

UGRA

Display Analysis & Certification Tool

Report

Basics

Date: 2009-6-29 14:17:54
Report-Version: v1.3.1
Monitor-Name: \\.\DISPLAY1
EDID-Name:
EDID-Serial:
Profile: C:/WINDOWS/.../Iiyama_UGRA_29.06.09-5800K-18-120cd-trc.icc
Created: 2009-6-29 14:13
Measurement device: eye-one display 2

Summary

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

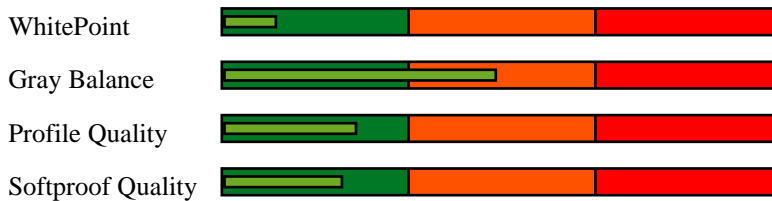
Calibration

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:	113.62 119.04 117.01
XYZ (normalized):	95.45 100.00 98.30
Luminance:	119.0 Cd/m ²
Next Temperature:	5839 Kelvin
Assumed Target Whitepoint:	5800 Kelvin
Distance to assumed Target Whitepoint:	0.6 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:	1.4 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	14967	0.13	0.99	1.41	
5	6336	0.62	4.72	0.59	1.85
10	5845	1.92	13.31	0.10	1.83
15	5661	3.91	21.14	0.59	1.83
20	5915	6.72	28.50	0.35	1.80
25	5834	9.57	34.06	0.11	1.83
30	5806	13.42	40.04	0.16	1.82
35	5739	18.01	45.81	0.63	1.81
40	5813	22.78	50.85	0.42	1.81
45	5852	28.20	55.78	0.59	1.81
50	5793	33.95	60.36	0.38	1.81
55	5799	40.65	65.08	0.81	1.81
60	5805	47.48	69.39	0.25	1.81
65	5848	54.79	73.56	0.67	1.81
70	5781	62.30	77.48	0.48	1.82
75	5814	70.87	81.58	0.70	1.82
80	5801	80.31	85.74	0.73	1.79
85	5788	89.05	89.30	0.72	1.81
90	5782	98.52	92.91	0.65	1.83
95	5826	108.38	96.43	0.21	1.82
100	5839	119.04	100.00	0.00	
Average	5807			0.45	1.82
Range				1.16	
Max				0.81	

Tone values = 91.4%

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 -1.4	-1.0 -0.2 1.4	1.7
0 0 128	14.8 36.0 -68.4	2.3 -1.8 0.7	3.0
0 0 255	33.1 50.0 -103.7	1.1 1.6 1.3	2.4
0 128 0	49.9 -57.1 42.4	1.0 0.3 3.9	4.1
0 128 128	52.1 -38.2 -13.5	1.4 0.6 1.8	2.3
0 170 255	68.5 -28.2 -49.0	1.0 1.5 2.6	3.1
0 255 0	84.7 -84.8 70.9	0.4 -1.1 -0.8	1.4
0 255 170	86.3 -70.2 13.8	0.7 -0.5 0.3	0.9
0 255 255	88.5 -57.2 -19.1	0.6 0.3 1.3	1.5
85 85 85	44.1 -0.4 0.5	-0.1 0.4 -0.5	0.6
128 0 0	32.6 52.3 44.6	0.2 0.5 4.2	4.3
128 0 128	36.8 58.5 -31.4	0.6 -1.3 -2.1	2.6
128 128 0	58.5 -10.1 53.5	0.1 1.3 3.5	3.8
128 128 128	60.5 0.1 -0.1	0.2 -0.1 0.1	0.2
128 128 255	65.4 15.7 -52.8	0.1 1.0 1.1	1.5
128 255 128	89.8 -49.9 37.6	0.1 -1.0 -1.1	1.5
170 0 255	52.2 72.9 -71.4	0.2 -0.3 -0.2	0.4
170 170 170	75.0 0.2 -0.1	-0.1 -0.2 0.1	0.2
170 255 0	91.0 -43.0 79.5	0.0 -0.2 -1.1	1.1
170 255 255	94.7 -24.2 -8.9	-0.1 -0.5 0.1	0.5
255 0 0	57.5 80.4 79.8	0.2 -0.6 -4.0	4.0
255 0 170	60.5 84.8 -14.5	0.8 -1.6 -2.3	2.9
255 0 255	64.3 86.7 -50.7	0.5 -0.2 -0.1	0.6
255 128 128	74.1 43.5 22.4	0.2 -0.3 -0.7	0.8
255 170 0	80.7 20.4 77.9	-0.2 0.8 0.5	1.0
255 170 255	84.9 32.5 -21.7	-0.1 1.3 0.5	1.4
255 255 0	96.8 -12.9 88.7	-0.0 -0.3 -2.4	2.5
255 255 170	98.2 -6.0 33.1	0.2 -0.5 -1.1	1.3
255 255 255	100.0 0.0 0.0	0.0 0.0 -0.0	0.0
170 85 85	55.0 34.5 18.0	-0.2 -0.5 -0.9	1.0
85 170 85	67.1 -40.8 28.5	-0.1 0.7 0.2	0.7
85 85 170	47.3 13.2 -41.1	0.5 -0.0 0.4	0.6
85 170 170	68.8 -29.3 -10.0	0.2 0.9 0.4	1.0
170 85 170	57.4 41.1 -24.3	0.1 -0.9 -0.3	0.9
170 170 85	73.5 -7.3 38.3	-0.3 0.1 -0.1	0.4
Average			1.6
Maximum			4.3

Gamut-Volume

These measurements are only informative.

Gamut-Volume	
ISO	91 %
sRGB	94 %
AdobeRGB	78 %
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	56.4 -20.8 -46.8	16.6
66.9 -24.7 -37.1	66.3 -26.8 -37.6	2.2
79.7 -12.5 -21.8	79.6 -12.9 -22.3	0.7
48.0 74.0 -3.0	49.0 71.6 1.5	5.2
60.8 50.6 -6.7	60.7 51.6 -5.3	1.8
76.4 25.8 -6.9	76.2 26.4 -6.4	0.9
89.0 -5.0 93.0	89.5 -4.8 81.8	11.2
90.3 -4.7 62.6	90.6 -4.4 63.5	1.1
92.2 -3.5 31.1	92.4 -3.4 32.5	1.4
53.1 37.7 28.9	53.1 38.4 29.3	0.8
41.5 22.7 16.8	41.6 23.7 15.7	1.5
31.9 40.0 24.0	31.9 40.1 23.1	0.9
32.5 44.5 -1.8	32.5 45.2 -1.0	1.1
51.3 1.3 44.5	51.4 1.8 42.7	1.9
34.6 -36.4 13.9	34.0 -37.0 12.3	1.7
36.0 -26.2 -20.9	35.3 -22.8 -20.4	3.5
20.9 9.6 -23.6	20.7 10.4 -23.4	0.8
89.0 0.0 -1.9	89.2 -0.5 -0.7	1.3
82.8 0.0 -1.7	82.7 -0.4 -0.9	0.9
69.3 0.0 -1.4	69.3 -0.1 -1.0	0.3
54.1 0.0 -1.0	53.9 0.3 -1.1	0.4
36.6 0.0 -0.5	36.5 0.1 -0.5	0.2
16.0 0.0 0.0	16.6 -0.2 0.1	0.7
24.0 22.0 -46.0	23.0 22.2 -45.2	1.2
40.9 17.9 -36.6	40.1 18.7 -36.0	1.2
63.7 10.3 -23.8	63.3 10.1 -23.1	0.8
47.0 68.0 48.0	47.1 68.7 48.3	0.8
58.5 47.1 37.9	58.6 48.1 38.3	1.1
74.2 22.9 21.4	74.3 23.3 21.8	0.6
50.0 -65.0 27.0	50.2 -53.5 26.6	11.5
62.1 -39.8 21.0	62.4 -41.0 21.3	1.2
77.0 -19.1 11.0	77.0 -19.4 11.5	0.6
71.2 18.9 17.3	71.5 18.7 18.1	0.9
71.2 22.1 73.1	71.5 21.5 69.7	3.5
47.7 71.2 16.2	48.2 70.4 19.4	3.3
38.0 55.4 -20.9	37.7 56.5 -19.6	1.8
73.7 -22.8 67.6	73.7 -24.1 64.6	3.3
52.3 -52.3 -20.1	52.9 -36.4 -17.7	16.1
43.3 -17.0 -48.6	43.1 -9.3 -48.5	7.7
95.0 0.0 -2.0	95.0 0.3 -1.9	0.3
88.5 -0.4 -3.1	88.7 -0.7 -1.9	1.2
82.0 -0.9 -4.1	81.7 -1.3 -3.8	0.6
67.7 -2.0 -4.4	67.4 -1.7 -4.1	0.4
52.2 -2.5 -3.5	52.1 -2.8 -2.6	1.0
37.5 -3.9 -3.1	37.2 -4.2 -3.3	0.5
26.3 -6.8 -3.4	26.5 -6.5 -3.7	0.5
Average		2.5
Gamut-Volume		91 %

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	113.62 119.04 117.01	85 85 170	22.19 19.61 49.77
0 0 0	0.13 0.13 0.23	85 170 170	35.10 46.86 55.84
12 12 12	0.58 0.62 0.65	170 85 170	41.92 30.13 50.37
25 25 25	1.83 1.92 1.88	170 170 85	48.24 54.31 22.58
38 38 38	3.76 3.91 3.76	0 132 211	24.02 29.54 74.18
51 51 51	6.38 6.72 6.64	45 161 224	33.56 43.09 84.66
63 63 63	9.12 9.57 9.38	140 194 234	58.89 67.08 95.92
76 76 76	12.82 13.42 13.13	197 0 106	39.15 20.57 19.92
89 89 89	17.21 18.01 17.40	207 82 146	50.53 34.11 38.18
102 102 102	21.84 22.78 22.46	219 152 192	69.21 59.63 66.22
114 114 114	26.78 28.20 27.53	243 221 0	80.56 88.90 14.30
127 127 127	32.52 33.95 33.29	242 225 75	83.58 91.67 25.05
140 140 140	38.66 40.65 39.38	239 230 153	89.31 96.60 53.53
153 153 153	45.37 47.48 46.48	173 77 62	33.96 24.86 10.62
165 165 165	52.06 54.79 53.50	115 64 56	18.00 14.41 8.55
178 178 178	59.58 62.30 60.78	109 28 31	13.39 8.24 3.11
191 191 191	67.45 70.87 68.95	111 23 65	14.83 8.58 8.89
204 204 204	76.49 80.31 78.06	120 102 26	22.10 23.12 5.70
216 216 216	84.91 89.05 86.52	8 78 42	5.14 9.57 5.85
229 229 229	94.07 98.52 95.85	0 78 98	7.40 10.42 18.87
242 242 242	103.58 108.38 106.54	37 33 69	4.52 3.81 9.55
0 0 128	5.11 2.45 26.41	215 216 220	84.51 88.81 88.31
0 0 255	18.99 9.84 98.21	194 195 199	69.85 73.35 73.23
0 128 0	10.27 21.80 5.11	152 153 156	45.10 47.27 47.42
0 128 128	15.53 24.28 32.72	110 110 112	24.91 26.02 26.25
0 170 255	36.65 46.84 108.17	68 68 69	10.52 11.01 11.01
0 255 0	37.37 77.81 15.26	30 30 30	2.52 2.65 2.59
0 255 170	46.40 82.12 62.56	39 30 110	6.77 4.68 20.95
0 255 255	56.70 87.82 115.57	80 66 141	16.71 13.66 34.36
85 85 85	15.70 16.52 16.01	138 129 186	40.29 38.25 59.86
128 0 0	15.91 8.52 0.89	195 4 30	35.20 18.71 3.30
128 0 128	21.65 11.23 27.08	207 80 61	44.92 31.11 10.76
128 128 0	26.58 31.28 6.00	220 149 126	62.97 55.74 35.05
128 128 128	32.62 34.16 33.66	0 128 48	11.12 22.19 9.68
128 128 255	46.75 41.74 105.78	69 155 88	23.49 36.73 21.39
128 255 128	59.88 90.26 44.01	146 190 151	50.12 61.28 48.02
170 0 255	46.86 24.57 99.19	201 144 125	55.73 50.76 34.18
170 170 170	54.92 57.46 56.62	221 141 0	56.17 50.56 7.70
170 255 0	64.59 93.14 16.41	197 0 75	37.42 19.75 11.24
170 255 255	85.23 103.88 116.51	133 14 108	21.77 11.70 20.73
255 0 0	55.64 29.52 1.58	152 182 0	42.13 54.81 10.42
255 0 170	64.65 33.74 46.23	0 130 140	16.65 25.26 37.28
255 0 255	74.92 39.44 99.51	0 92 171	14.59 16.17 49.95
255 128 128	72.14 55.14 34.40	235 237 242	99.88 104.36 105.68
255 170 0	73.90 68.12 10.02	211 215 222	83.19 87.47 88.77
255 170 255	93.66 78.46 109.91	188 193 202	67.41 71.15 74.74
255 255 0	93.63 108.62 16.79	142 149 157	41.82 44.35 47.39
255 255 170	103.04 113.15 64.03	99 107 111	22.36 24.06 25.24
170 85 85	35.34 26.96 16.65	63 72 75	10.44 11.53 12.57
85 170 85	28.58 43.70 21.87	38 50 52	5.05 5.87 6.67

Uniformity

The uniformity test shows the luminance (in %) and the color deviation (in Delta C*) from the centre to the 8 measuring points around it. The maximum deviation for the luminance may be 10%. The average value and the chroma deviations are only informative. This test is not taken in consideration for the UDACT certification.

Results of the white measurements:

Absolute Luminance	102.10 Cd/m2	108.83 Cd/m2	110.38 Cd/m2
Luminance to Centre	86 %	91 %	93 %
Lab-Chroma to Centre	1.58	2.79	1.80
Absolute Luminance	106.97 Cd/m2	119.08 Cd/m2	116.33 Cd/m2
Luminance to Centre	90 %	100 %	98 %
Lab-Chroma to Centre	0.40	0.00	0.57
Absolute Luminance	103.51 Cd/m2	110.25 Cd/m2	112.63 Cd/m2
Luminance to Centre	87 %	93 %	95 %
Lab-Chroma to Centre	0.92	1.73	0.51

Results of the gray measurements:

Absolute Luminance	27.93 Cd/m2	30.88 Cd/m2	31.19 Cd/m2
Luminance to Centre	80 %	89 %	90 %
Lab-Chroma to Centre	1.82	2.63	1.58
Absolute Luminance	30.01 Cd/m2	34.77 Cd/m2	33.30 Cd/m2
Luminance to Centre	86 %	100 %	96 %
Lab-Chroma to Centre	0.06	0.47	0.32
Absolute Luminance	29.42 Cd/m2	32.75 Cd/m2	32.62 Cd/m2
Luminance to Centre	85 %	94 %	94 %
Lab-Chroma to Centre	0.97	0.65	0.80

Results of the dark measurements:

Absolute Luminance	7.97 Cd/m2	8.63 Cd/m2	8.83 Cd/m2
Luminance to Centre	81 %	88 %	90 %
Lab-Chroma to Centre	1.64	1.47	1.37
Absolute Luminance	8.70 Cd/m2	9.81 Cd/m2	9.53 Cd/m2
Luminance to Centre	89 %	100 %	97 %
Lab-Chroma to Centre	0.13	0.30	0.48
Absolute Luminance	8.49 Cd/m2	9.23 Cd/m2	9.30 Cd/m2
Luminance to Centre	87 %	94 %	95 %
Lab-Chroma to Centre	0.66	0.25	0.66

Summary:

	Average	Max
Luminance Deviation	9%	20%
Chroma Deviation	1	3