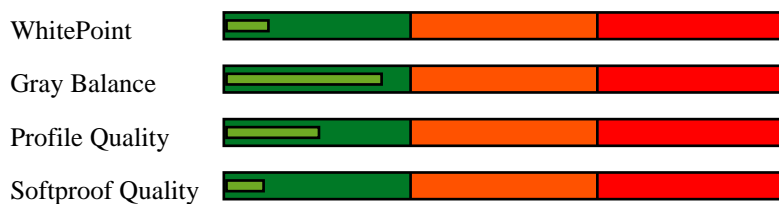
#### Calibration

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:	113.33 119.26 130.73
XYZ (normalized):	95.02 100.00 109.61
Luminance:	119.3 Cd/m2
Next Temperature:	6552 Kelvin
Assumed Target Whitepoint:	6600 Kelvin
Distance to assumed Target Whitepoint:	0.5 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:	1.8 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	22625	0.19	1.48	1.79	
5	10160	0.34	2.55	1.44	2.27
10	7424	0.94	7.09	1.18	2.22
15	6811	2.03	13.84	0.52	2.21
20	6575	3.61	20.16	0.47	2.21
25	6544	5.70	26.10	0.28	2.22
30	6481	8.62	32.31	0.39	2.21
35	6567	12.00	37.96	0.16	2.20
40	6598	16.16	43.58	0.19	2.19
45	6609	20.59	48.60	0.25	2.21
50	6594	26.08	53.89	0.20	2.20
55	6540	31.97	58.79	0.65	2.20
60	6538	38.87	63.83	0.22	2.20
65	6544	45.89	68.37	0.20	2.22
70	6602	54.34	73.26	0.33	2.21
75	6605	63.29	77.92	0.35	2.20
80	6586	73.22	82.59	0.24	2.19
85	6580	82.98	86.79	0.22	2.24
90	6592	94.35	91.28	0.53	2.24
95	6598	106.29	95.63	1.04	2.31
100	6552	119.26	100.00	0.00	
Average	6584			0.35	2.22
Range				1.68	
Max				1.04	

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	1.5 -0.3 -1.8	-1.5 0.3 1.8	2.3
0 0 128	12.2 41.0 -67.3	-0.3 1.5 -0.8	1.7
0 0 255	29.9 70.8 -113.8	0.3 -0.5 0.9	1.1
0 128 0	44.8 -79.3 47.9	0.2 -0.8 1.3	1.6
0 128 128	46.9 -53.2 -11.7	-0.0 0.5 -0.2	0.5
0 170 255	64.5 -33.6 -56.9	0.1 0.5 0.4	0.6
0 255 0	85.0 -133.1 82.3	0.1 0.4 -0.7	0.8
0 255 170	86.3 -112.4 21.9	0.1 0.7 -0.3	0.8
0 255 255	88.1 -88.1 -19.9	0.1 0.7 0.2	0.7
85 85 85	36.2 -0.0 0.0	-0.4 0.0 0.0	0.4
128 0 0	29.7 60.2 45.3	-0.2 1.2 2.7	3.0
128 0 128	32.8 66.8 -32.8	-0.1 0.6 0.2	0.7
128 128 0	52.5 -9.7 60.2	-0.0 -0.4 0.5	0.6
128 128 128	54.2 -0.1 -0.1	-0.3 0.1 0.1	0.3
128 128 255	59.1 26.4 -65.3	-0.2 0.5 0.1	0.5
128 255 128	88.8 -84.9 47.2	0.0 -0.3 -0.1	0.3
170 0 255	48.8 91.9 -81.7	0.2 -0.1 0.9	0.9
170 170 170	70.3 -0.1 -0.3	-0.1 0.1 0.3	0.3
170 255 0	90.5 -68.5 91.1	0.1 -0.1 -1.1	1.1
170 255 255	93.3 -41.9 -11.3	0.0 -0.0 0.2	0.3
255 0 0	59.5 101.5 90.7	-0.2 0.3 -0.9	0.9
255 0 170	61.7 106.0 -10.6	-0.0 0.0 0.4	0.4
255 0 255	64.6 111.9 -54.6	0.1 -0.2 0.7	0.7
255 128 128	72.0 65.9 29.4	-0.2 0.5 0.2	0.6
255 170 0	78.7 38.3 91.7	0.1 -0.5 -1.4	1.5
255 170 255	82.4 52.8 -26.7	-0.1 0.5 0.2	0.5
255 255 0	97.5 -16.7 102.3	0.0 -0.1 -1.8	1.8
255 255 170	98.5 -9.4 41.4	-0.0 -0.1 0.2	0.2
255 255 255	100.0 0.0 -0.0	0.0 0.0 0.0	0.0
170 85 85	49.4 48.8 21.9	-0.3 0.7 0.2	0.8
85 170 85	61.9 -62.9 35.1	-0.1 -0.6 0.1	0.6
85 85 170	39.8 19.8 -48.6	-0.3 0.2 0.0	0.4
85 170 170	63.6 -44.8 -11.4	-0.1 -0.3 0.3	0.4
170 85 170	51.8 56.8 -28.4	-0.2 0.5 0.2	0.6
170 170 85	68.8 -9.6 46.3	-0.1 -0.0 0.1	0.2
Average			0.8
Maximum			3.0

# Gamut-Volume

These measurements are only informative.

Gamut-Volume	
ISO	99 %
sRGB	100 %
AdobeRGB	99 %
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	55.6 -31.3 -49.3	5.8
66.9 -24.7 -37.1	67.1 -25.1 -37.1	0.4
79.7 -12.5 -21.8	79.9 -13.2 -21.9	0.7
48.0 74.0 -3.0	48.2 73.8 -3.9	0.9
60.8 50.6 -6.7	61.1 50.0 -6.7	0.6
76.4 25.8 -6.9	76.6 25.2 -7.4	0.8
89.0 -5.0 93.0	88.9 -5.3 94.2	1.3
90.3 -4.7 62.6	90.4 -5.4 62.5	0.7
92.2 -3.5 31.1	92.2 -4.2 30.8	0.8
53.1 37.7 28.9	53.4 36.9 29.1	0.9
41.5 22.7 16.8	41.9 21.8 16.8	1.0
31.9 40.0 24.0	32.3 39.5 23.2	0.9
32.5 44.4 -1.8	33.0 43.8 -1.7	0.7
51.3 1.3 44.5	51.5 1.4 44.2	0.4
34.6 -36.4 13.9	34.7 -35.5 13.1	1.2
36.0 -26.2 -20.9	36.1 -25.5 -21.4	0.9
20.9 9.6 -23.6	21.3 9.5 -23.6	0.4
89.0 0.0 -1.8	89.1 -0.3 -2.1	0.4
82.8 0.0 -1.7	82.9 -0.4 -2.1	0.6
69.3 0.0 -1.4	69.3 -0.0 -1.9	0.6
54.1 0.0 -1.0	54.3 0.1 -1.5	0.5
36.6 -0.0 -0.5	37.1 0.3 -1.0	0.8
16.0 0.0 0.0	16.8 0.2 -0.6	1.0
24.0 22.0 -46.0	24.4 21.8 -46.1	0.4
40.9 17.9 -36.6	41.2 17.7 -36.5	0.4
63.7 10.3 -23.8	63.7 10.9 -24.1	0.7
47.0 68.0 48.0	47.2 67.8 47.8	0.3
58.5 47.1 37.9	58.7 46.5 38.1	0.7
74.2 22.9 21.4	74.2 22.7 20.7	0.7
50.0 -65.0 27.0	49.8 -64.2 26.7	0.9
62.1 -39.8 21.0	62.2 -39.5 20.6	0.5
77.0 -19.1 11.0	76.9 -19.2 10.5	0.5
71.2 18.8 17.3	71.1 18.8 16.5	0.7
71.2 22.2 73.1	71.3 22.0 73.3	0.2
47.7 71.2 16.2	47.8 70.7 15.6	0.8
38.0 55.4 -20.9	38.3 54.9 -21.2	0.6
73.7 -22.8 67.6	73.6 -22.8 67.9	0.4
52.3 -52.3 -20.2	52.0 -52.1 -20.2	0.4
43.3 -17.0 -48.6	43.6 -17.7 -48.8	0.8
95.0 0.0 -2.0	95.0 -1.0 -2.0	1.0
88.5 -0.4 -3.1	88.7 -1.1 -3.2	0.8
82.0 -0.9 -4.1	82.0 -1.6 -4.4	0.8
67.7 -2.0 -4.4	67.7 -1.8 -5.0	0.7
52.2 -2.5 -3.5	52.6 -3.3 -3.6	0.9
37.5 -3.9 -3.1	37.8 -3.2 -3.5	0.8
26.3 -6.8 -3.4	26.9 -6.4 -3.2	0.7
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	113.33 119.26 130.73	85 85 170	17.63 13.77 49.99
0 0 0	0.18 0.19 0.36	85 170 170	25.02 39.10 53.63
12 12 12	0.31 0.34 0.49	170 85 170	39.17 23.70 50.47
25 25 25	0.87 0.94 1.11	170 170 85	39.30 46.14 16.00
38 38 38	1.92 2.03 2.29	0 146 215	22.23 29.19 84.71
51 51 51	3.46 3.61 4.02	100 173 226	36.10 44.85 96.18
63 63 63	5.44 5.70 6.28	167 203 236	59.86 68.02 107.42
76 76 76	8.17 8.62 9.32	185 53 122	38.56 19.69 24.85
89 89 89	11.42 12.00 13.21	197 114 159	50.34 34.54 44.69
102 102 102	15.34 16.16 17.79	214 173 201	69.35 60.45 76.42
114 114 114	19.53 20.59 22.69	241 224 19	76.72 86.81 9.87
127 127 127	24.77 26.08 28.73	241 228 108	80.90 90.85 28.26
140 140 140	30.54 31.97 35.28	240 233 173	87.50 96.23 61.47
153 153 153	37.01 38.87 42.65	171 104 82	33.27 24.96 12.10
165 165 165	43.67 45.89 50.36	124 87 74	17.69 14.62 9.36
178 178 178	51.53 54.34 59.78	116 53 46	13.31 8.34 3.56
191 191 191	60.09 63.29 69.79	117 51 82	14.84 8.79 10.53
204 204 204	69.49 73.22 80.48	134 120 50	21.65 23.14 5.97
216 216 216	78.75 82.98 91.13	49 93 61	5.46 9.98 6.60
229 229 229	89.34 94.35 103.45	38 94 116	7.79 11.09 22.56
242 242 242	100.37 106.29 116.12	51 50 85	4.79 4.06 11.17
0 0 128	4.97 2.03 25.69	222 223 226	84.28 88.75 100.61
0 0 255	22.58 8.85 118.41	204 205 208	70.16 73.93 84.00
0 128 0	5.11 17.25 2.75	167 168 170	45.16 47.46 54.05
0 128 128	10.04 19.42 28.33	128 128 130	25.30 26.55 30.16
0 170 255	32.00 41.36 122.86	87 87 88	10.96 11.47 12.98
0 255 0	23.03 79.03 11.44	44 44 44	2.58 2.70 3.05
0 255 170	32.21 82.77 59.46	53 51 125	7.71 5.29 25.46
0 255 255	45.55 88.03 129.46	96 89 154	17.82 14.60 40.51
85 85 85	10.35 10.89 11.94	153 148 194	41.61 39.07 69.27
128 0 0	14.77 6.92 0.54	184 58 45	34.28 18.47 3.82
128 0 128	19.79 8.85 26.43	197 110 81	43.83 31.09 12.21
128 128 0	20.01 24.23 2.96	214 168 145	61.80 55.40 39.95
128 128 128	25.14 26.49 29.12	49 138 72	9.28 21.88 10.43
128 128 255	42.80 33.50 121.52	111 164 111	23.45 36.56 24.05
128 255 128	43.13 88.09 37.86	170 197 168	49.95 61.37 54.65
170 0 255	50.14 21.52 119.25	200 162 144	54.60 50.06 39.02
170 170 170	46.57 49.05 54.04	214 160 42	54.65 49.78 7.25
170 255 0	50.73 91.79 11.80	185 56 92	36.50 19.17 13.92
170 255 255	73.52 100.91 130.34	135 53 123	22.11 12.12 24.97
255 0 0	67.59 31.16 1.21	173 189 52	41.39 54.46 10.10
255 0 170	76.78 34.69 49.98	0 142 155	13.83 24.63 42.47
255 0 255	90.06 39.83 119.93	15 110 180	14.39 16.88 57.12
255 128 128	77.77 50.78 30.14	239 240 244	98.83 104.54 118.23
255 170 0	77.00 63.34 5.72	219 222 227	83.06 87.88 101.39
255 170 255	99.59 72.67 124.47	199 203 210	67.95 72.09 85.30
255 255 0	90.55 110.14 12.27	159 164 171	42.21 44.89 54.40
255 255 170	100.04 113.97 61.50	119 125 129	22.77 24.68 29.51
170 85 85	31.86 20.83 12.35	84 90 93	10.95 11.96 14.60
85 170 85	17.74 36.16 15.55	57 67 69	5.21 6.05 7.50