

SPECIFICATION

承 认 书 Approved by	
审核:	确认:
客户确认结果:	

Customer
客 户: _____

Product
品 名: _____ 13.3 inch LCD 模组

Part NO.
产品型号: _____ DCE133FH0-B00-500N

DATE
日 期: _____ 2026/08/18

Approved 核 准	Checked 审 核	Prepared 制 作

[illegible]

Document Revision History				
Change No.	Date	Subject And Reason	Version No.	Responser
1	2026.08.18	New	01	ZHU

1.0 General Description

1.1 Introduction

DCE133FH0-B00-500N is a color active matrix TFT LCD FOB using amorphous silicon TFT's (Thin Film Transistors) as an active switching devices. This FOB has a 13.3 inch diagonally measured active area with Full-HD resolutions (1920 horizontal by 1080 vertical pixel array). Each pixel is divided into RED, GREEN, BLUE dots which are arranged in vertical stripe and this FOB can display 16.7 M colors.

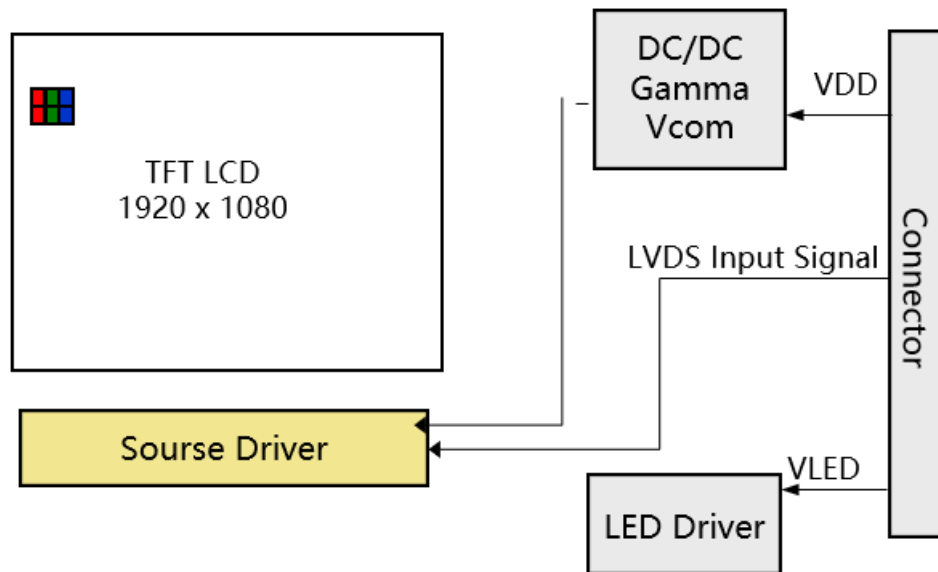


Figure 1. Drive Architecture

1.2. Features

- LVDS Interface with 2 pixel / clock
- Mode: DE (Data Enable) only
- Thin and light weight
- 16.7M color depth, color gamut 72%
- On board LED driver circuit

1.3. General information

Item	Specification	Unit
Outline Dimension(LCM)	300.26 x177.9 x 2.8/4.73	mm
Display area(LCM)	293.76 (H) x165.24 (V)	mm
Number of Pixel	1920(H) x 1080 (V)	pixels
Pixel pitch	0.153 (H) X 0.153 (V)	mm
Pixel Arrangement	RGB Vertical stripe	
Display mode	Normal Black	
Display Colors	16.7M	8Bit
Luminous(LCM)	430(Min.)/500(Typ.)	Cd/m ²
Weight	TBD	g

2.0 ABSOLUTE MAXIMUM RATINGS

The followings are maximum values which, if exceed, may cause faulty operation or damage to the unit. The operational and non-operational maximum voltage and current values are listed in Table 2.

<Table 2. Absolute Maximum Ratings>

Parameter		Symbol	Min	Max	Unit	Remarks
LCD	Power Supply Voltage	VDD	-0.3	5	V	Ta =25 °C
Environment	Operating Temperature	TOP	0	50	°C	Note:1
	Storage Temperature	TST	-20	60	°C	
	Operating Ambient Humidity	Hop	10	90	%RH	
	Storage Humidity	Hst	5	90	%RH	

Note:

1. These range above is maximum value not the actual operating temperature . Actual Operating temperature is no more than 50°C and temperature refers to the LCM surface temperature ;
2. DCE is not responsible for product problems beyond the use conditions.
3. When the ambient temperature is T °C, the surface temperature of Panel can not exceed (T+15)°C.

3.0 ELECTRICAL SPECIFICATIONS

3.1 TFT LCD Module

< Table 3.LCD FOB/FOG Electrical Specifications >

[Ta =25±2 °C]

Parameter		Symbol	Values			Unit	Notes
			Min	Typ	Max		
Power Supply Voltage		VDD	-	3.3	-	V	Note 1
Power Supply Ripple Voltage		VRP	-	20	50	mV	
Power Supply Current		IDD	-	TBD		mA	
Rush current		IRUSH	-	-	3	A	Note 2
LVDS Interface	Differential Input High Threshold Voltage	VLVTH	-	-	+100	mV	
	Differential Input Low Threshold Voltage	VLVTL	-100	-	-	mV	
	Input Differential Voltage	VID	100	-	600	mV	
	Common Input Voltage	VLVC	0.6	1.2	1.6	V	
BLU Supply Voltage		VLED	10.8	12	13.2	V	
BLU Supply Current		ILED	-	350	-	mA	

Notes : 1. The supply voltage is measured and specified at the interface connector of FOB.

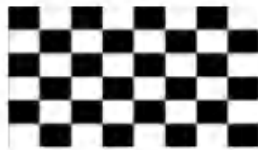
The current draw and power consumption specified is for 3.3V at 25 °C

Max value at H 1 Line Pattern

a) Typ : Mosaic Pattern

b) Max : H1L Pattern

2. The duration of rush current is about 2ms and rising time of Power Input is 1ms(min)



(a)



(b)

3.0 ELECTRICAL SPECIFICATIONS

3.2 Back-light Unit

< Table 4. LED driver Electrical Specifications >

[Ta =25±2°C]

Parameter		Min.	Typ.	Max.	Unit	Remarks
Power supply voltage for Back light		V_{LED}	-	12	-	V
Power supply Current for Back light		I_{LED}	-	350	-	mA
Power supply for Back light		P_{LED}	-	TBD	-	W
EN Control Level	Backlight on	V_{ENH}	2	3.3	5	V
	Backlight off	V_{ENL}	0	-	0.8	V
PWM Control Level	PWM High Level	V_{PML}	2	-	-	V
	PWM Low Level	V_{PML}	0	-	0.8	V
PWM Control Frequency		F_{PWM}	0.1	-	10	KHz
Duty Ratio		-	1	-	100	%

Notes : 1. Calculator Value for reference $I_{LED} \times V_{LED} = P_{LED}$

2. The LED Life-time define as the estimated time to 50% degradation of initial luminous under the condition of the ambient temperature of 25°C.

4.0 INTERFACE CONNECTION

4.1 Electrical Interface Connection

The electronics interface connector is 300E40-1010RA-G3

The LED connector is MSK24022P10D

The connector interface pin assignments are listed in Table 5 and 6.

<Table 5. Pin Assignments for the Interface Connector>

Pin No	Symbol	Description	Remark
1	RXE3P	Positive Transmission data of Pixel 3 (EVEN)	LVDS 接口 EVEN 差分对
2	RXE3N	Negative Transmission data of Pixel 3 (EVEN)	
3	RXE2P	Positive Transmission data of Pixel 2 (EVEN)	
4	RXE2N	Negative Transmission data of Pixel 2 (EVEN)	
5	RXECP	Positive Transmission Clock (EVEN)	
6	RXECN	Negative Transmission Clock(EVEN)	
7	GND	Power Ground	共地
8	RXE1P	Positive Transmission data of Pixel 1 (EVEN)	LVDS 接口 EVEN 差分对
9	RXE1N	Negative Transmission data of Pixel 1(EVEN)	
10	RXE0P	Positive Transmission data of Pixel 0 (EVEN)	
11	RXE0N	Negative Transmission data of Pixel 0 (EVEN)	
12	GND	Power Ground	共地
13	RXO3P	Positive Transmission data of Pixel 3 (ODD)	LVDS 接口 ODD 差分对
14	RXO3N	Negative Transmission data of Pixel 3 (ODD)	
15	RXO2P	Positive Transmission data of Pixel 2(ODD)	
16	RXO2N	Negative Transmission data of Pixel 2 (ODD)	
17	RXOCP	Positive Transmission Clock(ODD)	
18	RXOCN	Negative Transmission Clock(ODD)	
19	GND	Power Ground	共地
20	RXO1P	Positive Transmission data of Pixel 1 (ODD)	LVDS 接口 ODD 差分对
21	RXO1N	Negative Transmission data of Pixel 1(ODD)	
22	RXO0P	Positive Transmission data of Pixel 0 (ODD)	
23	RXO0N	Negative Transmission data of Pixel 0(ODD)	
24	GND	Power Ground	共地
25	NC	SDA for BOE use, this pin should be open	厂内生产使用，客户端不连接
26	NC	SCL for BOE use, this pin should be open	
27	GND	Power Ground	共地
28	LCD_VCC	LCD Power Supply,3.3V	LCD 供电电压 3.3±0.3V
29	LCD_VCC	LCD Power Supply,3.3V	

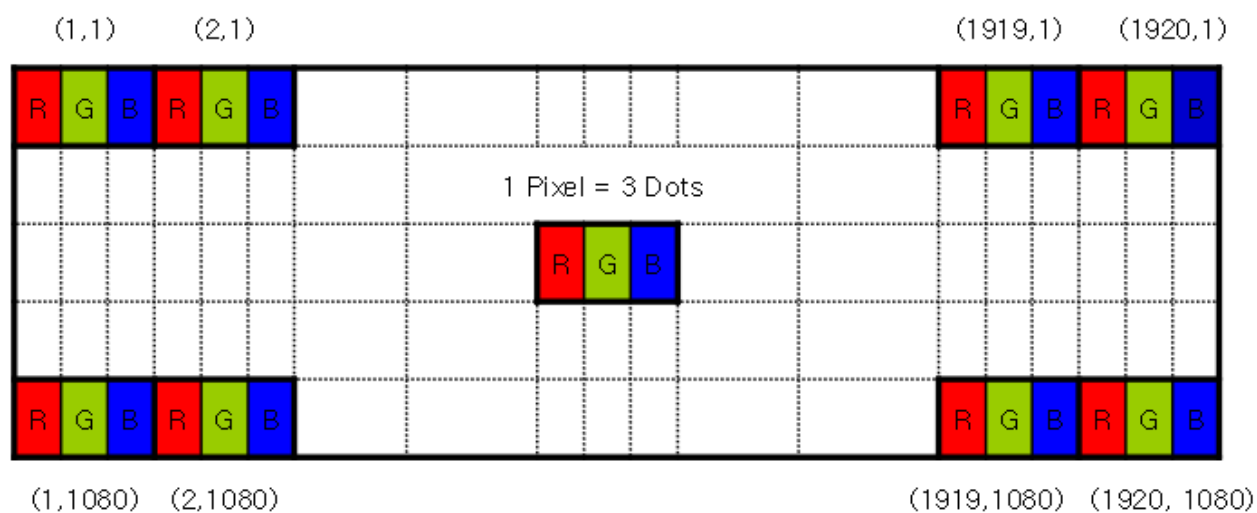
30	LCD_VCC	LCD Power Supply,3.3V	
31	GND	Power Ground	共地
32	LED PWM	BacklightAdjust,3.3v(3v~3.6V)	高电平 3.3V，低电平:0V
33	LED EN	Enable Pin, 3.3V (3V~3.6V)	高电平 3.3V:on, 低电平 0V:off
34	GND	Power Ground	
35	GND	Power Ground	
36	GND	Power Ground	共地
37	VLED	Power Supply,12V	背光供电电压 12±1.2V
38	VLED	Power Supply,12V	
39	VLED	Power Supply,12V	
40	VLED	Power Supply,12V	

<Table 6. Pin Assignments for the LED Connector>

PIN #	Symbol	Description Remark	PIN #	Symbol	Description Remark
1	LED1	LED-	6	LED6	LED-
2	LED2	LED-	7	NC	
3	LED3	LED-	8	VLEDOUT	VLEDOUT
4	LED4	LED-	9		
5	LED5	LED-	10		

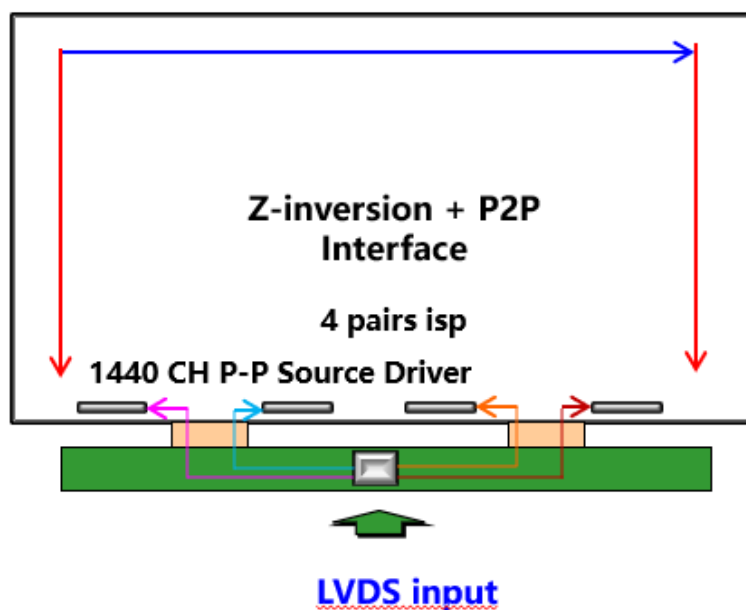
4.2 Data Input Format

Figure 2. Pixel Format



Display Position of Input Data (V-H)

Figure 3. Scan direction



4.3 LVDS Interface

LVDS Receiver : Timing Controller (LVDS Rx merged) / LVDS Data : Pixel Data

< Table 7. LVDS Input Data Mapping >

Channel No.	Data No.	8-bit LVDS Type
		VESA
0	Bit-0	R0
	Bit-1	R1
	Bit-2	R2
	Bit-3	R3
	Bit-4	R4
	Bit-5	R5
	Bit-6	G0
1	Bit-0	G1
	Bit-1	G2
	Bit-2	G3
	Bit-3	G4
	Bit-4	G5
	Bit-5	B0
	Bit-6	B1
2	Bit-0	B2
	Bit-1	B3
	Bit-2	B4
	Bit-3	B5
	Bit-4	HS
	Bit-5	VS
	Bit-6	DE
3	Bit-0	R6
	Bit-1	R7
	Bit-2	G6
	Bit-3	G7
	Bit-4	B6
	Bit-5	B7
	Bit-6	-

5.0 SIGNAL TIMING SPECIFICATIONS

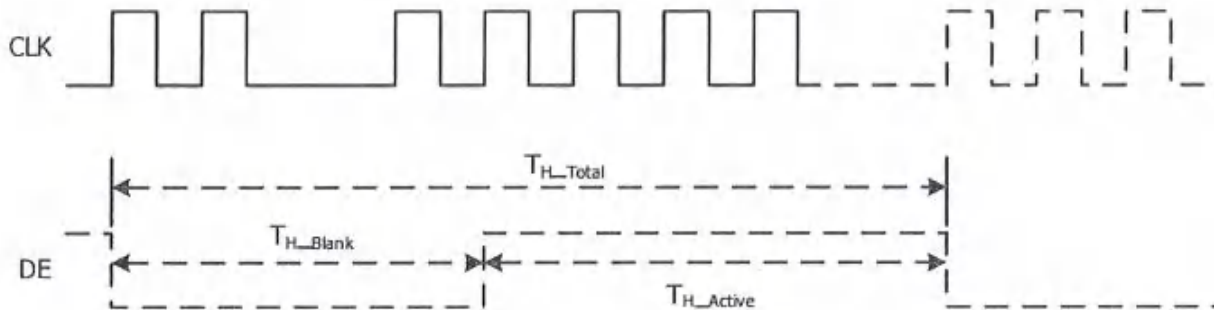
5.1.1 The DCE133FH0-B00-500N code is operated by the DE only

< Table 8.Timing Parameter >

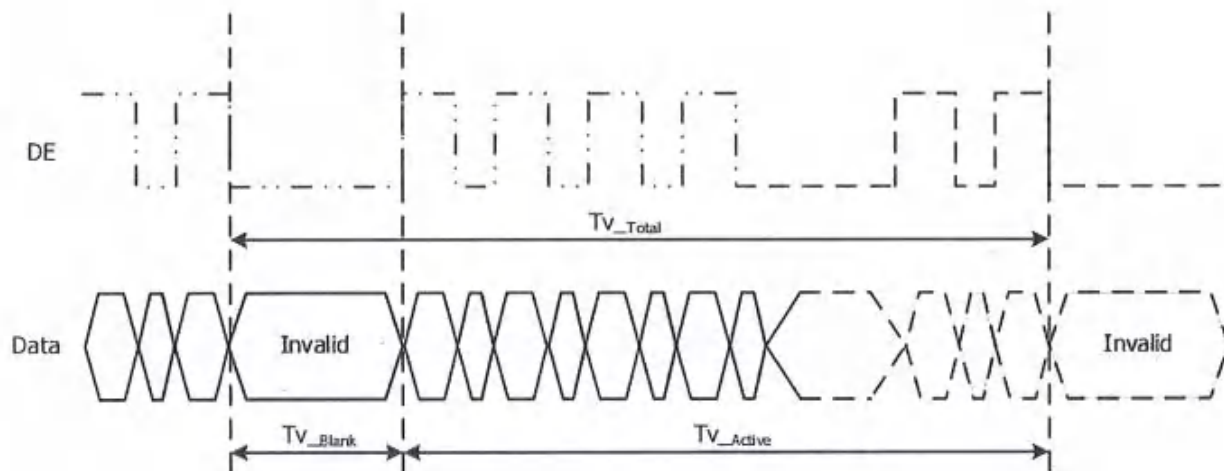
Item	Symbols		Min	Typ	Max	Unit	Note
DCLK	Period	<u>t_{CLK}</u>	TBD	13.8	TBD	ns	
	Frequency	-	TBD	72.71	TBD	MHz	
<u>Hsync</u>	Period	T _{V-Total}	TBD	1080	TBD	<u>t_{CLK}</u>	
	Horizontal Valid	t _{H_Active}	TBD	960	TBD	<u>t_{CLK}</u>	
	Horizontal Blank	t _{HBlank}	TBD	120	TBD	<u>t_{CLK}</u>	
	Frequency	f _H	TBD	64.8	TBD	KHz	
<u>Vsync</u>	Period	T _{V-Total}	TBD	1122	TBD	<u>t_{HP}</u>	
	Vertical Valid	T _{V_Active}	TBD	1080	TBD	<u>t_{HP}</u>	
	Vertical Blank	T _{V-Blank}	TBD	42	TBD	<u>t_{HP}</u>	
	Frequency	f _V	TBD	60	TBD	Hz	
LVDS Receiver clock	Input spread spectrum ratio	<u>SSr</u>	-3	-	+3	%	

5.0 SIGNAL TIMING SPECIFICATIONS

5.1.1 Horizontal Input Timing



5.1.2 Vertical Input Timing

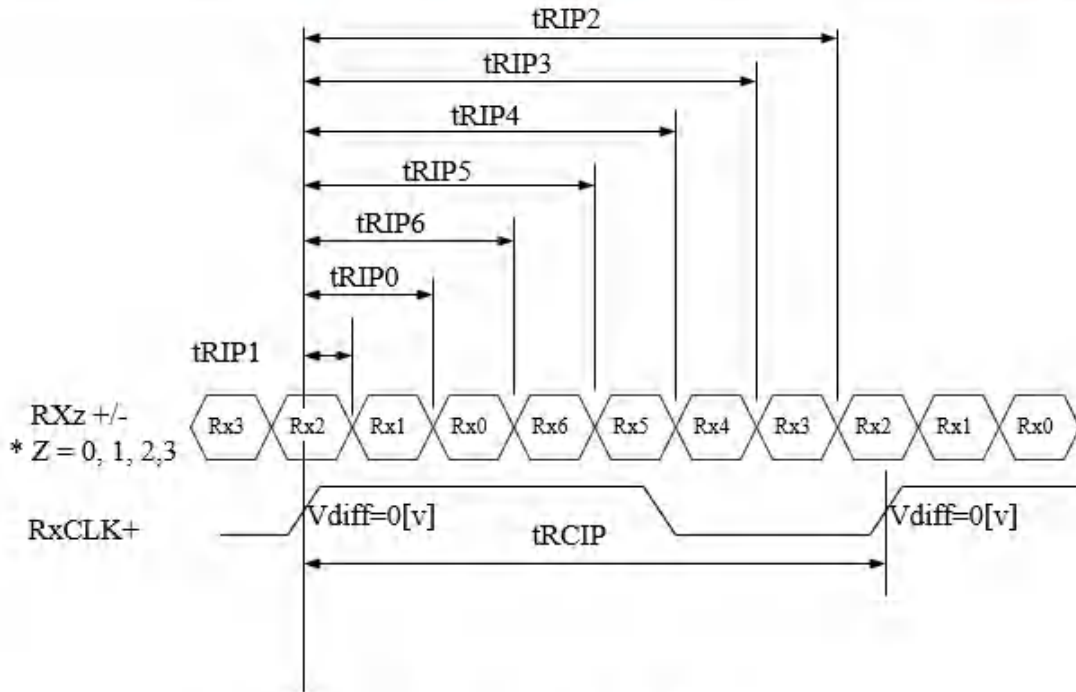


5.2 LVDS Rx Interface Timing Parameter

The specification of the LVDS Rx interface timing parameter is shown in Table 9-1.<Table 9-1.

LVDS RxInterface Timing Specification>

Item	Symbol	Min	Typ	Max	Unit	Remark
CLKIN Period	tRCIP	TBD	13.8	TBD	nsec	
Input Data 0	tRIP1	-0.4	0.0	+0.4	nsec	
Input Data 1	tRIP0	$tRCIP/7-0.4$	$tRCIP/7$	$tRCIP/7+0.4$	nsec	
Input Data 2	tRIP6	$2 \times tRCIP/7-0.4$	$2 \times tRCIP/7$	$2 \times tRCIP/7+0.4$	nsec	
Input Data 3	tRIP5	$3 \times tRCIP/7-0.4$	$3 \times tRCIP/7$	$3 \times tRCIP/7+0.4$	nsec	
Input Data 4	tRIP4	$4 \times tRCIP/7-0.4$	$4 \times tRCIP/7$	$4 \times tRCIP/7+0.4$	nsec	
Input Data 5	tRIP3	$5 \times tRCIP/7-0.4$	$5 \times tRCIP/7$	$5 \times tRCIP/7+0.4$	nsec	
Input Data 6	tRIP2	$6 \times tRCIP/7-0.4$	$6 \times tRCIP/7$	$6 \times tRCIP/7+0.4$	nsec	



$$* V_{diff} = (RXz+) - (RXz-), \dots, (RXCLK+) - (RXCLK-)$$

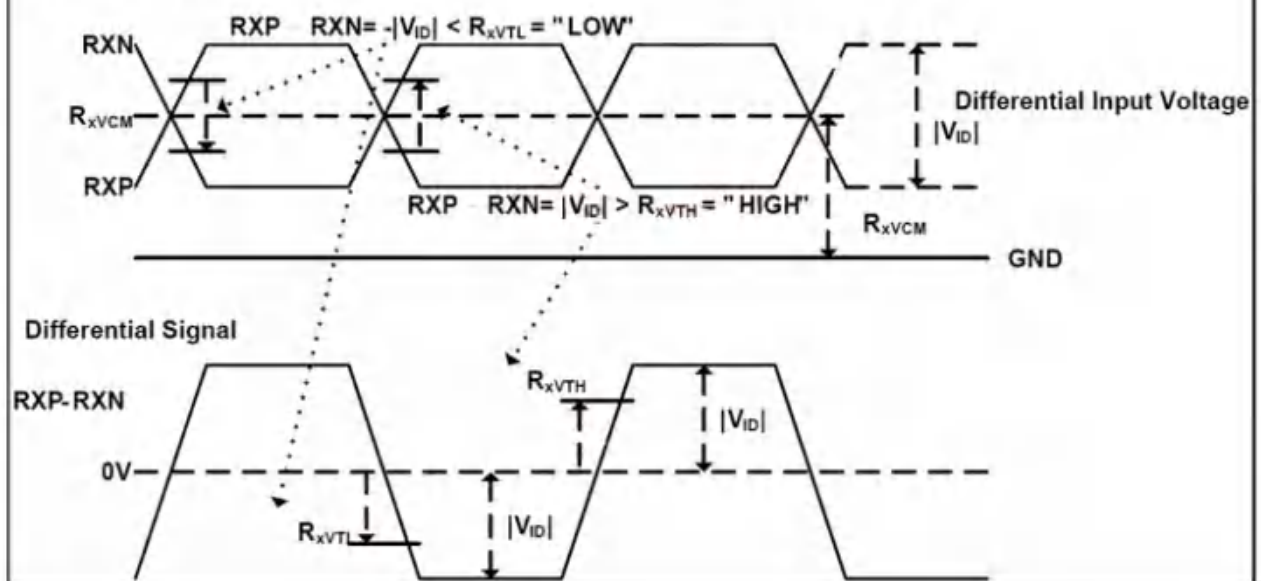
5.2 LVDS Rx Interface Timing Parameter

LVDS Receiver Differential Input (DC Characteristics)

< Table 9-2. LVDS Rx DC Characteristics >

Parameter	Symbol	Min	Typ	Max	Unit	Notes
Differential Input High Threshold Voltage	VTH	-	-	+100	mV	VCM=1.2V
Differential Input Low Threshold Voltage	VTL	-100	-	-	mV	
Differential Input Common Mode Voltage	VCM	0.7	1.2	1.6	V	
Differential Input Voltage	VID	100	-	600	mV	

Single-end Signals

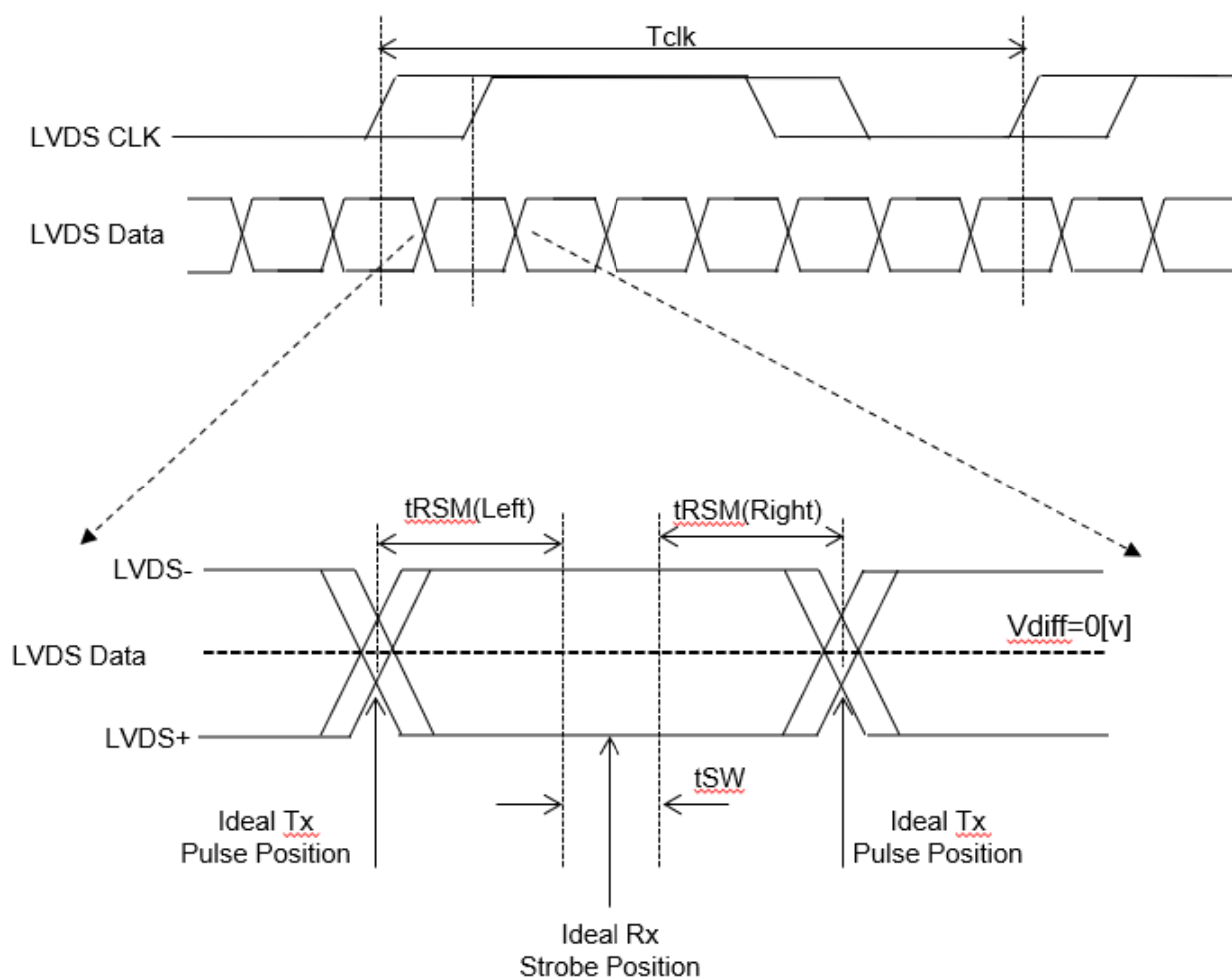


5.3 LVDS Rx Interface Timing Parameter

LVDS Receiver Differential Input (AC Characteristics)

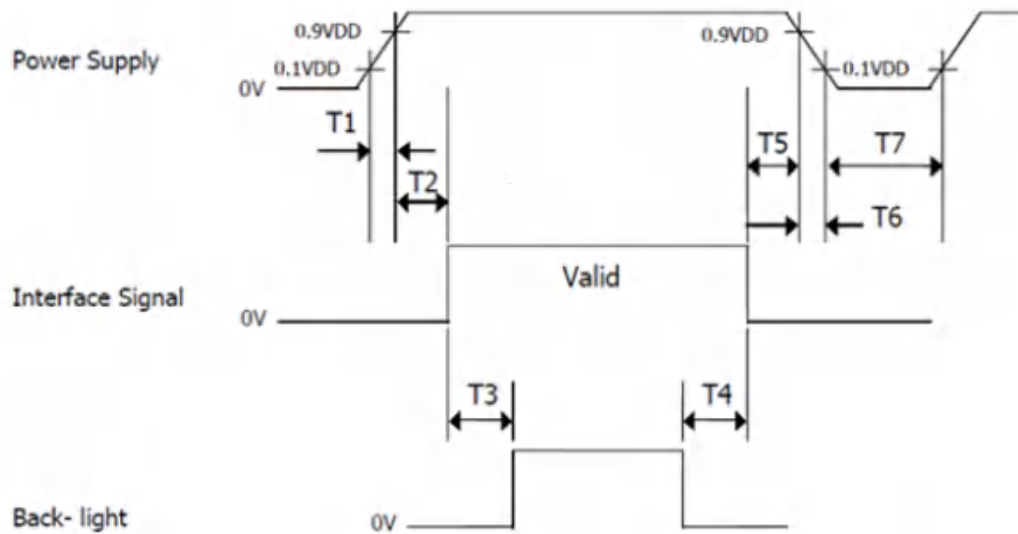
< Table 9-3. LVDS Rx AC Characteristics >

Parameter	Symbol	Min	Typ	Max	Unit	Notes
LVDS Strobe Width	t_{SW}	200	-	-	ps	$V_{cm}=1.2V$ $V_{ID} = 400$ mV @60MHz
LVDS Receiver Skew Margin	t_{RSM}	400	-	-	ps	



6.0 POWER SEQUENCE

To prevent a latch-up or DC operation of the LCD module, the power on/off sequence shall be as shown in below



Parameter	Values			Units
	Min	Typ	Max	
T1	0.5	-	10	ms
T2	0	-	50	ms
T3	200	-	-	ms
T4	200	-	-	ms
T5	-	-	-	ms
T6	-	-	-	ms
T7	1000	-	-	ms

Notes:

1. When the power supply VDD is 0V, keep the level of input signals on the low or keep high impedance.
2. Do not keep the interface signal high impedance when power is on. Back Light must be turn on after power for logic and interface signal are valid.

7.0 OPTICAL SPECIFICATIONS

7.1 Overview

The test of view angle range shall be measured in a dark room (ambient luminance $\leq 1\text{lux}$ and temperature = $25\pm 2^\circ\text{C}$) with the equipment of Luminance meter system (Goniometer system and TOPCON CS2000/CA310) and test unit shall be located at an approximate distance 50cm from the LCD surface at a viewing angle of θ and Φ equal to 0° . We refer to $\theta=0$ ($=\theta_3$) as the 3 o'clock direction (the "right"), $\theta=90$ ($=\theta_{12}$) as the 12 o'clock direction ("upward"), $\theta=180$ ($=\theta_9$) as the 9 o'clock direction ("left") and $\theta=270$ ($=\theta_6$) as the 6 o'clock direction ("bottom"). While scanning θ and/or Φ , the center of the measuring spot on the Display surface shall stay fixed. The luminance, color and uniformity (etc) should be tested by CS2000/CA310. The backlight should be operating for 10 minutes prior to measurement. VDD shall be $3.3 \pm 0.3\text{V}$ at 25°C . Optimum viewing angle direction is 6 o'clock

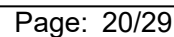
7.2 Optical Specifications

Parameter		Symbol	Condition	Min	Typ	Max	Unit	Remark
Response Time		Tr+Td	Ta= 25°C θ= 0°	-	30	35	ms	Note 6
Viewing Angle Range	Horizontal	θ3	CR> 10	80	85	-	Deg	Note 1
		θ9		80	85	-		
	Viewing	θ12		80	85	-		
		θ6		80	85	-		
Color Chromaticity		Wx	θ= 0°	-0.03	0.289	+0.03		Note 3
		Wy			0.325			
		Rx			0.638			
		Ry			0.347			
		Gx			0.335			
		Gy			0.610			
		Bx			0.129			
		By			0.064			
Contrast Ratio		CR	θ= 0°	600	800	-		Note 2
NTSC		CIE1931	θ= 0°	68	72		%	
Luminance uniformity		YU		75	-	-	%	

- Notes : 1. Viewing angle is the angle at which the contrast ratio is greater than 10. The viewing angles are determined for the horizontal or 3, 9 o'clock direction and the vertical or 6, 12 o'clock direction with respect to the optical axis which is normal to the LCD surface (see FIGURE 1).
2. Contrast measurements shall be made at viewing angle of $\theta = 0$ and at the center of the LCD surface. Luminance shall be measured with all pixels in the view field set first to white, then to the dark (black) state. (see FIGURE 5) Luminance Contrast Ratio (CR) is defined mathematically.

$$CR = \frac{\text{Luminance when displaying a white raster}}{\text{Luminance when displaying a black raster}}$$

3. Luminance of white is defined as luminance values of center of the LCD surface. Luminance shall be measured with all pixels in the view field set first to white. This measurement shall be taken at the locations shown in FIGURE 2 for a total of the measurements per display. The luminance is measured by CS2000/CA310 when the LED current is set at 60mA.
4. The color chromaticity coordinates specified in Table 5. shall be calculated from the spectral data measured with all pixels first in red, green, blue and white. Measurements shall be made at the center of the panel.
5. The electro-optical response time measurements shall be made as FIGURE 3 by switching the "data" input signal ON and OFF. The times needed for the luminance to change from 10% to 90% is T_r , and 90% to 10% is T_d .



9.0 Reliability Test

NO	Item	Conditions	Remark
1	High Temperature Storage test(HTS)	60°C, 48hrs, Non-operationa	(1) (2)
2	Low Temperature Storage test(LTS)	-20°C,48hrs,Non-operational	
3	High Temperature Operating test(HTO)	50C, 48hrs, operational	
4	Low Temperature Operating test(LTO)	0°C,48hrs, operational	
5	Thermal Humidity Storage test(THS)	50°C/80%RH,48hrs, Non-operational	
6	Thermal Cycle Storage test(TST)	-20 °C ↔ 60 °C (0.5 hr), 60%±3%RH, 100 cycle Non-operational	
7	ESD	Air Voltage:±8Kv ClassB Contact Voltage:±6KV ClassB R:330ΩC:150pF	

Notes :

1. The fixture must be hard enough , so that the FOB would not be twisted or bent.
2. Self- recovery and restart recovery is allowed. No hardware failures.

10.0 Packing Form

TBD

11.0 General Precaution

11.1 Use Restriction

This product is not authorized for use in life supporting systems, aircraft navigation control systems, military systems and any other application where performance failure could be life-threatening or otherwise catastrophic.

11.2 Assembly Precaution

11.2.1 Please use the mounting hole on the module side in installing and do not bending or wrenching LCD in assembling. And please do not drop, bend or twist LCD module in handling.

11.2.2 Please design display housing in accordance with the following guide lines.

11.2.2.1 Housing case must be destined carefully so as not to put stresses on LCD all sides and not to wrench module. The stresses may cause non-uniformity even if there is no non-uniformity statically.

11.2.2.2 Keep sufficient clearance between LCD module back surface and housing when the LCD module is mounted. The clearance in the design is recommended taking into account the tolerance of LCD module thickness and mounting structure height on the housing.

11.2.3 Please do not push or scratch LCD panel surface with any-thing hard. And do not soil LCD panel surface by touching with bare hands. (Polarizer film, surface of LCD panel is easy to be flawed.)

11.2.4 Please do not press any parts on the rear side such as source IC, gate IC, and FPC during handling LCD module. If pressing rear part is unavoidable, handle the LCD module with care not to damage them.

11.2.5 Please wipe out LCD panel surface with absorbent cotton or soft cloth in case of it being soiled.

11.2.6 Please wipe out drops of adhesives like saliva and water on LCD panel surface immediately. They might damage to cause panel surface variation and color change.

11.2.7 Please do not take a LCD module to pieces and reconstruct it. Resolving and reconstructing modules may cause them not to work well.

11.3 Disassembling or Modification

Do not disassemble or modify the module. It may damage sensitive parts inside LCD module, and may cause scratches or dust on the display. Manufacturer does not warrant the module, if customers disassemble or modify the module.

11.4 Breakage of LCD Panel

11.4.1 If LCD panel is broken and liquid crystal spills out, do not ingest or inhale liquid crystal, and do not contact liquid crystal with skin.

11.4.2 If liquid crystal contacts mouth or eyes, rinse out with water immediately.

11.4.3 If liquid crystal contacts skin or cloths, wash it off immediately with alcohol and rinse thoroughly with water.

11.4.4 Handle carefully with chips of glass that may cause injury, when the glass is broken.

11.5 Absolute Maximum Ratings and Power Protection Circuit

11.5.1 Do not exceed the absolute maximum rating values, such as the supply voltage variation, input voltage variation, variation in parts' parameters, environmental temperature, etc., otherwise LCD module may be damaged.

11.5.2 Please do not leave LCD module in the environment of high humidity and high temperature for a long time.

11.5.3 It's recommended employing protection circuit for power supply.

11.6 Operation

11.6.1 Do not touch, push or rub the polarizer with anything harder than HB pencil lead. Use fingerstalls of soft gloves in order to keep clean display quality, when persons handle the LCD module for incoming inspection or assembly.

11.6.2 When the surface is dusty, please wipe gently with absorbent cotton or other soft material.

11.6.3 Wipe off saliva or water drops as soon as possible. If saliva or water drops contact with polarizer for a long time, they may cause deformation or color fading.

11.6.4 When cleaning the adhesives, please use absorbent cotton wetted with a little petroleum benzene or other adequate solvent.

11.7 Static Electricity

11.7.1 Protection film must remove very slowly from the surface of LCD module to prevent from electrostatic occurrence.

11.7.2 Because LCD module uses CMOS-IC on TFT-LCD panel, it is very weak to electrostatic discharge. Please be careful with electrostatic discharge.

11.7.3 Persons who handle the module should be grounded through adequate methods.

11.8 Disposal

When disposing LCD module, obey the local environmental regulations.

11.9 OTHERS

11.9.1 A strong incident light into LCD panel might cause display characteristics' changing inferior because of polarizer film, color filter, and other materials becoming inferior.

Please do not expose LCD module direct sunlight and strong UV rays.

11.9.2 Please pay attention to a panel side of LCD module not to contact with other materials in preserving it alone.

11.9.3 For the packaging box, please pay attention to the followings:

11.9.3.1 Packaging box and inner case for LCD are designed to protect the LCDs from the damage or scratching during transportation. Please do not open except picking LCDs up from the box.

11.9.3.2 Please do not pile them up more than 6 boxes. (They are not designed so.) And please do not turn over.

11.9.3.3 Please handle packaging box with care not to give them sudden shock and vibrations. And also please do not throw them up.

11.9.3.4 Packing box and inner case for LCDs are made of cardboard. So please pay attention not to get them wet. (Such like keeping them in high humidity or wet place can occur getting them wet.)

12.0 检测标准（IIS）

SUBJECT 主题：DCE133FH0-B00-500N 总成显示屏检验标准		EFFECTIVE DATE 生效日期：2026.08.18		NO 编码：WIA-PZ-009	
		PAGE OF 页次：第1页 共5页		REV 版本：V1.0	

修改登记表						
页码	1	2	3	4	5	
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日期	修订页	修订状态	修订内容	修订人	审核	批准
2026.08.18		V1.0	新制定	ZHU		

会签记录		
批准	审核	制定

SUBJECT 主题：DCE133FH0-B00-500N 总成显示屏检验标准	EFFECTIVE DATE 生效日期：2026.08.18	NO 编码：WIA-PZ-009
	PAGE OF 页次：第2页 共 5 页	REV 版本：V1.0

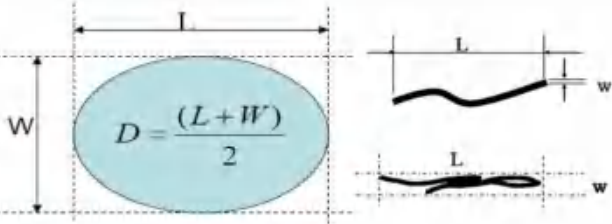
检验环境条件	A. 温度：23±2 ℃；	
	B. 湿度 60±10%RH.	
	C. 外观检查光照：300~700Lux.	
	D. 点亮检查光照：150~250Lux.	
检测条件：	A. 目视距离：35~50 cm。	
	B. ADS 产品：面向 Panel 与垂直线成 45° 内°。	
	C. TN 产品：面向 Panel 与垂直线 10° 内	
检查时注意事项：	A.检查时必须配戴好防静电手环。	
	B.检查时必须配戴好防静电手套。	
	C.LCD 屏幕检查时，必需关掉电源后 FPC 进行插拔。	

抽样计划:MIL—STD—105E 的一般检验水准Ⅱ级，正常检验、随机抽样。

接收质量限（AQL）为：CR（致命缺陷）= 0；MA(重缺陷)=0.65；MI(轻缺陷)= 1.5

检验人员视力推荐≥5.0（小数记录法≥1.0）

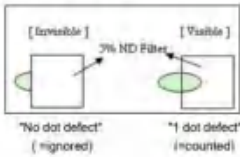
代码	代码含义	代码	代码含义
L	长度（mm）	N	数目（PCS）
W	宽度（mm）	S	面积（mm ² ）
D	直径（mm）	DS	距离（mm）



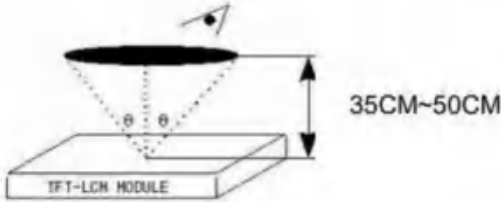
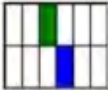
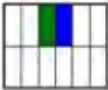
※Note 3) For pixel defect, dot means a sub-pixel. Dot defects should be larger than half size of a sub-pixel. Dot which is invisible through 5% ND filter or smaller than 1/2 of sub-pixel size will not counted as "1 dot" defect.

图 1. 点状异物

图 2. 线状异物

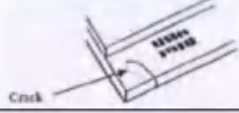
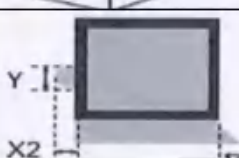
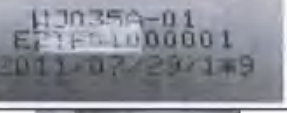


[2 adjacent dots defect]



检验项目	不良内容描述	判定标准	缺陷判定			测试仪器/治具	适用范围
			CR	MA	MI		

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ALL	Stain		可擦拭 OK					ALL	
PNL 相关	Crack		不允许		✓			目视/ 菲林卡	出货 状态为 Single Cell / FOG / MDL / TPM / 产品 适用
	Side Chipping		不影响功能和组 装 OK			✓			
	Corner Chipping		不影响功能和组 装 OK			✓			
	Burr		不影响功能和组 装 OK			✓			
	凹点/异 物/气泡/ 鱼眼/油 墨点	$D \leq 0.3\text{mm}$ 忽略不计 $0.3\text{mm} < D \leq 0.5\text{mm}$	$N \leq 4$			✓			
	线性/划 伤/毛丝	$W \leq 0.1\text{mm}$ $L \leq 4\text{mm}$ 忽略不计 $0.1\text{mm} < W \leq 0.2\text{mm}$ $L \leq 4\text{mm}$	$N \leq 3$			✓			
FPC/ PCB 相关	短路/断 路		不允许		✓			出货 状态为 FOG / MDL / TPM / 产品 适用	
	元器件		元器件缺失不允 许			✓			
Backli ght 相 关	条码/喷 码/ 标识		关键信息可适别 OK			✓		出货 状态为 MDL / TPM / 产品 适用	
	划伤		limit Sample/无感 划伤 OK			✓			
	污渍		可擦拭 OK			✓			

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电性 检查	像素缺陷 Pixel Defects	像素亮点 Bright Dot	$N \leq 1$			√	目视/ 菲林卡
		像素暗点 Dark Dot	$N \leq 4$				
		像素亮暗点 Bright + Dark Dot	$N \leq 5$				
		2 Adjacent Sub Pixel Defect	$N \leq 2$				
	异物/凹痕/气泡 /斑点//外来物 质/异物亮点 ForeignMaterial /Dent/ Bubble/ Spots//Extraneous Substances/Dot	$D \leq 0.3\text{mm}$	忽略不计			√	目视/ 滤光片 ND5%
		$0.3\text{mm} < D \leq 0.5\text{mm}$	$N \leq 4$				
		$W \leq 0.1\text{mm}$ $L \leq 4\text{mm}$	忽略不计			√	
		$0.1\text{mm} < W \leq 0.2\text{ mm}$ $L \leq 4\text{mm}$	$N \leq 3$				
	Mura (亮斑、白斑、蓝斑)	按ND5%过滤，距离30CM，停留3秒，不可见OK， 可见NG				√	目视 / 滤光片 ND5%
	密集点	密集小碎点按5% NDFilter(距表面 $2 \pm 0.5\text{cm}$)) (遮盖可见NG; 遮盖不可见 判定OK)				√	
	偏光片气泡	边缘气泡未超出BM区的1/2为OK, AA区气 泡按点大小判定				√	目视/ 量尺
	成品弯曲度	用0.5mm塞规判定				√	塞规片
	膜拱	可签订限度样品管控				√	限度样 样品
	残影	先播放第一张黑白棋盘图，停留60秒，60 秒后切换到20%全灰图片，如不能从全灰 图片中看出残影即为合格. 当出现残影 时与客户签样样机对比, 严重程度不超 过签样样机且30秒后残影消失可为接 受。				√	目视/ 滤光片 ND5%
	边缘光晕 (压黄)	在规定的测试照度条件下, 使用 5%ND Filter 去遮, 不可见为 OK测试方法: 眼 睛到 ND flter 距离: 40cm, ND filter 到产品的距离为3~5cm				√	
	色温偏差	使用色彩分析仪对产品中心位置进行测 量, 测量出白色画面XY坐标值, 在规格书 内可接受。				√	CA310
	屏闪	屏显示忽亮忽暗或跳 动	不允许		√		目测/ 治具

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	显示不全	在显示文件时文件内容显示不完整	不允许		√				
	花屏	屏显示出现不同颜色条纹或方格及马赛克现象	不允许		√				
	失真	显示颜色失真	不允许		√				
	白屏	屏幕整个显示区域为白色	不允许		√				
	黑屏	屏幕整个显示区域为黑色	不允许		√				
	亮线	显示屏出现横线/竖线	不允许		√				
	漏液晶	液晶面板因密封不严或封口未封住，使液晶外漏	不允许		√				
	显示反向	测试画面与正常显示画面相反	不允许		√				