

Prüfbericht-Nr.: <i>Test Report No.:</i>	60356584 002	Auftrags-Nr.: <i>Order No.:</i>	168148578	Seite 1 von 18 <i>Page 1 of 18</i>
Kunden-Referenz-Nr.: <i>Client Reference No.:</i>	446952	Auftragsdatum: <i>Order date:</i>	10. Jan. 2020	
Auftraggeber: <i>Client:</i>	TPV Electronics (Fujian) Co., Ltd. Rongqiao Economic and Technological Development Zone, Fuqing City, Fujian Province, P. R. China			
Prüfgegenstand: <i>Test item:</i>	LCD monitor (LED Backlight)			
Bezeichnung / Typ-Nr.: <i>Identification / Type No.:</i>	Q24P2, Q24P2C, Q24P2*****, 24P2, 24P2C, 24P2*****, 24E2, 24E2***** (* can be 0-9, A-Z, a-z, +, -, /, \ or blank, represent different enclosure colour for marketing purpose) (AOC)			
Auftrags-Inhalt: <i>Order content:</i>	TÜV Rheinland ISO 9241-307 mark approval			
Prüfgrundlage: <i>Test specification:</i>	ISO 9241-307:2008 for artificial information			
Wareneingangsdatum: <i>Date of receipt:</i>	30. Mar. 2020			
Prüfmuster-Nr.: <i>Test sample No.:</i>	A001177518-002			
Prüfzeitraum: <i>Testing period:</i>	30. Mar. 2020			
Ort der Prüfung: <i>Place of testing:</i>	TÜV Rheinland (Shenzhen) Co., Ltd.			
Prüflaboratorium: <i>Testing laboratory:</i>	TÜV Rheinland (Shenzhen) Co., Ltd.			
Prüfergebnis*: <i>Test result*:</i>	Pass			
geprüft / tested by:		kontrolliert / reviewed by:		
30. Mar. 2020 Solina Zhao / Test Engineer		30. Mar. 2020 Anderson Wang / Technical Certifier		
Datum <i>Date</i>	Name/Stellung <i>Name/Position</i>	Unterschrift <i>Signature</i>	Datum <i>Date</i>	Name/Stellung <i>Name/Position</i>
Sonstiges / Other: LCD panel and LCD panel manufacturer: TPM238WQ1 (TPV) The Test result is valid for the Intended context of use as mentioned on page 3 of this test report and for the following content and perception in accordance with ISO 9241-307: artificial information This report is the test result measured with main board 715G9485. The approval is only valid for the mentioned construction.				
Zustand des Prüfgegenstandes bei Anlieferung: <i>Condition of the test item at delivery:</i>		Test item complete and undamaged <i>Prüfmuster vollständig und unbeschädigt</i>		
* Legende: 1 = sehr gut 2 = gut 3 = befriedigend 4 = ausreichend 5 = mangelhaft P(ass) = entspricht o.g. Prüfgrundlage(n) F(ail) = entspricht nicht o.g. Prüfgrundlage(n) N/A = nicht anwendbar N/T = nicht getestet Legend: 1 = very good 2 = good 3 = satisfactory 4 = sufficient 5 = poor P(ass) = passed a.m. test specification(s) F(ail) = failed a.m. test specification(s) N/A = not applicable N/T = not tested				
Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens. <i>This test report relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.</i>				

Prüfbericht-Nr.: 60356584 002

Test Report No.:

Seite 2 von 18

Page 2 of 18

Verwendete Messgeräte/Prüfmittel / Used measuring instrument/test equipment

Measurement equipment	Device No.	Next calibration
RTM Display Analysis System <i>Response time and flicker</i>	1.855	Sep-20
Superspot 320 Display Analysis System <i>Luminance, Distance and Color</i>	1.802	Sep-20
Processing PC: Microvision 320 <i>Serial No.: 8-366 Upgrade</i>	1.857	N/A
Slave PC: DELL <i>DELL OPTIPLEX 755 (model No.: DC8M)</i>	1.856	N/A
Reflexionsnormal SRS-99-020 <i>Diffuse reflectance</i>	1.804	Jan-21
Reflexionsnormal 8-215 <i>Specular reflectance</i>	1.859	Jan-21
micro-TRI-gloss with standard holder <i>BYK Gardner 4376</i>	1.836	Feb-21

Summary of the test results

Attribute	artificial inf.	reality inf.
1. Design viewing distance	P	
2. Design viewing direction	P	
3. Gaze and head tilt angles	N/A	
4. Virtual images	N/A	
5. Illuminance	P	
6. Display luminance	P	P
7. Luminance Balance and Glare	P	
8. Luminance and contrast adjustment	N/A	N/A
9. Vibration	N/A	
10. Wind and rain	N/A	
11. Excessive temperatures	N/A	
12. Luminance non-uniformity	P	F
13. Colour non-uniformity	P	P
14. Contrast non-uniformity	P	
15. Geometric distortions	N/A	
16. Screen and faceplate defects	P	
17. Temporal instability (flicker)	P	
18. Spatial instability (jitter)	N/A	
19. Moiré effects	P	
20. Other visual artefacts	P	
21. Unwanted reflections	P	P
22. Unintended depths effects	N/A	
23. Luminance contrast	P	F
24. Image polarity	P	N/A
25. Character height	P	N/A
26. Text size constancy	N/A	N/A
27. Character stroke width	P	N/A
28. Character width-to-height ratio	P	N/A
29. Character format	P	N/A
30. Between-character spacing	P	N/A
31. Between word spacing	P	N/A
32. Between-line spacing	P	N/A
33. Luminance coding	P	N/A
34. Blink coding	N/A	
35. Colour coding	P	N/A
36. Geometrical coding	N/A	
37. Monochrome and multicolour object size	N/A	
38. Contrast for object legibility	N/A	
39. Colour considerations for graphics	N/A	
40. Background and surrounding image effects	N/A	
41. Number of colours	N/A	
42. Colour gamut and reference white	P	P
43. Electro optical transfer function and grey scale	P	P
44. Rendering of moving images	P	
45. Colour misconvergence	N/A	
46. Image formation time	P	
47. Spatial resolution	P	
48. Raster modulation	N/A	
49. Fill factor	N/A	
50. Pixel density	P	

Compliance route **5.2 Emissive flat panel Liquid Crystal Display (LCD) for indoor use**
– display laboratory method –

5.2.1 Intended context of use

User with normal or to normal corrected vision
User's age 7 years and older (typically up to 65 years)
Intended environment e.g. visual display workplace in offices, where alpha is the screen tilt angle

Screen tilt angle 75°
Design screen illuminance 315 lx

max. possible screen illuminance
for artificial information approximately: 2000 lx
for reality information approximately: N/A

Typical components of the illumination	artificial inf. pos. Pol.	artificial inf. neg. Pol.	reality inf.
Luminance of the large aperture source	200 cd/m ²	200 cd/m ²	200 cd/m ²
Luminance of the small aperture source	2000 cd/m ²	2000 cd/m ²	2000 cd/m ²

Typical environment according to the luminance of the large/small aperture source for artificial information:
suitable for general office use

Illuminant D65
Ambient temperature 15°C to 35°C
Content and perception artificial information
Amount of information visualization of A4 sized paper:
two times complete dialogue information horizontal
Image type from still to moving image
Design viewing distance 500 mm
ΘD 0.0°
ΦD 90.0°
Θrange 62.3°
Eye and head position from fixed to moving
Number of users typical single
Display handling stationary display handling

Prüfbericht-Nr.: 60356584 002
Test Report No.:
Seite 5 von 18
Page 5 of 18

5.2.2 Information about the technology

Identification on typeplate Q24P2C

Rated voltage and Rated frequency 100-240Vac

Rated frequency 50/60Hz

Rated current 1.5A

Rated power consumption not specified

Additional data on type label N/A

Manufacturer TPV Electronics (Fujian) Co., Ltd.
Rongqiao Economic and Technological Development Zone, Fuqing
City, Fujian Province, P. R. China

LCD panel and LCD Panel manufacturer Technology TPV : TPM238WQ1
Transmissive flat panel Liquid Crystal Display (LCD) with LED
backlight unit
Display Mode:Normally Black
Surface Treatment: Hard coating (3H), Anti-glare treatment of the
front polarizer

Number of Pixels 2560 x 1440

Pixel arrangement RGB vertical stripe

pixel size horizontal / vertical

horizontal / vertical display size

active area diagonal

specified gamma value

0.206 mm	0.206 mm
526.8 mm	296.4 mm
604.5 mm	23.8"

2.20

typ. colour coordinates at $\Theta = \Phi = 0^\circ$

red

green

blue

white

x	Uncertainty	y	Uncertainty
0.652	± 0.030	0.312	± 0.030
0.290	± 0.030	0.651	± 0.030
0.152	± 0.030	0.059	± 0.030
0.313	± 0.030	0.329	± 0.030

5.2.3 Compliance assessment

Test setup

Ambient temperature and humidity	23°C +3°C/-3°C , 40% - 60%
Supply voltage and Supply frequency	AC 230 V, 50 Hz
darkroom condition	< 2 lx
Processing unit	DELL OPTIPLEX 755 (Model No.: DC8M)
Operating System	Windows XP
Graphics-board	NVIDIA GeForce 9600 GT (external)
Test software	Windows XP, SS330 V2.01.128A
dark current adjusted	Dark current adjustment done
Display mode	digital drive 2560x1440 @60 Hz (24 bit)
video input used	digital,DP

Displayed colours and RGB values

No.	Name	R	G	B	NOTE
0 =	Black	0	0	0	R=G=B=0%
1 =	Blue	0	0	128	R,G,B=50%
2 =	Green	0	128	0	R,G,B=50%
3 =	Cyan	0	128	128	R,G,B=50%
4 =	Red	128	0	0	R,G,B=50%
5 =	Magenta	128	0	128	R,G,B=50%
6 =	Yellow	128	128	0	R,G,B=50%
7 =	White	192	192	192	R=G=B=75%
8 =	Grey	128	128	128	R=G=B=50%
9 =	Light Blue	0	0	255	R,G,B=100%
10 =	Light Green	0	255	0	R,G,B=100%
11 =	Light Cyan	0	255	255	R,G,B=100%
12 =	Light Red	255	0	0	R,G,B=100%
13 =	Light Magenta	255	0	255	R,G,B=100%
14 =	Light Yellow	255	255	0	R,G,B=100%
15 =	Bright White	255	255	255	R=G=B=100%

Adjustment of the visual display

clock	AUTO adjustment used
phase	AUTO adjustment used
screen position	AUTO adjustment used
colour/colour mode	normal
gain	R=G=B=50
brightness	50%
contrast	90%
sharpness	N/A
black level	N/A
reference white	factory setting
reference white adjustable	Yes
other settings 1	factory setting
other settings 2	

Prüfbericht-Nr.: 60356584 002

Test Report No.:

Seite 7 von 18

Page 7 of 18

Attribute	Assessment and Reporting									Result																																																																																
1. Design viewing distance	500 mm									artificial & reality inf. P																																																																																
2. Design viewing direction	a) The visual display has optically anisotropic behavior. b) Viewing cone with a single visual display Θ_D 0.0° Φ_D 90.0° Θ_{range} 62.3° c) Number of measurement locations (mloc): CL, HL and LL from 11+9 ini. sites d) Measurement directions (mdir): <table><tr><td>mdir</td><td>0</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td></tr><tr><td>Θ</td><td>0.0°</td><td>31.2°</td><td>31.2°</td><td>31.2°</td><td>31.2°</td><td>31.2°</td><td>31.2°</td><td>0.0°</td></tr><tr><td>Φ</td><td>---</td><td>209.4°</td><td>149.7°</td><td>270.0°</td><td>90.0°</td><td>30.3°</td><td>330.6°</td><td>90.0°</td></tr></table>									mdir	0	1	2	3	4	5	6	7	Θ	0.0°	31.2°	31.2°	31.2°	31.2°	31.2°	31.2°	0.0°	Φ	---	209.4°	149.7°	270.0°	90.0°	30.3°	330.6°	90.0°	artificial & reality inf. P																																																					
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Θ	0.0°	31.2°	31.2°	31.2°	31.2°	31.2°	31.2°	0.0°																																																																																		
Φ	---	209.4°	149.7°	270.0°	90.0°	30.3°	330.6°	90.0°																																																																																		
3. Gaze and head tilt angles	Not applicable.									artificial & reality inf. N/A																																																																																
4. Virtual images	Not applicable.									artificial & reality inf. N/A																																																																																
5. Illuminance	a) Design screen illuminance 315 lx, (max. possible screen illuminance: 2000 lx) b) Screen tilt angle 75° c) Illuminant D65									artificial & reality inf. P																																																																																
6. Display luminance	<table><tr><td colspan="10">Luminance of the mloc (perpendicular)</td></tr><tr><td>mloc</td><td>11</td><td>22</td><td>33</td><td>44</td><td>55</td><td>66</td><td>77</td><td>88</td><td>99</td></tr><tr><td>L [cd/m²]</td><td>278.2</td><td>378.8</td><td>390.4</td><td>409.1</td><td>421.9</td><td>369.1</td><td>326.6</td><td>326.4</td><td>304.5</td></tr><tr><td>mloc</td><td>91</td><td>19</td><td>---</td><td>---</td><td>---</td><td>---</td><td>---</td><td>---</td><td>---</td></tr><tr><td>L [cd/m²]</td><td>341.9</td><td>282.8</td><td>---</td><td>---</td><td>---</td><td>---</td><td>---</td><td>---</td><td>---</td></tr><tr><td>mloc</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td></tr><tr><td>L [cd/m²]</td><td>378.8</td><td>393.5</td><td>372.3</td><td>355.3</td><td>421.9</td><td>342.5</td><td>335.7</td><td>367.2</td><td>325.7</td></tr><tr><td colspan="10">Minimum luminance in cd/m² of all measurement directions for mloc: CL 198.5 ±13.7 HL 195.3 ±13.5 LL 131.4 ±9.1</td></tr></table>									Luminance of the mloc (perpendicular)										mloc	11	22	33	44	55	66	77	88	99	L [cd/m²]	278.2	378.8	390.4	409.1	421.9	369.1	326.6	326.4	304.5	mloc	91	19	---	---	---	---	---	---	---	L [cd/m²]	341.9	282.8	---	---	---	---	---	---	---	mloc	1	2	3	4	5	6	7	8	9	L [cd/m²]	378.8	393.5	372.3	355.3	421.9	342.5	335.7	367.2	325.7	Minimum luminance in cd/m² of all measurement directions for mloc: CL 198.5 ±13.7 HL 195.3 ±13.5 LL 131.4 ±9.1										artificial inf. P reality inf. P
Luminance of the mloc (perpendicular)																																																																																										
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Minimum luminance in cd/m² of all measurement directions for mloc: CL 198.5 ±13.7 HL 195.3 ±13.5 LL 131.4 ±9.1																																																																																										
7. Luminance Balance and Glare	a) Luminance balance: Not applicable. b) Disturbing glare: b1) Description of the surface design: The housing has mostly flat surfaces. Edges are rounded. b2) Gloss of the housing determined with gloss reference sample sheets Front = N/T Side = N/T Rear = N/T b3) Gloss of the housing measured in gloss units Front = 15 ±1.3 Side = 18.1 ±1.3 Rear = 17.6 ±1.3									artificial & reality inf. P																																																																																

Prüfbericht-Nr.: 60356584 002

Test Report No.:

Seite 8 von 18

Page 8 of 18

Attribute	Assessment and Reporting					Result
8. Luminance and contrast adjustment	The brightness control adjusts the luminance of the backlight. The contrast control adjusts the maximum luminance. The display luminance of the low state is manually adjustable. The display luminance of the high state is manually adjustable. Independent adjustment of low/high state is technically provided. Visual discrimination of grey levels with 10% step size is provided.					artificial inf. N/A reality inf. N/A
9. Vibration	Not applicable.					artificial & reality inf. N/A
10. Wind and rain	Not applicable.					artificial & reality inf. N/A
11. Excessive temperatures	Not applicable.					artificial & reality inf. N/A
12. Luminance non-uniformity	a) lateral criterion					

Attribute	Assessment and Reporting	Result																																																																				
14. Contrast non-uniformity	a) lateral criterion 32% ±9% b) directional criterion CR > CRmin; see 23. Luminance contrast	artificial & reality inf. P																																																																				
15. Geometric distortions	Not applicable.	artificial & reality inf. N/A																																																																				
16. Screen and faceplate defects	Specified Class _{Pixel} of the visual display I Multiplier n _{ClassPixel} 1 Observed faults: <table><tr><td>Type 1</td><td>Type 2</td><td>Type 3 stuck high</td><td>Type 3 stuck low</td><td>Cluster Type 1 / 2</td><td>Cluster Type 3</td></tr><tr><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr></table>	Type 1	Type 2	Type 3 stuck high	Type 3 stuck low	Cluster Type 1 / 2	Cluster Type 3	0	0	0	0	0	0	artificial & reality inf. P																																																								
Type 1	Type 2	Type 3 stuck high	Type 3 stuck low	Cluster Type 1 / 2	Cluster Type 3																																																																	
0	0	0	0	0	0																																																																	
17. Temporal instability (flicker)	Eobs,n ≤ Epred,n → The visual display is flickerfree. screen diagonal 62.3° pupil area 4.71 mm² c0 420.8 cd/m² <table><tr><td>n =</td><td>1</td><td>2</td><td>3</td></tr><tr><td>f,n [Hz]</td><td>60.0</td><td>120.0</td><td></td></tr><tr><td>AMPn [1]</td><td>0.0016</td><td>0.0006</td><td></td></tr><tr><td>Eobs,n [td]</td><td>3.1</td><td>1.1</td><td></td></tr><tr><td>Epred,n [td]</td><td>209.8</td><td>86676.5</td><td></td></tr></table>	n =	1	2	3	f,n [Hz]	60.0	120.0		AMPn [1]	0.0016	0.0006		Eobs,n [td]	3.1	1.1		Epred,n [td]	209.8	86676.5		artificial & reality inf. P																																																
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Eobs,n [td]	3.1	1.1																																																																				
Epred,n [td]	209.8	86676.5																																																																				
18. Spatial instability (jitter)	Not applicable.	artificial & reality inf. N/A																																																																				
19. Moiré effects	horizontal bars P vertical bars P pixel checkerboard P	artificial & reality inf. P																																																																				
20. Other visual artefacts	none	artificial inf. reality inf. P																																																																				
21. Unwanted reflections	a) Illumination conditions for artificial inf. and positive image polarity Luminance of the large aperture source (L-REF,EXT) 200 cd/m² and Luminance of the small aperture source (L-REF,SML) 2000 cd/m² Contrast of unwanted reflections $\frac{L_H + L_D + L_S}{L_H + L_D} \leq 125$ <table><tr><td></td><td>mloc-mdir</td><td>CL-1S</td><td>CL-2S</td><td>CL-3S</td><td>CL-4S</td><td>CL-5S</td><td>CL-6S</td></tr><tr><td rowspan="3">L-REF,EXT</td><td>left side</td><td>1.01</td><td>1.01</td><td>1.01</td><td>1.01</td><td>1.01</td><td>1.01</td></tr><tr><td>≤</td><td>±0.23</td><td>±0.23</td><td>±0.23</td><td>±0.23</td><td>±0.22</td><td>±0.23</td></tr><tr><td>right side</td><td>1.25</td><td>1.25</td><td>1.25</td><td>1.25</td><td>1.25</td><td>1.25</td></tr><tr><td rowspan="3">L-REF,SML</td><td></td><td>±0.0</td><td>±0.0</td><td>±0.0</td><td>±0.0</td><td>±0.0</td><td>±0.0</td></tr><tr><td>left side</td><td>1.01</td><td>1.00</td><td>1.01</td><td>1.01</td><td>1.00</td><td>1.00</td></tr><tr><td>≤</td><td>±0.24</td><td>±0.23</td><td>±0.24</td><td>±0.24</td><td>±0.23</td><td>±0.24</td></tr><tr><td></td><td>right side</td><td>1.25</td><td>1.25</td><td>1.25</td><td>1.25</td><td>1.25</td><td>1.25</td></tr><tr><td></td><td></td><td>±0.0</td><td>±0.0</td><td>±0.0</td><td>±0.0</td><td>±0.0</td><td>±0.0</td></tr></table>		mloc-mdir	CL-1S	CL-2S	CL-3S	CL-4S	CL-5S	CL-6S	L-REF,EXT	left side	1.01	1.01	1.01	1.01	1.01	1.01	≤	±0.23	±0.23	±0.23	±0.23	±0.22	±0.23	right side	1.25	1.25	1.25	1.25	1.25	1.25	L-REF,SML		±0.0	±0.0	±0.0	±0.0	±0.0	±0.0	left side	1.01	1.00	1.01	1.01	1.00	1.00	≤	±0.24	±0.23	±0.24	±0.24	±0.23	±0.24		right side	1.25	1.25	1.25	1.25	1.25	1.25			±0.0	±0.0	±0.0	±0.0	±0.0	±0.0	artificial inf. P reality inf. P
	mloc-mdir	CL-1S	CL-2S	CL-3S	CL-4S	CL-5S	CL-6S																																																															
L-REF,EXT	left side	1.01	1.01	1.01	1.01	1.01	1.01																																																															
	≤	±0.23	±0.23	±0.23	±0.23	±0.22	±0.23																																																															
	right side	1.25	1.25	1.25	1.25	1.25	1.25																																																															
L-REF,SML		±0.0	±0.0	±0.0	±0.0	±0.0	±0.0																																																															
	left side	1.01	1.00	1.01	1.01	1.00	1.00																																																															
	≤	±0.24	±0.23	±0.24	±0.24	±0.23	±0.24																																																															
	right side	1.25	1.25	1.25	1.25	1.25	1.25																																																															
		±0.0	±0.0	±0.0	±0.0	±0.0	±0.0																																																															

[illegible]

Prüfbericht-Nr.: 60356584 002
Test Report No.:

Seite 11 von 18
Page 11 of 18

Attribute	Assessment and Reporting			Result	
24. Image polarity	for artificial information: positive and negative polarity			artificial inf. P reality inf. N/A	
25. Character height	Minimum character height Font Arial, 12 pt, large Font Font type Latin-origin Character height N _{H,Height} 15 Pixel / 3.09 mm / 21.2 minutes of arc. Default mode Font Arial, 12 pt, large Font Font type Latin-origin Character height N _{H,Height,default} 15 Pixel / 3.09 mm / 21.2 minutes of arc.			artificial inf. P reality inf. N/A	
26. Text size constancy	Not applicable.			artificial inf. N/A reality inf. N/A	
27. Character stroke width	horizontal stroke width	2 Pixel	13.3% of character height	artificial inf. P reality inf. N/A	
	vertical stroke width	2 Pixel	13.3% of character height		
28. Character width-to-height ratio	Character width N _{H,Width}	12 Pixel		artificial inf. P reality inf. N/A	
	Character height N _{H,Height}	15 Pixel			
	Character width-to-height ratio	0.8 : 1			
29. Character format	Character format	15 x 12		artificial inf. P reality inf. N/A	
30. Between-character spacing	Font with serifs	No		artificial inf. P reality inf. N/A	
	Between-character spacing	2 Pixel			
31. Between word spacing	Print font	Yes		artificial inf. P reality inf. N/A	
	Between-word-spacing	8 Pixel			
32. Between-line spacing	Between-line-spacing	2 Pixel		artificial inf. P reality inf. N/A	
33. Luminance coding	Level 1	Black	Level 3	White	artificial inf. P reality inf. N/A
	Level 2	Gray	Level 4	Bright White	
	Ratio		actual value	set value	
	Level 1,max		10.89	N/A	
	Level 2,min / Level 1,max		8.28	≥ 1,5	
	Level 3,min / Level 2,max		2.55	≥ 1,5	
	Level 4,min / Level 3,max		1.88	≥ 1,5	

Prüfbericht-Nr.: 60356584 002

Test Report No.:

Seite 12 von 18

Page 12 of 18

Attribute	Assessment and Reporting	Result
34. Blink coding	Not applicable.	artificial & reality inf. N/A
35. Colour coding	minimum ΔE 22.5 $\pm$ 8.3 between the following two colours: No. of Colour 1 15 (Bright White) No. of Colour 2 7 (White)	artificial inf. P reality inf. N/A
36. Geometrical coding	Not applicable.	artificial & reality inf. N/A
37. Mono-chrome and multicolour object size	Not applicable.	artificial & reality inf. N/A
38. Contrast for object legibility	Not applicable.	artificial & reality inf. N/A
39. Colour considerations for graphics	Not applicable.	artificial & reality inf. N/A
40. Background and surrounding image effects	Not applicable.	artificial & reality inf. N/A
41. Number of colours	Not applicable.	artificial & reality inf. N/A
42. Colour gamut and reference white	for artificial information 1. Colour gamut 36.7% $\pm$ 5.1% 2.a Reference white (measured) 6323 K 2.b Reference white (specified) 6488 K 2.c Abs. difference to meas. 165 K 3. Adjustability of the ref. white Yes for reality information 1. Colour gamut acceptable to more than 75% of the population 2.a ITU reference white 6500 K 2.b Abs. difference to meas. 177 K 3. Skin tone N/A	artificial inf. P reality inf. P
43. Electro optical transfer function and grey scale	1. Electro optical transfer function See figures on page 14 and 15. Monotonicity of first derivative Monotonicity is given Second derivative > 0 Yes Measured gamma value 2.38 Specified gamma value 2.20 Max. deviation from specified gamma value -0.18 2. max. $\Delta u'v'$ of different grey levels 0.010	artificial inf. P reality inf. P
44. Rendering of moving images	Depending on the viewing conditions and image content, motion blur may occur. The visual display has sufficient temporal fidelity to show typical workplace applications like text processing, table calculation etc. with acceptable low blur, smear and other noticeable artefacts.	artificial & reality inf. P

Prüfbericht-Nr.: 60356584 002
Test Report No.:
Seite 13 von 18
Page 13 of 18

Attribute	Assessment and Reporting	Result
45. Colour misconvergence	Not applicable.	artificial & reality inf. N/A
46. Image formation time	Minimum 11.8 ms Maximum 35.5 ms Mean value 17.0 ms Standard deviation 6.9 ms NOTE: mean value switching time t-on 9.0 ms mean value switching time t-off 8.1 ms	artificial & reality inf. P
47. Spatial resolution	a) Resolution horizontal x vertical 2560 x 1440 b) Spatial resolution horizontal 1.4' (at the design viewing distance) vertical 1.4'	artificial & reality inf. P
48. Raster modulation	Not applicable.	artificial & reality inf. N/A
49. Fill factor	Pixel density 43.6 Pixel per degree Fill factor N/A	artificial & reality inf. N/A
50. Pixel density	Pixel density horizontal 123.4 ppi Pixel density vertical 123.4 ppi	artificial & reality inf. P

Remarks

Classification result according to ISO 13406-2:2001:

Class viewing contrast: III
 Class viewing colour: IV
 Reflection class positive Polarity: I
 Reflection class negative Polarity: I
 Pixel Fault Class: I
 Design Azimuth/Inclination: 90°/0°
 digital drive 2560x1440 @60 Hz (24 bit), Arial, 12 pt, large Font

Figures and Tables

Figure 1: Electro-optical transfer function for the design viewing direction (linear)

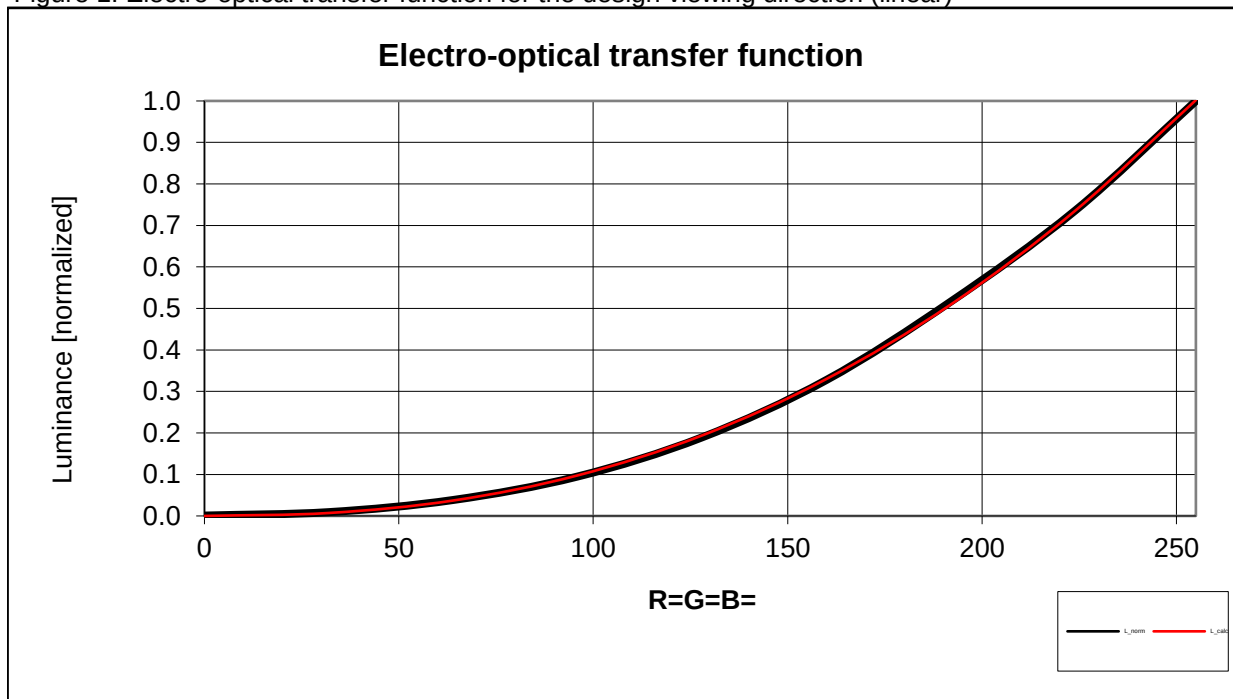
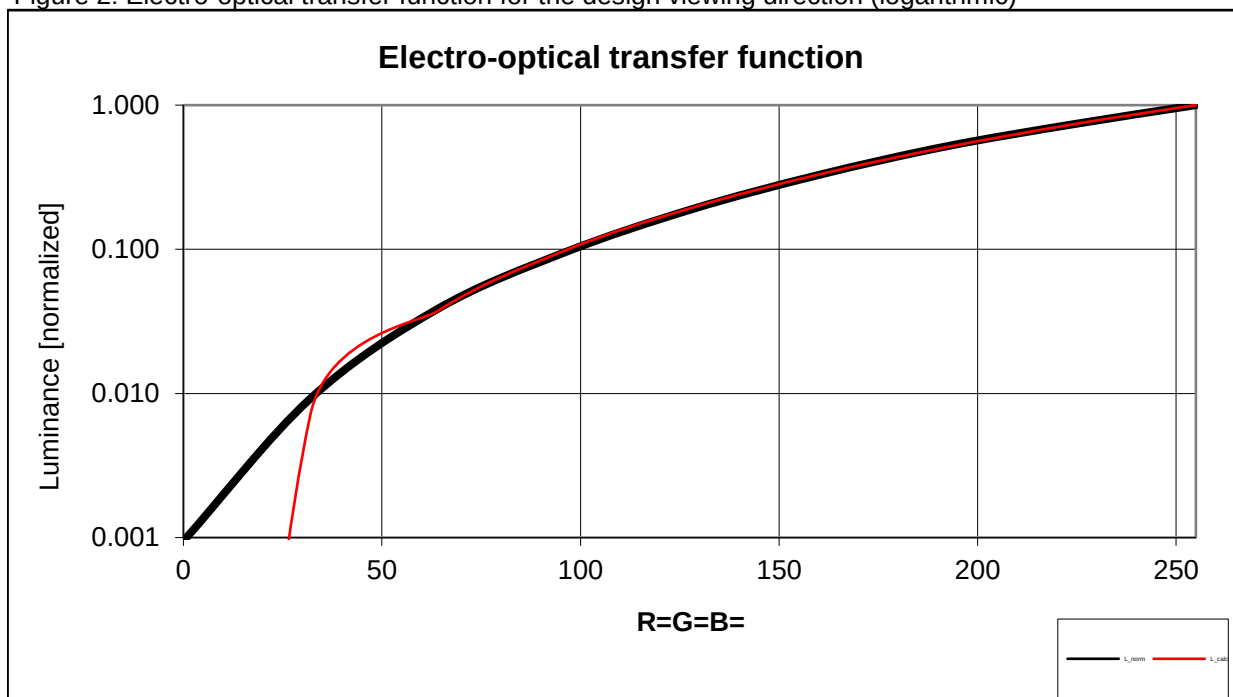


Figure 2: Electro-optical transfer function for the design viewing direction (logarithmic)



Figures and Tables (continued)

Figure 3: First derivative of electro-optical transfer function for the design viewing direction

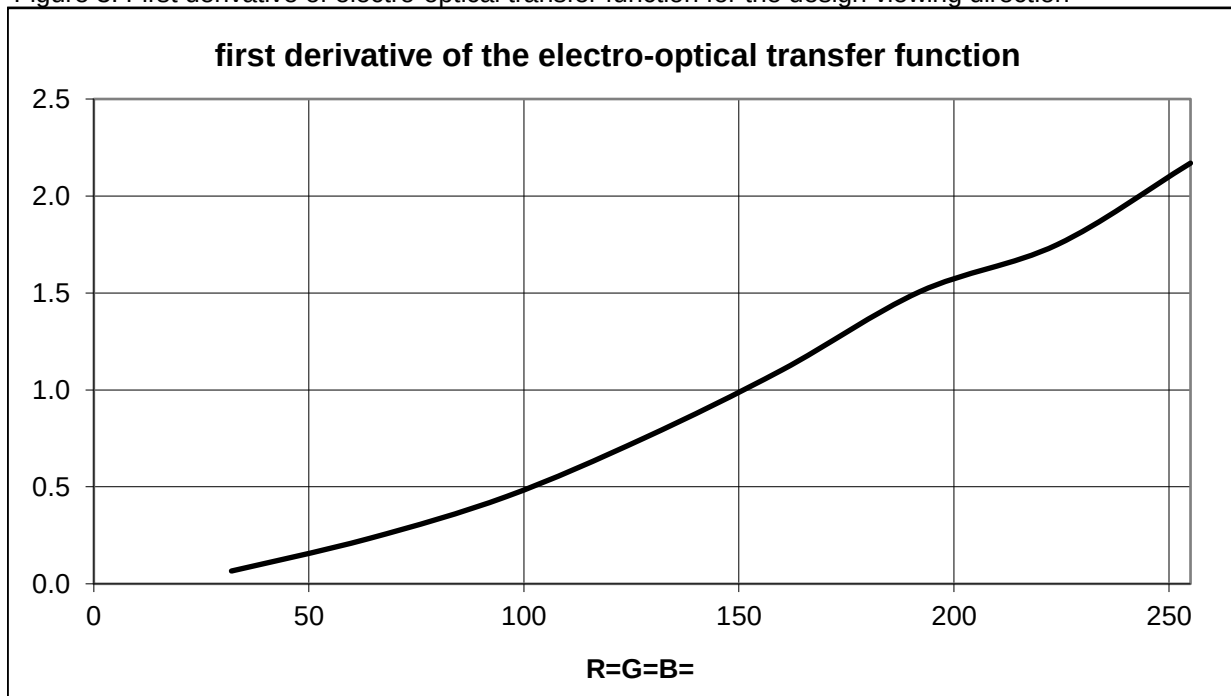
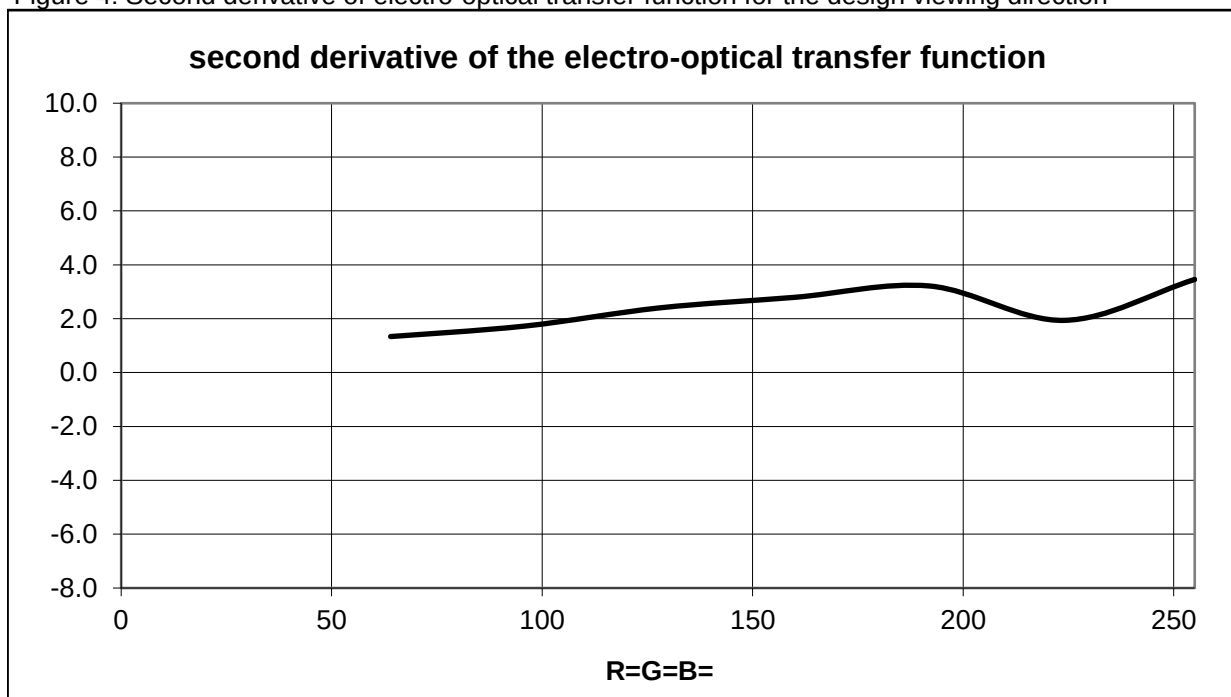


Figure 4: Second derivative of electro-optical transfer function for the design viewing direction



Figures and Tables (continued)

Table 1: Image formation time

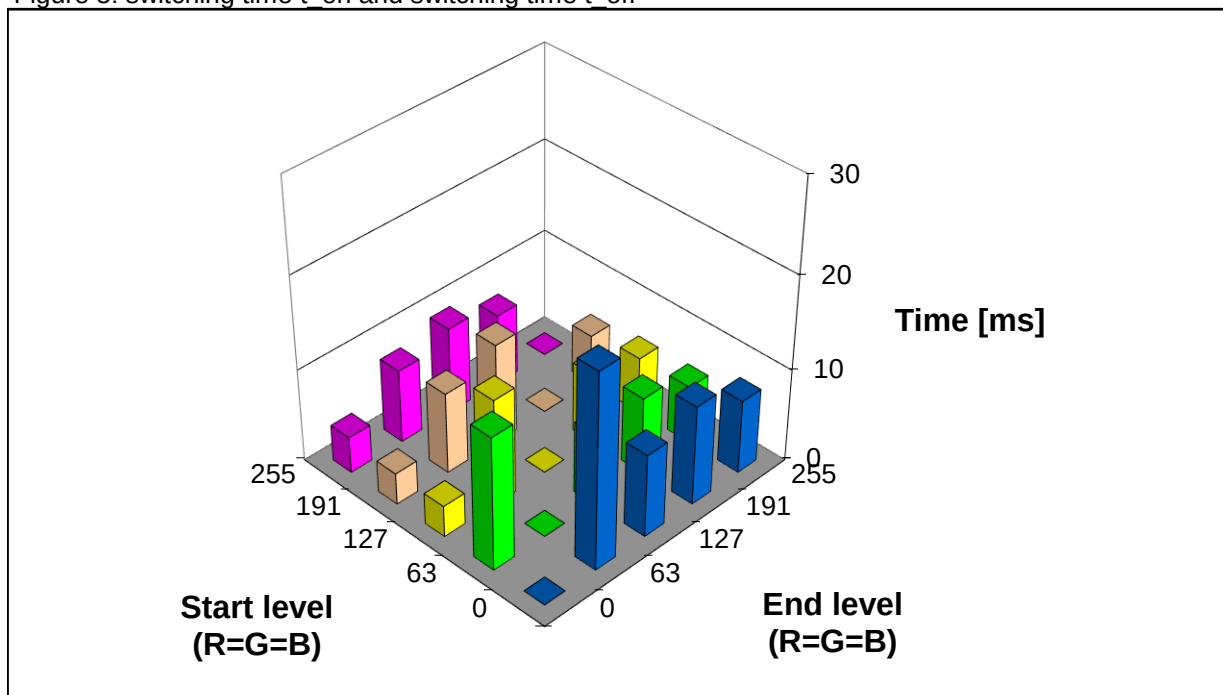
Switching time t_{on}		End level (R=G=B)				
Switching time t_{off}		0	63	127	191	255
Start level (R=G=B)	0	XX	21.1 ms	9.0 ms	10.7 ms	7.9 ms
	63	14.4 ms	XX	7.7 ms	8.2 ms	6.1 ms
	127	3.4 ms	11.4 ms	XX	7.5 ms	6.0 ms
	191	3.4 ms	8.7 ms	10.7 ms	XX	5.3 ms
	255	3.9 ms	7.9 ms	9.3 ms	7.6 ms	XX

Evaluation of the switching time

mean value switching time t_{on} 9.0 ms

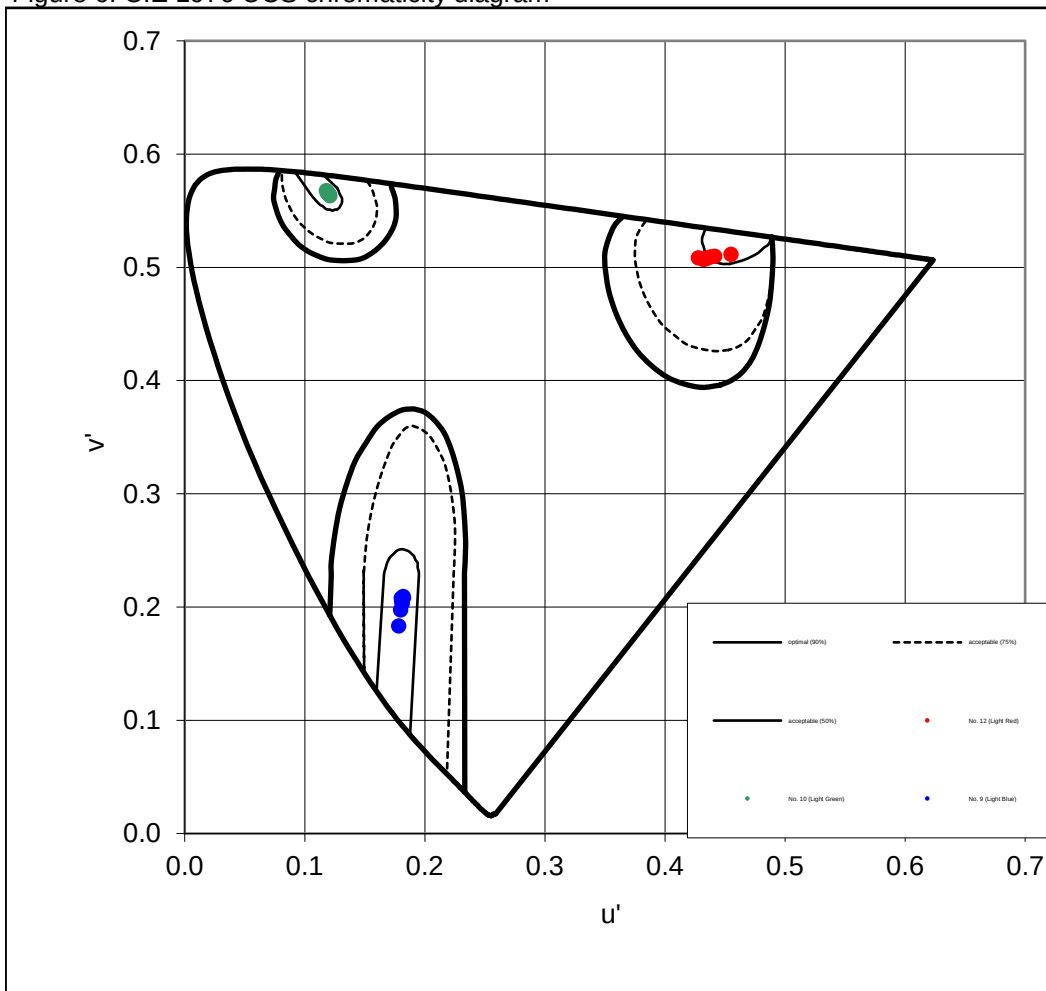
mean value switching time t_{off} 8.1 ms

Image formation time		End level (R=G=B)				
		0	63	127	191	255
Start level (R=G=B)	0	X	X	X	X	X
	63	35.5 ms	X	X	X	X
	127	12.4 ms	19.1 ms	X	X	X
	191	14.1 ms	16.9 ms	18.2 ms	X	X
	255	11.8 ms	14.0 ms	15.3 ms	12.9 ms	X

Figure 5: switching time t_{on} and switching time t_{off}


Figures and Tables (continued)

Figure 6: CIE 1976 UCS chromaticity diagram



[illegible]