

UGRA

Display Analysis & Certification Tool

Report

Basics

Date: 2009-1-26 19:46:40
Report-Version: v1.3.1
Monitor-Name: \\.\DISPLAY1
EDID-Name:
EDID-Serial:
Profile: C:/WINDOWS/System32/spool/DRIVERS/COLOR/ev2411w_ugra.icc
Created: 2009-1-26 19:41
Measurement device: DTP94-LCD mode

Summary

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

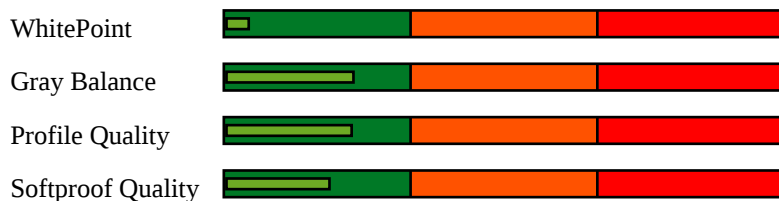
Calibration

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:	130.19 136.38 132.55
XYZ (normalized):	95.46 100.00 97.19
Luminance:	136.4 Cd/m2
Next Temperature:	5779 Kelvin
Assumed Target Whitepoint:	5800 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:	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	19198	0.19	1.26	2.11	
5	6741	0.71	4.70	1.55	1.87
10	5744	2.26	13.57	0.78	1.83
15	5828	4.59	21.45	0.85	1.81
20	5846	7.79	28.67	0.36	1.80
25	5835	11.25	34.50	0.26	1.81
30	5825	15.75	40.49	0.24	1.80
35	5815	20.82	46.00	0.20	1.80
40	5812	26.57	51.25	0.32	1.79
45	5795	32.43	55.87	0.55	1.81
50	5807	38.38	60.02	0.26	1.83
55	5818	46.07	64.79	0.53	1.81
60	5774	54.38	69.38	0.04	1.81
65	5792	62.64	73.50	0.16	1.81
70	5799	70.97	77.30	0.64	1.82
75	5784	81.47	81.70	0.19	1.79
80	5784	91.75	85.64	0.15	1.78
85	5808	100.94	88.93	0.65	1.83
90	5779	112.34	92.74	0.29	1.83
95	5794	124.15	96.42	0.43	1.79
100	5779	136.38	100.00	0.00	
Average	5801			0.36	1.81
Range				1.37	
Max				0.85	

Tone values = 96.6%

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	1.2 0.3 -2.1	-1.2 -0.3 2.1	2.4
0 0 128	11.7 54.0 -77.5	-0.0 0.2 -1.0	1.0
0 0 255	25.9 81.9 -119.6	-0.0 0.0 0.8	0.8
0 128 0	51.9 -56.6 50.4	0.7 2.0 3.1	3.7
0 128 128	53.2 -35.3 -11.9	0.8 1.2 0.9	1.7
0 170 255	68.4 -20.4 -50.6	0.4 0.7 1.8	2.0
0 255 0	88.1 -80.3 84.2	-0.4 -2.3 -3.3	4.1
0 255 170	89.1 -64.6 19.8	-0.4 -2.0 -1.7	2.7
0 255 255	90.3 -49.8 -16.3	-0.4 -1.7 -0.4	1.8
85 85 85	44.3 -0.0 0.1	-0.3 0.0 -0.1	0.4
128 0 0	32.6 51.2 45.8	-1.0 0.3 3.2	3.3
128 0 128	35.2 62.9 -37.6	-0.7 0.1 -2.0	2.1
128 128 0	59.3 -11.4 60.8	0.1 -0.1 2.4	2.4
128 128 128	60.5 0.3 -0.0	0.2 -0.3 0.0	0.4
128 128 255	63.4 23.4 -57.9	0.2 -0.4 1.4	1.4
128 255 128	92.1 -48.3 44.2	-0.5 -2.1 -2.7	3.4
170 0 255	47.8 86.5 -82.3	-0.5 -0.2 -0.0	0.6
170 170 170	75.0 0.2 -0.1	-0.0 -0.2 0.1	0.2
170 255 0	93.6 -43.2 91.9	-0.6 -1.9 -3.5	4.0
170 255 255	95.6 -21.0 -7.6	-0.6 -1.7 -0.6	1.9
255 0 0	55.2 78.5 79.6	0.8 -0.6 -1.6	1.8
255 0 170	57.3 87.7 -23.7	0.9 -0.9 0.5	1.4
255 0 255	59.7 96.0 -61.9	0.8 -0.8 1.9	2.2
255 128 128	72.6 40.7 20.2	0.9 0.4 0.6	1.1
255 170 0	80.4 15.2 84.7	0.6 1.3 0.5	1.5
255 170 255	82.9 34.5 -26.3	0.6 0.9 1.9	2.1
255 255 0	98.3 -17.4 99.5	-0.1 -0.1 -3.8	3.8
255 255 170	99.1 -8.6 36.2	-0.1 -0.1 -1.6	1.6
255 255 255	100.0 0.0 0.0	0.0 -0.0 -0.0	0.0
170 85 85	54.5 32.6 16.6	-0.4 -0.3 -0.3	0.5
85 170 85	68.3 -40.0 32.3	-0.0 0.4 0.4	0.6
85 85 170	46.5 18.2 -44.3	-0.2 -0.0 -0.2	0.3
85 170 170	69.4 -26.2 -9.3	0.0 0.2 0.3	0.4
170 85 170	56.0 43.1 -28.2	-0.3 -0.4 -0.3	0.6
170 170 85	74.0 -9.5 41.3	-0.1 -0.1 0.2	0.2
Average			1.7
Maximum			4.1

Gamut-Volume

These measurements are only informative.

Gamut-Volume	
ISO	92 %
sRGB	100 %
AdobeRGB	79 %
ECI-RGB v1.0	73 %

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	58.0 -16.8 -46.2	20.8
66.9 -24.7 -37.1	66.8 -26.2 -37.5	1.6
79.7 -12.5 -21.8	79.9 -12.7 -22.4	0.7
48.0 74.0 -3.0	48.6 73.8 -1.9	1.3
60.8 50.6 -6.7	60.9 50.9 -6.1	0.7
76.4 25.8 -6.9	76.2 25.6 -7.7	0.8
89.0 -5.0 93.0	89.2 -5.6 90.4	2.7
90.3 -4.7 62.6	90.2 -5.1 63.2	0.8
92.2 -3.5 31.1	92.1 -3.8 31.6	0.5
53.1 37.7 28.9	53.5 37.6 28.3	0.8
41.5 22.7 16.8	42.1 22.7 16.8	0.6
31.9 40.0 24.0	32.6 40.3 24.1	0.8
32.5 44.5 -1.8	33.5 44.6 -1.2	1.1
51.3 1.3 44.5	51.8 0.6 43.7	1.2
34.6 -36.4 13.9	34.8 -36.5 13.7	0.3
36.0 -26.2 -20.9	36.8 -20.6 -20.2	5.7
20.9 9.6 -23.6	21.4 9.5 -22.8	1.0
89.0 0.0 -1.9	89.0 0.3 -2.3	0.5
82.8 0.0 -1.7	82.8 0.7 -2.4	1.0
69.3 0.0 -1.4	69.4 -0.1 -1.3	0.1
54.1 0.0 -1.0	54.5 -0.1 -0.6	0.5
36.6 0.0 -0.5	37.0 0.2 -0.3	0.5
16.0 0.0 0.0	16.8 0.1 -0.2	0.8
24.0 22.0 -46.0	24.2 22.5 -45.9	0.6
40.9 17.9 -36.6	41.4 18.0 -35.8	0.9
63.7 10.3 -23.8	63.4 10.8 -24.7	1.1
47.0 68.0 48.0	47.3 68.4 48.3	0.6
58.5 47.1 37.9	58.7 47.7 37.7	0.6
74.2 22.9 21.4	73.7 22.7 21.2	0.5
50.0 -65.0 27.0	51.5 -51.2 28.5	13.9
62.1 -39.8 21.0	62.1 -40.7 20.3	1.1
77.0 -19.1 11.0	77.1 -19.4 11.2	0.4
71.2 18.9 17.3	71.2 18.6 17.7	0.5
71.2 22.1 73.1	71.0 21.8 72.6	0.7
47.7 71.2 16.2	48.1 71.5 17.3	1.2
38.0 55.4 -20.9	38.5 55.9 -20.1	1.1
73.7 -22.8 67.6	73.5 -22.7 66.8	0.8
52.3 -52.3 -20.1	54.5 -33.2 -17.0	19.5
43.3 -17.0 -48.6	45.0 -7.9 -46.1	9.6
95.0 0.0 -2.0	95.2 -0.1 -2.4	0.5
88.5 -0.4 -3.1	88.5 0.1 -3.5	0.7
82.0 -0.9 -4.1	82.1 -0.7 -4.7	0.7
67.7 -2.0 -4.4	67.7 -2.2 -4.4	0.2
52.2 -2.5 -3.5	52.6 -2.4 -3.5	0.4
37.5 -3.9 -3.1	37.8 -3.7 -3.5	0.5
26.3 -6.8 -3.4	26.4 -5.7 -4.5	1.6
Average		2.2
Gamut-Volume		92 %

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	130.19 136.38 132.55	85 85 170	25.80 21.60 58.38
0 0 0	0.19 0.19 0.36	85 170 170	42.10 54.69 63.54
12 12 12	0.69 0.71 0.82	170 85 170	46.61 32.67 58.91
25 25 25	2.19 2.26 2.25	170 170 85	55.45 63.45 24.27
38 38 38	4.43 4.59 4.59	0 137 208	30.36 35.96 87.09
51 51 51	7.40 7.79 7.59	22 165 221	39.29 50.26 97.29
63 63 63	10.73 11.25 11.03	134 197 233	68.11 77.50 109.66
76 76 76	15.00 15.75 15.38	204 0 104	45.24 23.20 24.28
89 89 89	19.84 20.82 20.32	213 86 144	58.05 39.44 44.33
102 102 102	25.38 26.57 26.03	223 155 191	79.05 68.46 76.94
114 114 114	30.81 32.43 31.33	246 214 0	90.92 100.78 12.02
127 127 127	36.65 38.38 37.52	244 219 85	94.57 104.07 28.20
140 140 140	44.05 46.07 45.26	240 227 157	101.55 110.01 61.28
153 153 153	51.93 54.38 52.84	178 77 64	39.27 28.97 12.73
165 165 165	59.73 62.64 60.90	118 64 56	20.95 17.00 9.63
178 178 178	67.95 70.97 69.64	113 28 31	15.95 9.87 3.55
191 191 191	77.84 81.47 79.39	115 27 64	17.73 10.44 10.77
204 204 204	87.64 91.75 89.36	121 100 32	25.51 26.98 6.39
216 216 216	96.55 100.94 99.04	0 77 43	6.28 11.50 6.64
229 229 229	107.40 112.34 109.51	0 79 98	9.58 12.99 22.82
242 242 242	118.69 124.15 121.35	36 36 67	5.36 4.62 11.04
0 0 128	6.31 2.11 32.79	214 216 220	96.74 101.06 101.99
0 0 255	21.99 7.33 117.57	194 195 199	81.00 84.34 85.52
0 128 0	13.22 27.29 4.70	152 153 155	51.93 54.40 54.29
0 128 128	19.41 29.25 37.47	110 110 112	29.15 30.56 30.15
0 170 255	44.49 53.37 125.26	68 68 69	12.43 12.99 12.75
0 255 0	50.31 98.44 13.64	30 30 30	2.95 3.08 3.02
0 255 170	60.74 101.73 69.26	38 38 108	8.38 5.84 25.48
0 255 255	72.22 105.62 131.45	80 72 139	20.11 16.68 40.65
85 85 85	18.31 19.18 18.58	138 132 184	46.66 44.01 70.18
128 0 0	18.02 9.78 0.90	202 7 31	40.60 21.68 3.80
128 0 128	24.25 11.76 33.33	214 79 63	51.56 35.83 12.53
128 128 0	31.14 37.10 5.28	224 147 127	70.66 62.70 39.41
128 128 128	37.45 39.12 38.05	0 125 52	14.11 26.96 11.10
128 128 255	53.18 44.38 122.91	60 152 91	26.70 41.63 24.60
128 255 128	74.45 110.13 47.07	142 188 152	57.67 70.44 54.90
170 0 255	51.70 23.21 118.51	205 143 126	63.31 57.64 38.63
170 170 170	62.91 65.80 64.08	226 137 21	63.42 56.86 7.53
170 255 0	79.90 114.55 14.50	205 0 74	43.23 22.57 13.53
170 255 255	102.02 121.80 132.53	138 26 106	25.74 14.05 24.74
255 0 0	58.36 30.80 1.40	151 176 29	48.59 62.39 10.80
255 0 170	68.63 34.06 56.40	0 131 140	21.24 30.91 44.08
255 0 255	80.12 37.94 118.62	0 97 168	18.41 20.21 57.48
255 128 128	77.67 60.21 38.64	235 237 242	114.78 120.23 121.23
255 170 0	80.98 77.36 8.67	211 215 222	95.47 99.79 102.80
255 170 255	102.87 84.56 126.57	187 194 201	78.53 82.50 87.01
255 255 0	108.55 129.40 14.73	141 150 156	48.25 51.36 54.58
255 255 170	119.04 132.77 70.45	99 107 111	26.36 28.25 29.92
170 85 85	39.17 30.30 19.13	63 72 75	12.43 13.63 14.79
85 170 85	34.64 52.33 23.74	37 50 52	5.82 6.67 7.74