

UGRA

Display Analysis & Certification Tool

Report

Basics

Date: 2009-12-6 16:49:42
Report-Version: v1.3.1
Monitor-Name: \\.\DISPLAY1
EDID-Name: HP LP2480zx
EDID-Serial: 3CM83001JN
Profile: C:/WINDOWS/System32/spool/DRIVERS/COLOR/hp-ugra-trc.icc
Created: 2009-12-6 16:42
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:	111.33 117.03 113.99
XYZ (normalized):	95.13 100.00 97.41
Luminance:	117.0 Cd/m2
Next Temperature:	5824 Kelvin
Assumed Target Whitepoint:	5800 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:	0.1 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	46520	0.11	0.87	1.80	
5	6542	0.55	4.22	1.53	1.87
10	5719	1.85	13.13	0.47	1.84
15	5834	3.88	21.27	0.15	1.82
20	5863	6.46	28.18	0.39	1.81
25	5824	9.51	34.25	0.00	1.82
30	5809	13.44	40.38	0.44	1.81
35	5794	17.88	46.01	0.77	1.80
40	5779	22.50	50.95	0.27	1.81
45	5788	27.82	55.86	0.30	1.81
50	5783	33.74	60.63	0.42	1.80
55	5796	40.20	65.24	0.56	1.80
60	5770	46.79	69.46	0.41	1.80
65	5766	53.73	73.49	0.48	1.82
70	5761	61.65	77.68	0.53	1.81
75	5766	69.98	81.73	0.51	1.80
80	5780	78.29	85.45	0.44	1.81
85	5801	86.91	89.05	0.31	1.85
90	5806	96.77	92.88	0.24	1.80
95	5792	107.20	96.66	0.41	1.75
100	5824	117.03	100.00	0.00	
Average	5792			0.38	1.81
Range				1.16	
Max				0.77	

Tone values = 96.7%

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 -1.8	-0.9 -0.3 1.8	2.0
0 0 128	11.4 55.1 -79.9	-0.1 1.6 -1.0	1.9
0 0 255	25.3 85.1 -122.9	-0.0 0.6 0.6	0.8
0 128 0	52.1 -89.7 58.1	0.0 -1.7 1.4	2.2
0 128 128	53.6 -60.9 -11.5	0.0 -0.3 -0.4	0.5
0 170 255	68.1 -44.5 -51.9	0.2 -0.7 0.7	1.0
0 255 0	87.5 -136.0 90.2	-0.4 -2.2 -0.4	2.3
0 255 170	88.3 -112.5 19.1	-0.1 -1.5 -0.6	1.6
0 255 255	89.2 -91.3 -18.2	0.0 -1.4 0.2	1.4
85 85 85	44.2 -0.2 -0.0	-0.3 0.2 0.0	0.3
128 0 0	33.2 72.3 50.1	-0.7 1.1 2.4	2.7
128 0 128	35.8 81.1 -38.8	-0.6 1.1 -1.2	1.7
128 128 0	59.7 -12.0 70.1	-0.2 0.0 0.2	0.3
128 128 128	60.9 -0.3 0.5	-0.2 0.3 -0.5	0.6
128 128 255	63.5 24.1 -58.8	-0.0 -0.1 0.3	0.3
128 255 128	91.2 -78.8 43.9	-0.1 0.7 -0.0	0.7
170 0 255	48.5 106.2 -83.1	-0.7 0.8 -0.7	1.3
170 170 170	75.1 0.4 0.2	-0.1 -0.4 -0.2	0.5
170 255 0	93.1 -64.5 98.9	-0.3 0.5 -0.6	0.9
170 255 255	94.7 -38.2 -9.0	0.0 0.1 0.1	0.2
255 0 0	58.8 111.3 85.0	-1.5 -0.4 1.4	2.1
255 0 170	60.7 117.9 -20.5	-1.3 -0.2 -2.2	2.6
255 0 255	62.7 124.2 -58.8	-1.2 0.1 -1.8	2.1
255 128 128	74.9 62.8 23.3	-0.8 -0.5 -1.0	1.3
255 170 0	81.8 32.4 96.4	-0.4 -1.0 -1.7	2.0
255 170 255	84.1 49.9 -24.6	-0.3 -0.6 -0.4	0.8
255 255 0	98.6 -18.8 107.8	-0.4 0.6 -1.4	1.6
255 255 170	99.3 -9.3 36.8	-0.2 0.2 -0.2	0.4
255 255 255	100.0 0.0 0.0	-0.0 0.0 -0.0	0.0
170 85 85	55.3 49.1 18.2	-0.7 -0.0 -0.6	0.9
85 170 85	67.9 -62.0 33.9	0.0 0.6 0.6	0.8
85 85 170	46.3 18.7 -45.9	-0.1 0.2 -0.2	0.3
85 170 170	69.0 -45.4 -10.0	0.1 0.7 0.2	0.8
170 85 170	56.7 58.3 -28.3	-0.6 -0.1 -0.9	1.0
170 170 85	74.2 -9.5 44.1	-0.3 -0.5 0.1	0.6
Average			1.2
Maximum			2.7

Gamut-Volume

These measurements are only informative.

Gamut-Volume	
ISO	100 %
sRGB	100 %
AdobeRGB	100 %
ECI-RGB v1.0	95 %

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	55.3 -32.9 -49.3	4.1
66.9 -24.7 -37.1	66.6 -25.5 -37.3	0.8
79.7 -12.5 -21.8	79.7 -12.4 -22.0	0.3
48.0 74.0 -3.0	48.7 74.6 -1.8	1.5
60.8 50.6 -6.7	61.2 51.2 -6.1	1.0
76.4 25.8 -6.9	76.6 26.5 -6.6	0.8
89.0 -5.0 93.0	89.4 -4.2 94.1	1.4
90.3 -4.7 62.6	90.7 -4.1 62.9	0.8
92.2 -3.5 31.1	92.6 -3.3 32.0	0.9
53.1 37.7 28.9	53.7 37.3 29.8	1.2
41.5 22.7 16.8	42.0 21.6 16.6	1.2
31.9 40.0 24.0	32.4 39.0 24.7	1.3
32.5 44.4 -1.8	33.1 44.3 -0.9	1.1
51.3 1.3 44.5	51.3 1.9 44.2	0.7
34.6 -36.4 13.9	34.7 -36.7 13.7	0.3
36.0 -26.2 -20.9	36.0 -26.9 -20.9	0.7
20.9 9.6 -23.6	21.0 9.5 -23.3	0.4
89.0 0.0 -1.8	89.0 0.0 -1.7	0.1
82.8 0.0 -1.7	82.7 0.9 -1.7	0.9
69.3 0.0 -1.4	69.3 0.1 -1.0	0.4
54.1 0.0 -1.0	54.3 0.3 -0.8	0.4
36.6 -0.0 -0.5	36.7 0.0 -0.7	0.2
16.0 0.0 0.0	16.4 0.3 -0.0	0.5
24.0 22.0 -46.0	23.8 22.8 -46.0	0.8
40.9 17.9 -36.6	41.1 17.7 -36.6	0.3
63.7 10.3 -23.8	63.9 10.1 -23.4	0.5
47.0 68.0 48.0	47.7 67.9 49.4	1.6
58.5 47.1 37.9	59.1 47.8 39.1	1.5
74.2 22.9 21.4	74.4 23.4 21.6	0.5
50.0 -65.0 27.0	50.1 -66.1 26.3	1.3
62.1 -39.8 21.0	62.0 -39.8 20.9	0.2
77.0 -19.1 11.0	77.2 -19.5 11.4	0.6
71.2 18.8 17.3	71.3 19.9 17.4	1.1
71.2 22.2 73.1	71.4 23.0 73.7	1.1
47.7 71.2 16.2	48.5 71.3 17.2	1.2
38.0 55.4 -20.9	38.4 56.0 -20.1	1.1
73.7 -22.8 67.6	73.8 -22.6 67.5	0.3
52.3 -52.3 -20.2	52.2 -53.9 -19.5	1.8
43.3 -17.0 -48.6	43.3 -19.0 -48.1	2.0
95.0 0.0 -2.0	95.1 0.6 -2.0	0.6
88.5 -0.4 -3.1	88.6 -0.7 -2.9	0.4
82.0 -0.9 -4.1	81.9 -0.1 -3.9	0.8
67.7 -2.0 -4.4	67.6 -1.8 -4.3	0.2
52.2 -2.5 -3.5	52.4 -2.7 -3.3	0.3
37.5 -3.9 -3.1	37.8 -4.6 -3.7	1.0
26.3 -6.8 -3.4	26.2 -5.8 -3.6	1.0
Average		0.9
Gamut-Volume		100 %

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	111.33 117.03 113.99	85 85 170	22.08 18.39 51.51
0 0 0	0.12 0.11 0.24	85 170 170	30.01 46.44 54.62
12 12 12	0.54 0.55 0.63	170 85 170	46.23 28.73 51.97
25 25 25	1.78 1.85 1.81	170 170 85	47.66 54.79 19.54
38 38 38	3.70 3.88 3.80	0 128 206	19.94 27.80 72.99
51 51 51	6.17 6.46 6.38	84 158 219	33.61 42.89 82.90
63 63 63	9.05 9.51 9.27	154 192 231	58.11 66.19 93.37
76 76 76	12.74 13.44 12.96	171 49 102	39.01 19.91 20.90
89 89 89	16.91 17.88 17.13	185 101 142	50.37 34.26 38.61
102 102 102	21.44 22.50 21.79	206 161 190	68.82 59.45 65.74
114 114 114	26.47 27.82 26.91	237 216 27	78.98 87.13 9.22
127 127 127	32.08 33.74 32.56	237 221 93	82.53 90.56 25.03
140 140 140	38.15 40.20 38.75	236 228 160	88.09 95.53 53.01
153 153 153	44.62 46.79 45.31	155 88 64	33.66 25.01 10.51
165 165 165	51.18 53.73 51.88	105 70 57	17.64 14.52 8.27
178 178 178	58.77 61.65 59.54	96 41 31	13.28 8.34 2.90
191 191 191	66.71 69.98 67.66	98 40 63	14.82 8.75 8.97
204 204 204	74.68 78.29 75.99	115 101 37	21.66 22.69 5.21
216 216 216	82.65 86.91 84.22	35 73 45	5.30 9.80 5.65
229 229 229	92.20 96.77 94.21	27 75 97	7.14 10.67 19.25
242 242 242	101.98 107.20 103.76	36 36 66	4.48 3.86 9.46
0 0 128	5.44 1.77 29.44	215 216 220	82.61 86.76 86.93
0 0 255	19.15 6.11 104.93	194 195 199	68.98 72.02 72.23
0 128 0	7.18 23.81 2.79	152 153 155	44.39 46.60 46.33
0 128 128	12.56 25.54 32.27	110 110 112	24.90 26.09 25.90
0 170 255	30.86 45.52 108.95	68 68 69	10.47 11.00 10.96
0 255 0	25.19 83.42 9.08	30 30 30	2.44 2.54 2.48
0 255 170	34.08 85.70 58.66	39 38 106	7.03 4.87 21.54
0 255 255	43.84 88.41 113.20	78 73 137	16.96 14.11 35.18
85 85 85	15.57 16.40 15.99	137 133 182	40.31 38.40 59.71
128 0 0	20.04 8.61 0.57	169 51 30	35.02 18.88 3.18
128 0 128	25.52 10.34 30.19	185 96 63	44.79 31.25 10.55
128 128 0	26.85 32.33 2.99	205 155 128	61.99 54.98 34.49
128 128 128	32.38 34.12 32.86	36 118 57	9.15 21.75 9.45
128 128 255	45.94 38.22 107.47	93 146 94	22.90 35.60 20.73
128 255 128	49.27 92.68 39.42	156 185 154	49.45 60.68 47.24
170 0 255	52.72 20.43 105.24	189 148 127	54.85 49.62 33.60
170 170 170	54.05 56.64 54.96	204 145 32	55.43 49.42 6.36
170 255 0	57.30 97.01 9.45	171 51 72	37.41 19.66 11.92
170 255 255	76.01 102.17 113.55	117 44 104	21.99 11.99 21.24
255 0 0	71.19 30.30 1.37	158 174 43	41.98 54.10 9.23
255 0 170	80.22 33.10 51.23	12 123 139	12.91 24.15 36.73
255 0 255	90.04 36.26 105.64	18 92 165	12.84 16.00 48.48
255 128 128	82.49 55.47 33.96	236 237 242	98.37 102.96 103.40
255 170 0	81.10 69.15 5.17	212 215 221	81.28 85.77 87.65
255 170 255	100.00 75.04 109.68	189 193 201	67.04 70.41 73.38
255 255 0	92.77 112.13 9.77	143 149 156	41.23 43.90 46.66
255 255 170	101.82 114.53 60.28	101 106 111	22.23 23.98 25.38
170 85 85	39.74 26.76 16.41	65 72 75	10.53 11.73 12.83
85 170 85	23.53 44.43 19.12	41 49 51	4.90 5.65 6.33