

UGRA

Display Analysis & Certification Tool

Report

Basics

Date: 2009-6-9 14:44:15
Report-Version: v1.3.1
Monitor-Name: \\.\DISPLAY1
EDID-Name:
EDID-Serial:
Profile: C:/WINDOWS/System32/spool/DRIVERS/COLOR/benq_gra.icc
Created: 2009-6-9 14:38
Measurement device: DTP94-LCD mode

Summary

The monitor has not passed the certification according to the UGRA DACT specifications.

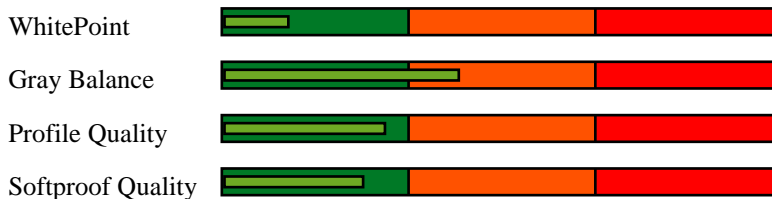
Calibration

White Point	yes
Gray balance	no
Profile quality	yes

Softproofing

MultiColor, HighBody	no
Offset/Gravure Paper Type 1/2	no
Offset on uncoated paper	no
Newspaper Printing	no
sRGB	no
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:	117.49 123.56 118.14
XYZ (normalized):	95.09 100.00 95.61
Luminance:	123.6 Cd/m ²
Next Temperature:	5735 Kelvin
Assumed Target Whitepoint:	5700 Kelvin
Distance to assumed Target Whitepoint:	0.7 deltaE

Blackpoint

The blackpoint is not defined in ISO 12646. Therefore UDACT does only measure but not assess it.

Luminance:	0.1 Cd/m ²
Chromaticity:	2.0 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/m ²	L	Chroma	Gamma
0	34406	0.13	0.95	1.96	
5	6814	0.58	4.24	1.52	1.88
10	5754	1.92	12.95	0.10	1.85
15	5710	3.86	20.53	0.30	1.85
20	5721	6.52	27.51	0.12	1.85
25	5739	9.48	33.29	0.03	1.86
30	5770	13.14	38.96	0.76	1.86
35	5717	17.48	44.44	1.16	1.86
40	5728	22.46	49.71	0.74	1.86
45	5709	27.75	54.51	0.47	1.87
50	5735	33.74	59.26	0.08	1.88
55	5736	39.98	63.64	0.47	1.89
60	5746	46.75	67.90	0.78	1.90
65	5719	54.22	72.15	0.72	1.91
70	5740	62.79	76.57	0.09	1.90
75	5749	71.62	80.72	0.13	1.90
80	5744	80.62	84.61	0.13	1.92
85	5762	89.87	88.32	0.29	1.95
90	5754	100.32	92.22	0.41	1.96
95	5722	111.72	96.17	0.24	1.96
100	5735	123.56	100.00	0.00	
Average	5736			0.37	1.89
Range				1.27	
Max				1.16	

Tone values = 92.5%

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	0.9 0.3 -1.9	-0.9 -0.3 1.9	2.2
0 0 128	12.0 47.7 -72.8	0.9 0.2 -2.0	2.2
0 0 255	27.7 70.7 -113.1	-0.1 1.7 -0.1	1.7
0 128 0	49.4 -59.6 42.4	2.0 0.1 4.1	4.6
0 128 128	51.0 -38.0 -13.9	2.1 -0.6 1.6	2.7
0 170 255	66.3 -23.4 -52.7	1.7 -1.9 4.0	4.8
0 255 0	86.4 -88.0 74.2	-0.5 -2.0 -3.8	4.3
0 255 170	87.6 -72.5 17.7	-0.4 -1.1 -3.6	3.7
0 255 255	89.0 -57.3 -18.1	-0.5 -1.1 -0.5	1.3
85 85 85	42.7 0.6 -0.6	1.3 -0.6 0.6	1.5
128 0 0	32.7 50.9 44.6	0.8 1.2 5.0	5.2
128 0 128	35.9 60.7 -32.5	0.6 0.4 -2.4	2.5
128 128 0	58.1 -11.6 53.7	1.3 1.2 3.8	4.1
128 128 128	59.6 0.1 -0.3	1.1 -0.1 0.3	1.2
128 128 255	63.1 21.1 -56.7	0.8 -0.4 2.5	2.7
128 255 128	90.9 -53.3 40.6	-0.5 -0.2 -3.7	3.7
170 0 255	49.5 81.6 -76.1	0.3 0.2 0.5	0.7
170 170 170	73.9 0.4 0.0	1.1 -0.4 -0.0	1.1
170 255 0	92.4 -47.0 82.3	-0.4 0.8 -3.4	3.5
170 255 255	94.9 -24.9 -8.6	-0.6 -0.1 -0.5	0.8
255 0 0	57.6 81.1 78.5	1.2 -2.2 -1.9	3.2
255 0 170	59.7 87.9 -14.8	1.4 -2.1 -2.0	3.3
255 0 255	62.4 94.1 -54.2	1.1 -1.6 1.6	2.5
255 128 128	73.5 44.5 22.5	1.3 -1.4 -0.1	1.9
255 170 0	80.5 20.3 78.0	1.1 -0.8 1.2	1.8
255 170 255	83.4 36.7 -24.3	1.0 -0.9 2.6	2.9
255 255 0	98.1 -15.6 91.1	-0.1 -0.1 -4.2	4.2
255 255 170	99.0 -7.9 36.1	-0.1 0.1 -3.5	3.5
255 255 255	100.0 0.0 0.0	-0.0 0.0 0.0	0.0
170 85 85	53.9 35.1 17.4	1.2 -1.2 0.3	1.7
85 170 85	66.3 -42.3 28.4	1.1 0.2 0.7	1.3
85 85 170	45.1 17.2 -42.7	1.4 -0.9 0.1	1.6
85 170 170	67.6 -29.0 -10.2	1.1 0.0 0.1	1.1
170 85 170	55.7 44.1 -25.1	1.2 -1.4 -0.2	1.9
170 170 85	72.8 -8.4 38.2	1.0 -0.2 0.7	1.2
Average			2.5
Maximum			5.2

Gamut-Volume

These measurements are only informative.

Gamut-Volume	
ISO	92 %
sRGB	98 %
AdobeRGB	82 %
ECI-RGB v1.0	74 %

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 -18.9 -47.7	18.2
66.9 -24.7 -37.1	65.7 -24.0 -38.9	2.3
79.7 -12.5 -21.8	78.9 -12.4 -23.1	1.6
48.0 74.0 -3.0	48.1 71.6 0.5	4.3
60.8 50.6 -6.7	59.4 52.3 -6.6	2.2
76.4 25.8 -6.9	74.9 26.7 -8.0	2.1
89.0 -5.0 93.0	88.5 -4.1 81.5	11.6
90.3 -4.7 62.6	89.8 -4.1 63.7	1.4
92.2 -3.5 31.1	91.7 -3.2 32.9	1.9
53.1 37.7 28.9	52.1 38.4 28.3	1.4
41.5 22.7 16.8	40.7 23.2 16.2	1.2
31.9 40.0 24.0	31.6 39.3 23.2	1.1
32.5 44.5 -1.8	32.3 44.2 -0.5	1.3
51.3 1.3 44.5	49.9 1.6 42.1	2.8
34.6 -36.4 13.9	33.1 -36.4 11.9	2.4
36.0 -26.2 -20.9	34.2 -21.9 -21.2	4.7
20.9 9.6 -23.6	20.2 9.8 -23.1	1.0
89.0 0.0 -1.9	88.4 0.0 -2.1	0.6
82.8 0.0 -1.7	82.0 0.2 -1.7	0.8
69.3 0.0 -1.4	67.8 0.5 -2.1	1.7
54.1 0.0 -1.0	52.9 0.7 -0.9	1.4
36.6 0.0 -0.5	35.5 0.3 -0.8	1.2
16.0 0.0 0.0	15.9 0.3 -0.4	0.5
24.0 22.0 -46.0	23.1 22.2 -44.4	1.9
40.9 17.9 -36.6	39.5 18.2 -35.9	1.6
63.7 10.3 -23.8	62.5 11.0 -24.4	1.5
47.0 68.0 48.0	46.5 67.3 47.5	1.0
58.5 47.1 37.9	57.2 48.3 37.4	1.8
74.2 22.9 21.4	72.6 24.1 20.8	2.1
50.0 -65.0 27.0	49.0 -54.8 26.0	10.3
62.1 -39.8 21.0	60.6 -39.5 19.8	2.0
77.0 -19.1 11.0	76.2 -19.8 11.5	1.2
71.2 18.9 17.3	69.8 19.9 17.1	1.8
71.2 22.1 73.1	69.7 22.1 68.7	4.6
47.7 71.2 16.2	47.6 69.9 18.9	3.0
38.0 55.4 -20.9	37.5 55.1 -19.1	1.9
73.7 -22.8 67.6	72.6 -24.5 64.4	3.8
52.3 -52.3 -20.1	52.4 -36.6 -17.6	15.9
43.3 -17.0 -48.6	42.6 -8.4 -47.9	8.7
95.0 0.0 -2.0	94.7 -0.2 -2.3	0.5
88.5 -0.4 -3.1	88.0 -0.5 -3.5	0.7
82.0 -0.9 -4.1	81.1 -0.5 -4.3	0.9
67.7 -2.0 -4.4	66.3 -1.5 -4.9	1.6
52.2 -2.5 -3.5	50.9 -2.5 -3.4	1.3
37.5 -3.9 -3.1	36.1 -3.5 -3.8	1.5
26.3 -6.8 -3.4	25.7 -7.0 -3.3	0.6
Average		3.0
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	117.49 123.56 118.14	85 85 170	21.59 18.30 48.09
0 0 0	0.14 0.13 0.27	85 170 170	34.58 46.50 54.21
12 12 12	0.56 0.58 0.67	170 85 170	41.84 29.16 48.81
25 25 25	1.83 1.92 1.85	170 170 85	48.46 55.14 22.20
38 38 38	3.69 3.86 3.71	0 137 211	24.37 29.78 74.60
51 51 51	6.19 6.52 6.21	50 165 224	34.54 43.69 85.84
63 63 63	9.01 9.48 9.07	141 196 234	59.62 68.09 96.27
76 76 76	12.57 13.14 12.80	194 0 106	39.29 20.46 19.74
89 89 89	16.81 17.48 17.02	205 83 146	50.29 33.58 37.66
102 102 102	21.49 22.46 21.72	217 154 192	68.94 59.26 66.10
114 114 114	26.50 27.75 26.63	243 215 0	81.59 89.68 13.87
127 127 127	32.10 33.74 32.30	242 220 75	84.94 93.14 24.40
140 140 140	38.14 39.98 38.48	239 227 153	90.89 98.43 52.41
153 153 153	44.66 46.75 45.21	171 76 63	33.81 24.63 10.42
165 165 165	51.82 54.22 52.18	114 63 56	17.76 14.26 7.98
178 178 178	59.72 62.79 60.12	108 27 31	13.47 8.36 3.02
191 191 191	68.08 71.62 68.62	110 24 65	15.00 8.78 8.72
204 204 204	76.59 80.62 77.08	119 100 26	21.47 22.51 5.34
216 216 216	85.42 89.87 86.34	13 78 42	5.02 9.41 5.65
229 229 229	95.50 100.32 96.49	0 79 98	7.20 10.15 18.49
242 242 242	106.39 111.72 106.85	36 35 69	4.44 3.80 9.26
0 0 128	5.12 1.91 26.30	215 216 220	85.72 90.06 89.11
0 0 255	18.80 7.30 99.33	194 195 199	70.96 74.48 73.36
0 128 0	10.02 22.20 5.01	152 153 156	44.61 46.68 46.61
0 128 128	15.19 24.04 32.00	110 110 112	24.83 25.93 25.39
0 170 255	36.20 44.95 109.16	68 68 69	10.31 10.79 10.58
0 255 0	40.23 85.19 15.34	30 30 30	2.46 2.57 2.52
0 255 170	48.95 88.34 61.14	39 36 110	6.95 4.85 20.71
0 255 255	59.33 92.55 116.69	79 70 141	16.60 13.70 33.78
85 85 85	15.35 16.02 15.60	138 131 186	40.66 38.43 60.30
128 0 0	16.38 8.94 0.91	192 0 30	35.16 18.83 3.26
128 0 128	21.96 11.04 26.97	205 78 61	44.47 30.55 10.34
128 128 0	26.72 31.98 5.86	218 147 126	62.28 54.70 33.96
128 128 128	32.52 34.16 32.89	0 126 48	10.55 21.78 9.29
128 128 255	46.49 39.74 106.68	72 153 88	22.85 35.64 20.78
128 255 128	62.57 96.73 43.40	147 189 151	50.35 62.05 47.24
170 0 255	47.26 22.59 100.39	200 142 125	55.19 49.76 33.12
170 170 170	54.84 57.48 54.92	219 137 0	55.17 49.29 7.18
170 255 0	67.87 100.52 16.39	195 0 75	37.85 19.97 11.14
170 255 255	88.10 108.48 117.85	132 22 108	22.05 12.03 20.51
255 0 0	58.30 30.81 1.74	153 178 0	41.85 54.84 9.96
255 0 170	66.73 33.86 45.61	0 132 140	16.60 25.55 36.68
255 0 255	77.03 38.02 100.85	0 97 171	14.62 16.25 48.86
255 128 128	74.05 56.17 33.83	235 237 242	102.07 107.38 106.46
255 170 0	76.29 70.41 10.01	211 215 222	84.43 89.02 90.23
255 170 255	95.40 77.78 111.00	188 193 202	68.88 72.60 74.92
255 255 0	98.84 116.74 16.88	142 150 157	41.52 44.13 46.71
255 255 170	107.62 119.93 62.69	99 107 111	22.05 23.77 24.77
170 85 85	35.44 26.80 16.26	63 72 75	10.22 11.24 12.15
85 170 85	28.27 44.17 21.44	38 51 52	4.87 5.76 6.27