

UGRA

Display Analysis & Certification Tool

Report

Basics

Date: 2009-2-20 20:45:10
Report-Version: v1.3.1
Monitor-Name: \\.\DISPLAY1
EDID-Name: PL2409HD
EDID-Serial: 11005M8C02026
Profile: C:/Windows/system32/spool/DRIVERS/.../iiyama_b2409hds_ugra1.icc
Created: 2009-2-20 20:39
Measurement device: DTP94-LCD mode

Summary

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

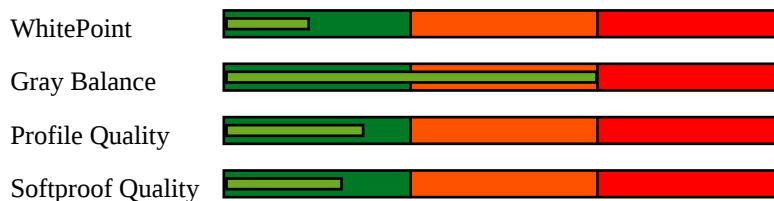
Calibration

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:	111.37 117.27 112.16
XYZ (normalized):	94.97 100.00 95.64
Luminance:	117.3 Cd/m2
Next Temperature:	5748 Kelvin
Assumed Target Whitepoint:	5700 Kelvin
Distance to assumed Target Whitepoint:	0.9 deltaE

Blackpoint

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

Luminance:	0.1 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	22561	0.13	1.00	1.79	
5	6306	0.65	5.01	1.14	1.82
10	5836	1.93	13.51	0.37	1.83
15	5718	3.92	21.37	0.97	1.81
20	5790	6.61	28.48	0.22	1.80
25	5793	9.55	34.28	0.21	1.82
30	5784	13.31	40.16	0.87	1.81
35	5794	17.62	45.67	0.97	1.80
40	5769	22.39	50.80	0.74	1.81
45	5791	27.25	55.32	0.54	1.83
50	5795	33.15	60.13	0.58	1.82
55	5750	39.62	64.79	0.57	1.81
60	5750	46.63	69.30	0.65	1.80
65	5801	53.38	73.23	1.02	1.81
70	5853	61.05	77.32	1.34	1.81
75	5833	69.19	81.29	1.04	1.82
80	5773	77.80	85.17	0.79	1.82
85	5764	86.75	88.91	0.79	1.83
90	5755	96.69	92.77	0.80	1.80
95	5790	106.98	96.50	0.56	1.74
100	5748	117.27	100.00	0.00	
Average	5783			0.69	1.81
Range				1.45	
Max				1.34	

Tone values = 88.2%

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	1.0 0.2 -1.8	-1.0 -0.2 1.8	2.0
0 0 128	13.4 45.5 -72.0	0.9 -1.3 -0.5	1.6
0 0 255	29.9 65.6 -109.6	-0.1 1.2 -0.1	1.3
0 128 0	50.7 -59.7 42.9	0.7 0.6 4.2	4.3
0 128 128	52.5 -38.5 -13.0	0.9 0.1 1.2	1.5
0 170 255	68.1 -25.3 -49.9	0.6 -0.3 2.2	2.2
0 255 0	86.3 -88.0 74.6	-0.4 -1.5 -3.3	3.6
0 255 170	87.7 -71.6 15.9	-0.2 -1.6 -1.1	1.9
0 255 255	89.4 -57.1 -17.5	-0.4 -1.0 -0.3	1.1
85 85 85	44.0 0.4 -0.9	-0.0 -0.4 0.9	1.0
128 0 0	32.8 53.1 44.5	0.0 0.2 4.4	4.4
128 0 128	36.3 61.8 -33.3	0.2 -0.7 -1.8	1.9
128 128 0	58.9 -10.9 53.7	0.2 0.7 4.0	4.1
128 128 128	60.5 0.1 -0.3	0.2 -0.1 0.3	0.4
128 128 255	64.4 20.0 -54.6	-0.0 0.1 1.1	1.1
128 255 128	90.7 -52.0 39.5	-0.2 -1.3 -2.2	2.5
170 0 255	50.3 80.7 -75.0	-0.1 0.0 -0.1	0.1
170 170 170	74.7 0.3 -1.0	0.2 -0.3 1.0	1.1
170 255 0	92.0 -45.7 82.3	-0.2 -0.3 -2.9	2.9
170 255 255	94.9 -24.2 -8.5	-0.3 -0.8 -0.3	1.0
255 0 0	57.0 81.6 79.9	0.9 -1.0 -4.0	4.2
255 0 170	59.5 88.0 -17.4	1.1 -1.3 -0.4	1.8
255 0 255	62.6 93.0 -54.0	0.8 -0.5 0.8	1.2
255 128 128	73.7 43.5 21.8	0.7 0.3 0.0	0.7
255 170 0	80.6 19.2 77.9	0.4 0.8 1.2	1.5
255 170 255	84.0 34.9 -23.2	0.4 0.9 1.4	1.7
255 255 0	97.4 -15.5 91.2	0.1 0.1 -4.0	4.0
255 255 170	98.5 -7.4 33.6	0.2 -0.3 -1.1	1.2
255 255 255	100.0 0.0 0.0	0.0 -0.0 -0.0	0.0
170 85 85	54.6 34.8 16.3	0.2 -0.3 0.9	0.9
85 170 85	67.2 -41.8 27.8	0.2 -0.1 1.6	1.6
85 85 170	46.7 16.6 -42.6	0.2 -0.8 0.5	1.0
85 170 170	68.7 -28.6 -10.7	0.3 -0.4 1.0	1.1
170 85 170	56.6 43.4 -26.1	0.3 -0.7 0.5	0.9
170 170 85	73.4 -8.4 37.3	0.2 -0.0 1.5	1.5
Average			1.8
Maximum			4.4

Gamut-Volume

These measurements are only informative.

Gamut-Volume	
ISO	92 %
sRGB	99 %
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	57.1 -19.4 -46.7	18.0
66.9 -24.7 -37.1	66.5 -24.6 -38.6	1.5
79.7 -12.5 -21.8	79.5 -11.7 -23.3	1.8
48.0 74.0 -3.0	48.1 73.0 -0.9	2.3
60.8 50.6 -6.7	60.5 51.0 -6.7	0.6
76.4 25.8 -6.9	76.1 26.3 -7.7	1.1
89.0 -5.0 93.0	89.0 -4.5 82.0	11.1
90.3 -4.7 62.6	90.1 -5.1 63.0	0.7
92.2 -3.5 31.1	91.9 -3.9 31.9	0.9
53.1 37.7 28.9	52.7 38.0 28.4	0.6
41.5 22.7 16.8	41.6 23.0 15.9	0.9
31.9 40.0 24.0	32.2 39.7 22.7	1.3
32.5 44.5 -1.8	32.6 44.2 -1.2	0.6
51.3 1.3 44.5	51.1 1.1 41.7	2.8
34.6 -36.4 13.9	34.1 -36.4 12.0	1.9
36.0 -26.2 -20.9	35.8 -22.5 -20.5	3.7
20.9 9.6 -23.6	21.1 9.2 -22.4	1.3
89.0 0.0 -1.9	88.7 0.4 -2.4	0.7
82.8 0.0 -1.7	82.3 0.1 -2.6	1.0
69.3 0.0 -1.4	69.1 0.5 -1.9	0.8
54.1 0.0 -1.0	53.7 0.5 -1.4	0.8
36.6 0.0 -0.5	36.4 0.1 -1.0	0.5
16.0 0.0 0.0	16.5 -0.1 -0.4	0.7
24.0 22.0 -46.0	23.8 22.2 -44.9	1.1
40.9 17.9 -36.6	40.4 18.7 -36.4	1.0
63.7 10.3 -23.8	63.5 11.0 -24.8	1.2
47.0 68.0 48.0	46.4 68.1 47.5	0.8
58.5 47.1 37.9	58.1 47.8 37.5	0.9
74.2 22.9 21.4	73.8 23.2 21.1	0.6
50.0 -65.0 27.0	50.2 -54.8 26.5	10.2
62.1 -39.8 21.0	61.9 -40.0 19.5	1.5
77.0 -19.1 11.0	76.8 -18.4 10.7	0.8
71.2 18.9 17.3	70.7 18.5 16.9	0.7
71.2 22.1 73.1	70.9 21.6 69.2	3.9
47.7 71.2 16.2	47.6 71.4 17.3	1.1
38.0 55.4 -20.9	37.9 55.8 -20.0	1.0
73.7 -22.8 67.6	73.5 -23.6 64.7	3.0
52.3 -52.3 -20.1	53.3 -36.2 -17.7	16.3
43.3 -17.0 -48.6	43.8 -8.5 -47.5	8.6
95.0 0.0 -2.0	94.7 0.5 -3.0	1.2
88.5 -0.4 -3.1	88.2 -0.2 -3.9	0.9
82.0 -0.9 -4.1	81.5 -0.6 -5.1	1.1
67.7 -2.0 -4.4	67.5 -1.6 -4.7	0.5
52.2 -2.5 -3.5	51.8 -2.6 -3.6	0.4
37.5 -3.9 -3.1	37.1 -3.7 -4.1	1.0
26.3 -6.8 -3.4	26.2 -6.0 -4.0	1.0
Average		2.5
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	111.37 117.27 112.16	85 85 170	21.79 18.70 48.09
0 0 0	0.13 0.13 0.25	85 170 170	34.34 45.90 53.89
12 12 12	0.63 0.65 0.70	170 85 170	40.75 28.71 48.69
25 25 25	1.82 1.93 1.85	170 170 85	46.90 53.43 22.19
38 38 38	3.78 3.92 3.84	0 135 211	24.37 29.91 72.46
51 51 51	6.28 6.61 6.38	46 163 224	33.65 42.81 83.10
63 63 63	9.05 9.55 9.18	140 195 234	57.88 65.77 93.13
76 76 76	12.73 13.31 12.99	195 0 106	37.73 19.42 19.52
89 89 89	16.84 17.62 17.22	205 85 146	49.01 33.29 37.36
102 102 102	21.37 22.39 21.72	218 154 192	67.58 58.46 64.76
114 114 114	25.93 27.25 26.38	243 217 0	78.25 86.34 13.33
127 127 127	31.53 33.15 32.10	242 222 75	80.77 89.29 23.92
140 140 140	37.77 39.62 38.19	239 228 153	86.24 93.97 51.13
153 153 153	44.47 46.63 44.97	172 77 62	32.77 24.07 10.24
165 165 165	50.88 53.38 51.96	115 64 56	17.54 14.20 8.11
178 178 178	58.10 61.05 59.83	109 29 31	13.29 8.25 3.09
191 191 191	65.77 69.19 67.41	110 26 65	14.48 8.51 8.66
204 204 204	74.12 77.80 75.23	120 101 27	21.37 22.55 5.62
216 216 216	82.67 86.75 83.79	12 77 42	5.10 9.47 5.72
229 229 229	92.18 96.69 93.28	0 79 98	7.47 10.55 18.56
242 242 242	101.62 106.98 103.21	36 35 68	4.46 3.88 9.07
0 0 128	5.20 2.09 26.05	215 216 220	82.28 86.33 85.82
0 0 255	18.66 7.94 94.81	194 195 199	67.98 71.44 71.50
0 128 0	10.24 22.39 5.13	152 153 156	44.22 46.34 46.05
0 128 128	15.44 24.42 31.60	110 110 112	24.26 25.41 25.17
0 170 255	36.04 45.48 104.04	68 68 69	10.27 10.79 10.65
0 255 0	37.98 80.67 14.34	30 30 30	2.45 2.59 2.53
0 255 170	47.01 84.21 60.34	38 35 110	6.92 4.86 20.62
0 255 255	56.87 88.64 110.67	79 69 141	16.55 13.63 33.57
85 85 85	15.50 16.23 15.91	138 131 186	40.01 37.88 59.51
128 0 0	16.00 8.52 0.89	193 9 29	33.52 17.80 3.08
128 0 128	21.43 10.69 26.55	206 80 61	43.31 30.04 10.31
128 128 0	26.37 31.36 5.90	219 148 126	60.80 53.95 33.43
128 128 128	31.94 33.58 32.33	0 126 48	10.69 21.84 9.31
128 128 255	45.59 39.54 101.47	71 153 89	22.82 35.57 21.06
128 255 128	59.49 91.26 41.90	147 189 151	49.26 60.03 46.55
170 0 255	45.63 22.16 95.63	200 143 125	53.31 48.72 32.70
170 170 170	53.39 56.05 54.64	220 139 0	54.09 48.69 7.20
170 255 0	64.22 94.49 15.28	196 0 75	36.32 18.91 11.12
170 255 255	83.77 102.82 111.52	132 23 108	21.44 11.66 20.31
255 0 0	54.42 28.50 1.43	153 179 2	41.32 53.70 9.88
255 0 170	63.03 31.90 45.42	0 130 140	16.57 25.27 36.23
255 0 255	72.89 36.30 95.78	0 95 170	14.72 16.40 48.03
255 128 128	70.09 53.64 32.93	235 237 242	97.28 102.01 102.25
255 170 0	72.04 67.10 9.61	211 215 222	80.84 85.11 86.83
255 170 255	90.77 75.05 105.22	188 193 202	65.97 69.66 72.81
255 255 0	92.14 108.97 15.49	142 150 157	41.14 43.83 46.14
255 255 170	101.14 112.47 61.38	99 107 111	21.72 23.46 24.53
170 85 85	34.36 26.16 16.45	63 72 75	10.23 11.28 12.27
85 170 85	27.97 43.37 21.55	38 50 52	4.89 5.67 6.34