

LCD MODULE SPECIFICATION

Model:	ALL-UEED080FH-RB39-A003A
Version:	V1.0
Date:	2025.11.06

Customer Confirmation

Approved by	Notes

Please return one of the copies of the specification with your signature to us within two weeks after you receive this document. If it is not returned, we will assume that you agree to the entire contents of this specification document.

VIEWE Confirmation

Prepared by	Reviewed by	Approved by

REVISION HISTORY

Revision	Date	Contents of Revision Change	Remarks
V1.0	2025.11.06	Preliminary release	

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1. GENERAL INFORMATION

Item	Specification	Unit	Remark
Pixel Driving element	IPS TFT	-	-
Screen Size	8.0	Inch	Diagonal
Resolution	1200(W)*3(RGB)*1920(H)	Dots	-
Module Power Consumption	0.18	Watt	Reflective Mode
	3.071		Transmissive Mode
Active Area	108(W)*172.8(H)	mm	-
Pixel pitch (W*H)	0.09(W)*0.09(H)	mm	-
Module Size (W*H*D)	132.6(W)*202.6(H)*4.98(D)	mm	
Driver IC	HX8279D*2 / ER88477A*2	-	
Interface Mode	MIPI 4lane	-	
Display mode	Normally Black	-	
Luminance	7%*Surrounding illumination	cd/m ²	Reflective Mode
	369+7%*Surrounding illumination	cd/m ²	Transmissive Mode
Viewing Direction	ALL	O'clock	-
Display Color	16.7M	Colors	24bits
LED life time	30,000 Hours	-	

2. ABSOLUTE MAXIMUM RATINGS

Item	Symbol	Min.	Max.	Unit	Remark
Power supply voltage	VDD	-0.3	6	V	Note1
LED forward current	I _F	-0.001	115	mA	For Total
LED Reverse Voltage	V _R	-	26.1	V	For Total
Operating temperature	T _{op}	-20	70	°C	Note1,2
Storage temperature	T _{st}	-30	80	°C	Note1,2
Humidity	H _{st}	10	90	%RH	Note1,3

(Ta=+25°C,GND=0V)

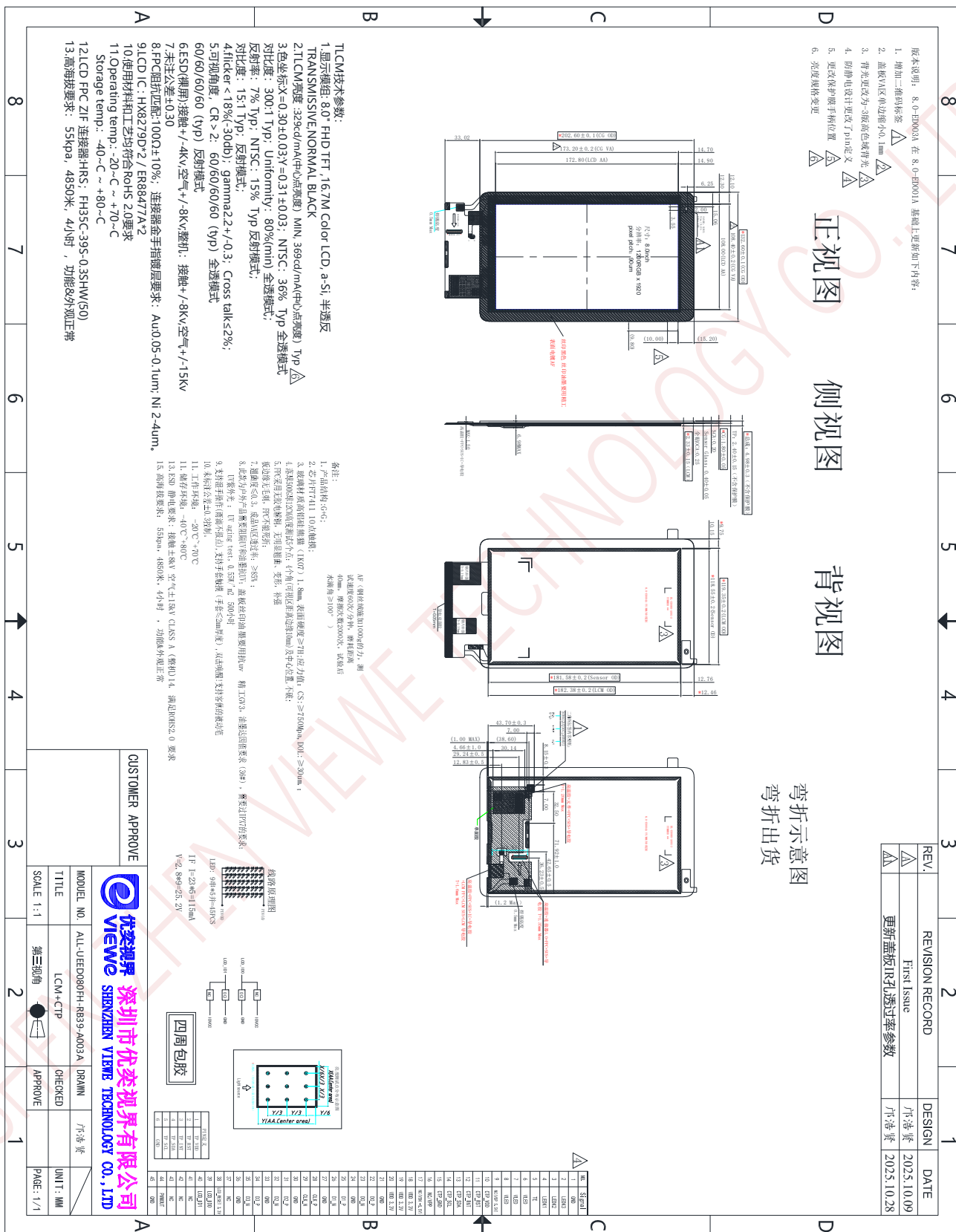
Note1:If the module exceeds the absolute maximum ratings, it may be damaged permanently. Also if the module operates with the absolute maximum ratings for a long time, the reliability may drop.

Note2: In case of temperature below 0°C,the response time of liquid crystal (LC) becomes slower and the color of panel darker than normal one.

Note3: Temp. ≤ 60°C , 90% RH MAX.

Temp. > 60°C , Absolute humidity shall be less than 90% RH.

3. MECHANICAL DRAWING



4. I/O CONNECTION

Pin No.	Symbol	Description
1	GND	Ground
2	FB3	LED Current FB3
3	FB2	LED Current FB2
4	FB1	LED Current FB1
5	NC	NC
6	VLED	LED Power
7	VLED	LED Power
8	VLED	LED Power
9	NC	NO CONNECT
10	CTP_VDD 2.8V	TP Power supply
11	CTP_RST 1.8V	Reset signal for TP
12	CTP_INT 1.8V	Interrupt signal for TP
13	CTP_SDA 1.8V	I2C date signal for TP
14	CTP_SCL 1.8V	I2C Clk signal for TP
15	CTP_GND	Ground
16	NC/VPP	NC
17	NC	NO CONNECT
18	VDD (3.3V)	Logic , interface ,power IC power supply. 2.5V to 3.3V
19	VDD (3.3V)	Logic , interface ,power IC power supply. 2.5V to 3.3V
20	VDD (3.3V)	Logic , interface ,power IC power supply. 2.5V to 3.3V
21	GND	Ground
22	D0_P	MIPI Positive data signal (+)

23	D0_N	MIPI Negative data signal (-)
24	GND	Ground
25	D1_P	MIPI Positive data signal (+)
26	D1_N	MIPI Negative data signal (-)
27	GND	Ground
28	CLK_P	MIPI Positive data signal (+)
29	CLK_N	MIPI Negative data signal (-)
30	GND	Ground
31	D2_P	MIPI Positive data signal (+)
32	D2_N	MIPI Negative data signal (-)
33	GND	Ground
34	D3_P	MIPI Positive data signal (+)
35	D3_N	MIPI Negative data signal (-)
36	GND	Ground
37	NC	NC
38	LCD_RESET 3.3V	Reset signal for LCM
39	LCD_ID0	ID PIN
40	LCD_ID1	ID PIN
41	NC	NC
42	NC	NC
43	NC	NC
44	PWMOUT	PWM OUT
45	GND	Ground

5. ELECTRICAL CHARACTERISTICS

5.1 TFT-LCD Panel Driving Section

Item	Symbol	Min.	Typ.	Max.	Unit	Remark
Power Supply Voltage	VDD	2.5	3.3	3.3	V	-
Power Supply Current	I _{VDD}	-	113	-	mA	Note1
Logic Input High Voltage	V _{IH}	0.7VDD	-	VDD	V	-
Logic Input Low Voltage	V _{IL}	0	-	0.3VDD	V	-
Panel Power Consumption	P _{VDD}	-	0.372	-	Watt	Note1
Module Power Consumption	P _{LCM}	-	3.27	-	Watt	Note1,2

(Ta=+25°C,GND=0V)

Note1:Measurement Conditions (Video Mode): Full Screen Red Pattern,VDD=3.3V,60Hz Refresh.

Note2: P_{LCM}= P_{VDD}+ P_{BL}, About P_{BL} information, inference to 5.2 Back Light Driving Section.

5.2 Back Light Driving Section

Item	Symbol	Min.	Typ.	Max.	Unit	Remark
Forward Voltage	V _F	-	25.2	-	V	Note1
Forward Current	I _F	-	115	-	mA	Note1
Backlight Power consumption	P _{BL}	-	2.898	-	Watt	Note1
LED Quantity		45			PCS	

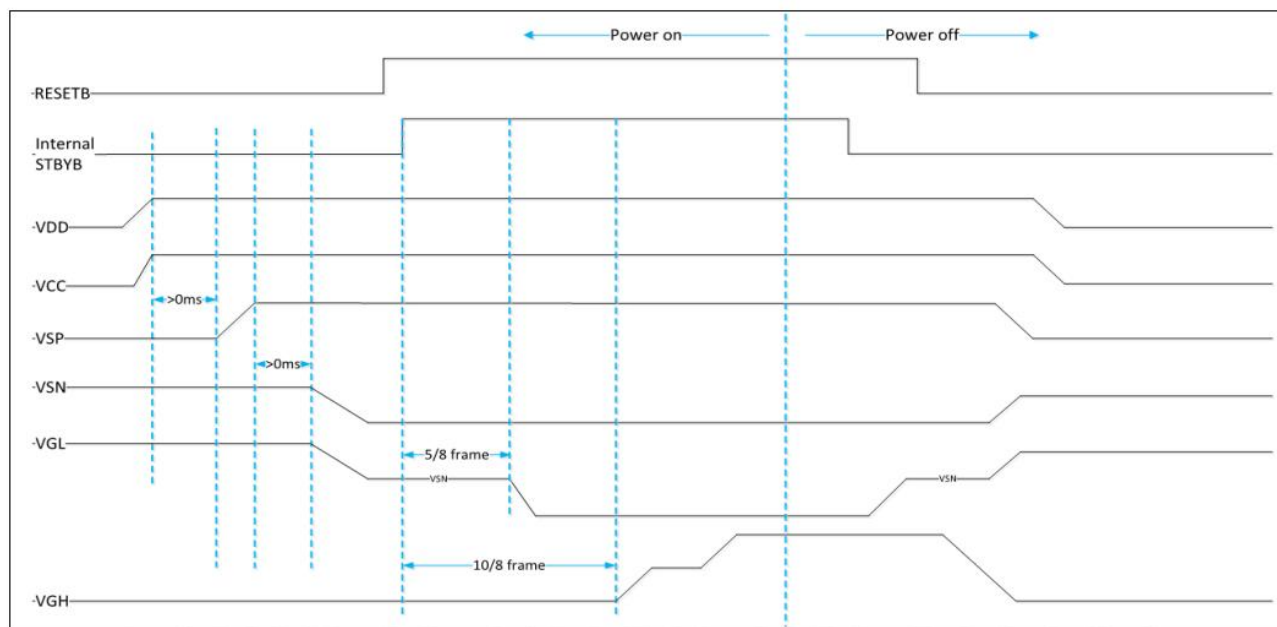
(Ta=+25°C,GND=0V)

Note1: The LED driving condition is defined for each LED module。

For each LED : I_F=20mA,V_F=3V(Typ.)/3.3V(Max.),Ta=25°C 。

Note2:The “LED life time” is defined as the module brightness decrease to 50% of original brightness at I_{LED}=20mA(Per Led). The LED life time could be decreased if operating I_{LED} is larger than 20mA

5.3 Power On/Off Sequence

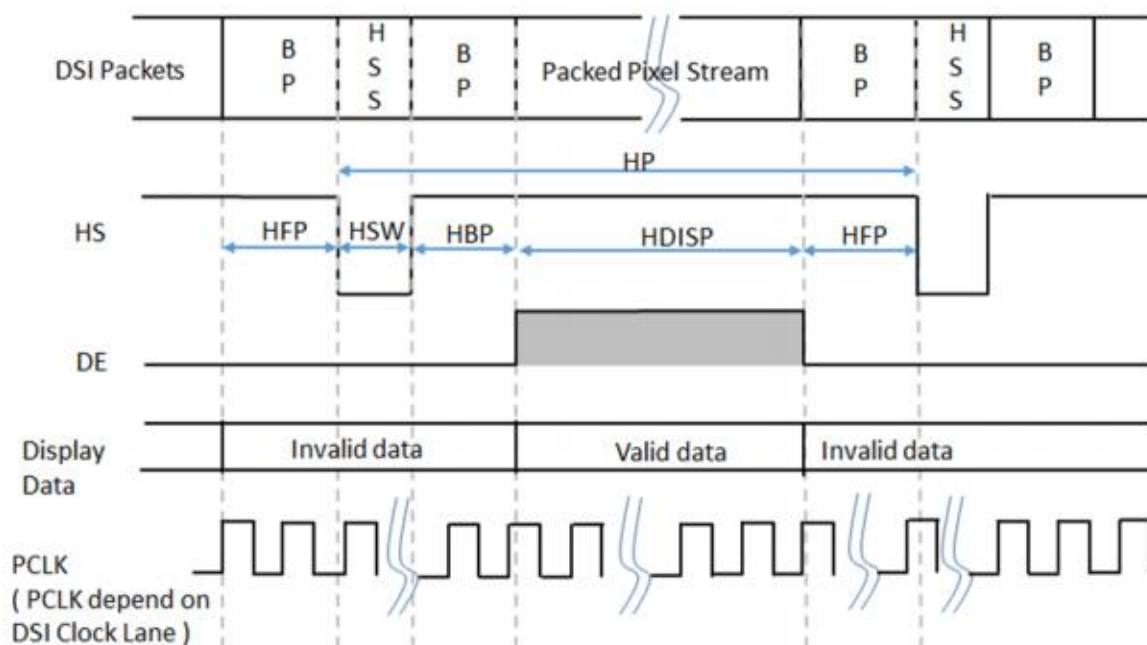


5.4 Timing Characteristics

(Ta=+25°C,GND=0V)

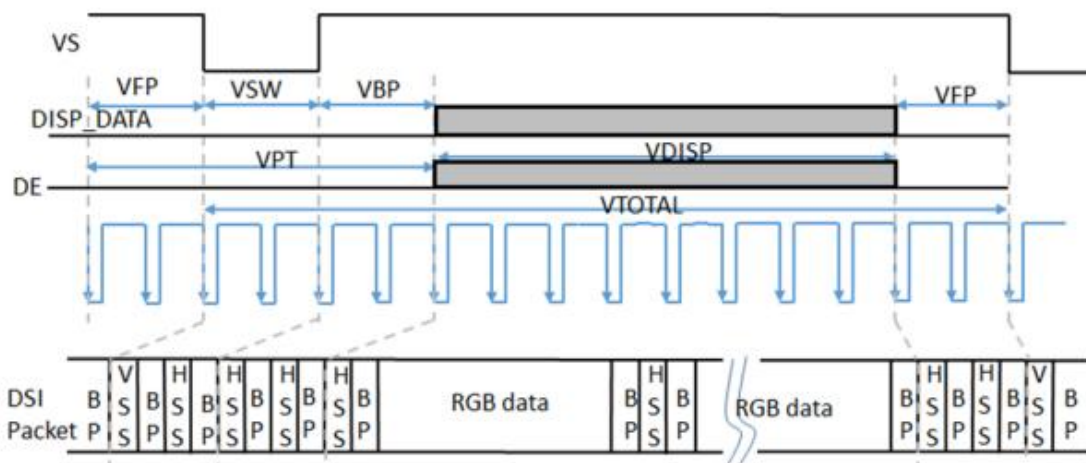
Condition: Ta =25°C, Resolution = 1200(RGB)*1920

Parameter	Symbol	Conditions	Specification			Unit	Notes
			Min.	Typ.	Max.		
Horizontal total	Htotal		1264		2047	DCK	
HS low pulse width	HSW		2			DCK	
Horizontal back porch	HBP		30			DCK	
Horizontal front porch	HFP		32			DCK	
Horizontal data start point		HSW+HBP	32			DCK	
Horizontal blanking period	HBLK	HSW+HBP+HFP	64			DCK	
Horizontal active area	HDISP			1200		DCK	



Condition: Ta=25°C, Resolution= 1200(RGB)*1920

Parameter	Symbol	Conditions	Specification			Unit	Notes
			Min.	Typ.	Max.		
Vertical Total	V _{TOTAL}		1952		2047	Line	
Vertical low pulse width	VSW		2			Line	1
Vertical front porch	VFP		16			Line	
Vertical back porch	VBP		14			Line	1
Vertical data start point		VSW+VBP	2			Line	1
Vertical blanking period	VPT	VSW+VBP+VFP	32			Line	
Vertical active area		VDISP		1920		Line	
Vertical Frame rate	VFR			60		Hz	



5.5 Timing Diagram

4.5.1 High Speed Mode - Clock Timings

Signal	Symbol	Parameter	Specification			Unit	Notes
			Min.	Typ.	Max.		
CLK P/N	$2 \times UI_{INST}$	Double UI instantaneous	2		25	nS	
CLK P/N	UI_{INSTA} , UI_{INSTB}	UI instantaneous Half	1		12.5	nS	1

Note 1 : $UI = UI_{INSTA} = UI_{INSTB}$

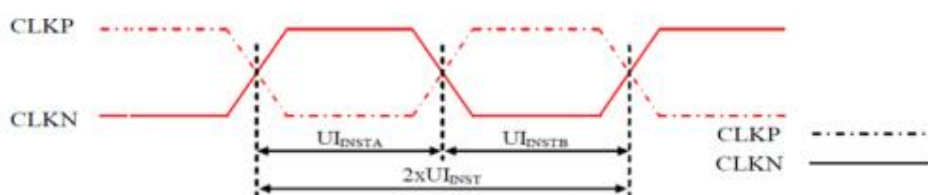


Figure 4.5.1 - 1 Clock Timing

4.5.2 High Speed Mode - Clock / Data Timings

Signal	Symbol	Parameter	Specification			Unit	Notes
			Min.	Typ.	Max.		
Dn P/N (n=0,1,2 and 3)	tDS	Data to Clock Setup time	$0.3 \times UI$			UI	
	tDH	Clock to Data Hold time	$0.3 \times UI$			UI	

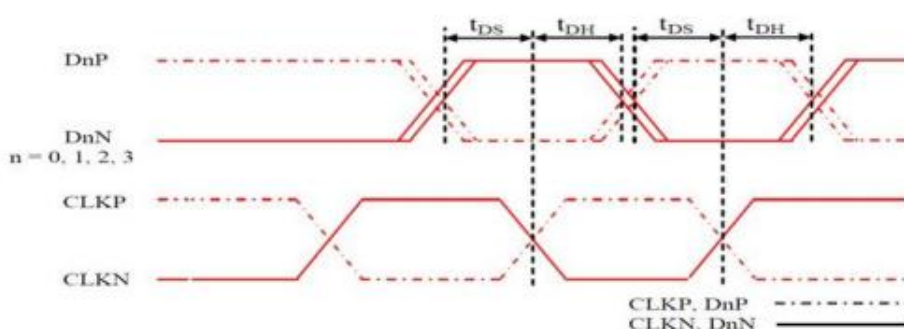


Figure 4.5.2 - 1 DSI Clock / Data Timings

6. OPTICAL CHARACTERISTICS

6.1 Optical Specification (Reflective mode)

Parameter 参数	Symbol 符号	Condi on 条件	Min. 最小值	Typ. 典型值	Max. 最大值	Unit 单位	Remark 备注
White Reflectance (with Polarizer)	Rw (%)	$\theta = 0$	6.5	7	-	%	
Contrast Ratio	C/R	$\theta = 0^\circ$	12	15	-	-	
NTSC Ratio	S	$\theta = 0^\circ$	15	20	-	%	
Response Time	$T_R + T_F$	25 °C	-	25	35	ms	设备: DMS $T_R + T_F$ W90%/B10%
Viewing Angle	θ_L	C/R>2	-	60	-	Degree	设备: DMS Source pad Down CR>2
	θ_R		-	60	-		
	θ_U		-	60	-		
	θ_D		-	60	-		

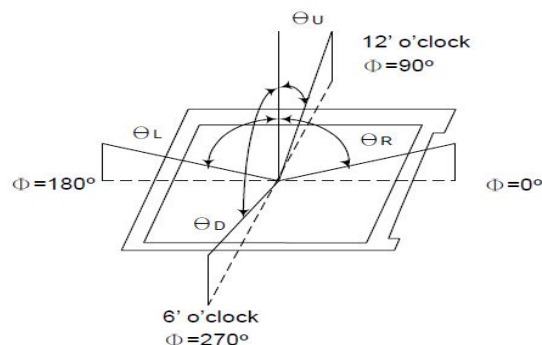
6.2 Optical Specification (Transmittance mode)

Parameter 参数	Symbol 符号	Condition 条件	Min. 最小值	Typ. 典型值	Max. 最大值	Unit 单位	Remark 备注
Contrast Ratio	C/R	$\theta = 0^\circ$	250	300	-	-	SR-UL1 R
Color Gamut (NTSC)	S	$\theta = 0^\circ$	35	40		%	
Luminance	L	$\theta = 0^\circ$	329	369	-	cd/m ²	
Luminance uniformity	U _W	$\theta = 0^\circ$	80	-	-	%	Note(1)
Response Time	T _R + T _F	25 °C	-	25	35	ms	Note(2)
White Color Coordination	W _X	$\theta = 0^\circ$	-+0.04	0.310	+0.04	(x,y)	Note(3)
	W _Y			0.327			
Viewing Angle CR>2	θ L	-	-	60	-	Degree	设备: DMS source pad down
	θ R		-	60	-		
	θ U		-	60	-		
	θ D		-	60	-		

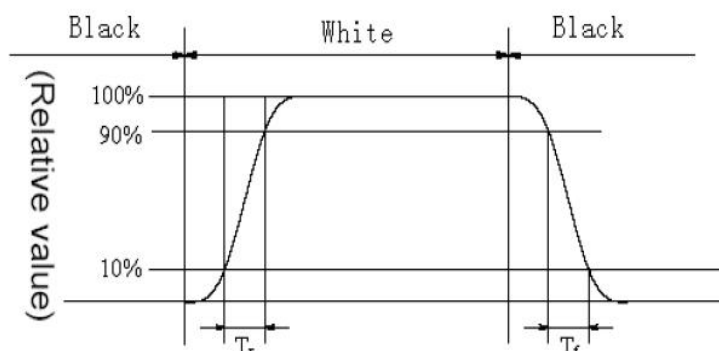
Test Conditions:

1. VDD=3.3V, I_F=20mA (Backlight current), the ambient temperature is +25°C.
2. The test systems refer to Note 8.

Note1: Definition of Viewing Angle: The viewing angle range that the CR>10

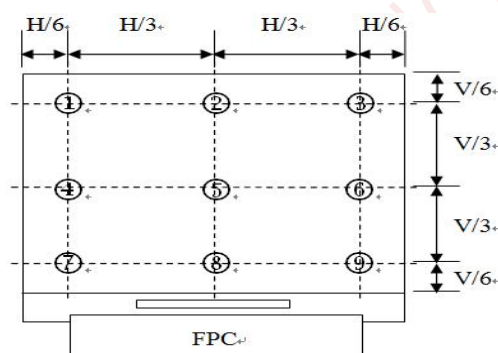


Note2: Definition of Response time: Sum of T_R and T_F



Note 3: Definition of Luminance Uniformity: Active area is divided into 9 measuring areas, every measuring point is placed at the center of each measuring area.

$$\text{Luminance Uniformity} = \frac{\text{Min Luminance of white among 9-points}}{\text{Max Luminance of white among 9-points}} \times 100\%$$



Note4: Definition of Contrast Ratio (CR): measured at the center point of panel

$$\text{Contrast ratio (CR)} = \frac{\text{Luminance measured when LCD on the "White" state}}{\text{Luminance measured when LCD on the "Black" state}}$$

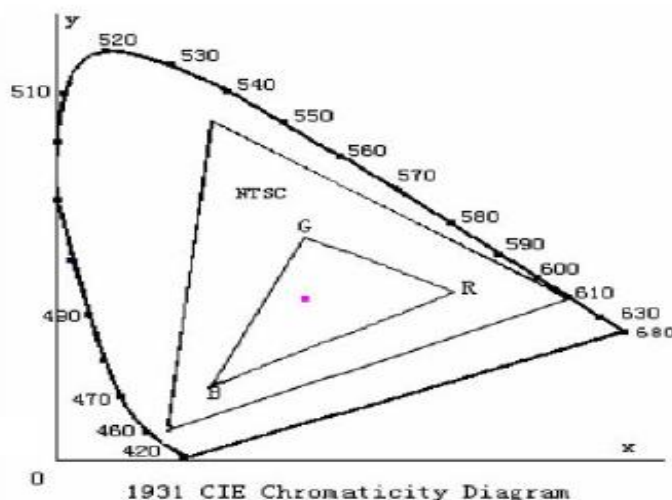
Note 5: Definition of Luminance: Center Luminance of white is defined as luminance values of 1 point average across the LCD surface.

Note 6: Definition of Color Chromaticity (CIE 1931)

Color coordinates of white & red, green, blue measured at center point of LCD.

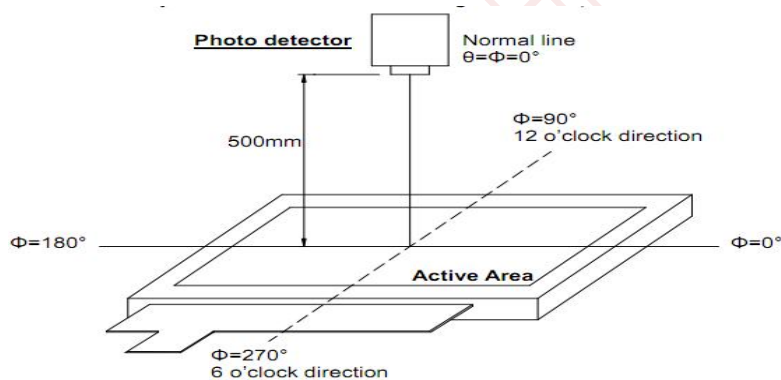
Note 7: Definition of NTSC ratio:

$$\text{NTSC ratio} = \frac{\text{Area of RGB triangle}}{\text{Area of NTSC triangle}}$$



Note 8: Definition of optical measurement system.

The optical characteristics should be measured in dark room. After 5 minutes operation, the optical properties are measured at the center point of the LCD screen. (Response time is measured by Photo detector TOPCON BM-7, Field of view: 1° /Height: 500mm.)



7.RELIABILITY

Item	Test Condition	Remark
High Temperature Storage	Ta =+80°C / 240Hours	Note1,2,3
Low Temperature Storage	Ta =-30°C / 240Hours	Note1,2,3
High Temperature Operating	Ta =+70°C / 240Hours	Note1,2,3
Low Temperature Operating	Ta =-20°C / 240Hours	Note1,2,3
Temperature Cycle storage Test	-20°C/30min Δ+70°C /30min for 30cycles,Transfer time less than 5min	Note2,3
Thermal humidity storage Test	60°C x 90%RH / 240Hours	Note2,3
Package Vibration Test	Frequency: 10Hz~55Hz,Amplitude:1.5mm, 1 hrs for each direction of X, Y, Z	Note2
Packing shock test	Drop to the ground from 60cm height, 1 corner, 3 edges, 6 surfaces.	Note2

Inspection after Test :

Note1:Ta is the ambient temperature of samples.

Note 2: In the standard condition, there shall be no practical problem that may affect the display function. After the reliability test, the product only guarantees operation, but doesn't guarantee all the cosmetic specification.

Note 3: Before cosmetic and function tests , the product must have enough recovery time, at least 2 hours at room temperature.

Note 4: In case of malfunction defect caused by ESD damage, if it would be recovered to normal state after resetting, it would be judged as a good part.

8. Specification of Quality Assurance:

8-1. Purpose

This standard for Quality Assurance should affirm the quality of LCD module products to supply to purchaser by VIEWE.

8-2. Standard for Quality Test

a. Inspection:

Before delivering, the supplier should take the following tests, and affirm the quality of product.

b. Electro-Optical Characteristics:

According to the individual specification to test the product.

c. Test of Appearance Characteristics:

According to the individual specification to test the product.

d. Test of Reliability Characteristics:

According to the definition of reliability on the specification for testing products.

e. Delivery Test :

Before delivering, the supplier should take the delivery test.

(i) Test method: According to ISO2859-1. General Inspection Level II take a single time.

(ii) The defects classify of AQL as following :

Major defect: AQL = 0.65

Minor defect: AQL = 2.5

Total defects: AQL = 2.5

8-3. Non- conforming Analysis & Deal With Manners

a. Non- conforming Analysis :

(i) Purchaser should supply the detail data of non- conforming sample and the non- conforming.

(ii) After accepting the detail data from purchaser, the analysis of non- conforming should be finished in two weeks.

(iii) If supplier can not finish analysis on time, must announce purchaser before 3 days.

b. Disposition of non- conforming:

(i) If find any product defect of supplier during assembly time, supplier must change the good product for every defect after recognition.

(ii) Both supplier and customer should analyze the reason and discuss the disposition of non- conforming when the reason of nonconforming is not sure.

8-4. Agreement items

Both sides should discuss together when the following problems happen.

- There is any problem of standard of quality assurance, and both sides should think that must be modified.
- There is any argument item which does not record in the standard of quality assurance.
- Any other special problem.

8-5. Standard of The Product Appearance Test

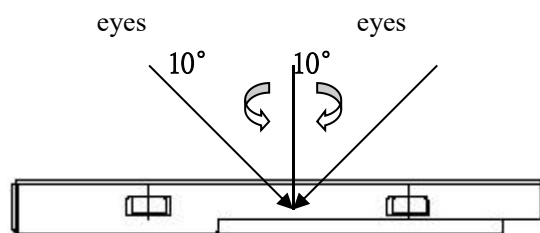
a. Manner of appearance test:

(i) The test must be under $20W \times 2$ or $40W$ fluorescent light, and the distance of view must be at $30 \pm 5cm$.

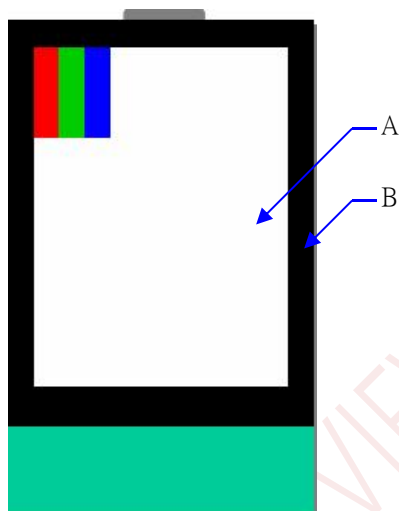
(ii) When test the model of transmissive product must add the reflective plate.

(iii) The test direction is base on around 10° of vertical line.

(iii) Temperature: $25 \pm 5^\circ C$ Humidity: $60 \pm 10\% RH$



(iv) Definition of area :



A. Area: Viewing area.

B. Area: Out of viewing area.

(Outside viewing area)

b. Basic principle::

(i) It will accord to the AQL when the standard can not be described.

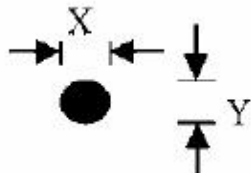
(ii) The sample of the lowest acceptable quality level must be discussed by both supplier and customer when any dispute happened.

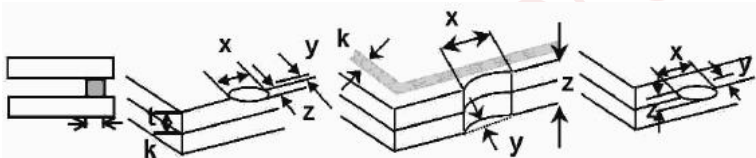
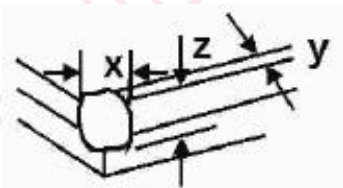
(iii) Must add new item on time when it is necessary.

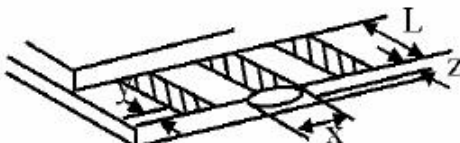
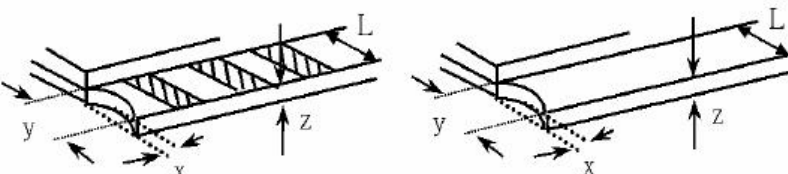
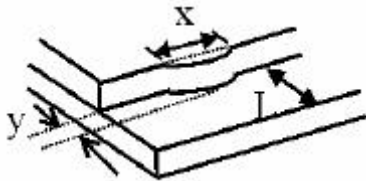
c. Standard of inspection : (Unit: mm)

8-6. Inspection specification

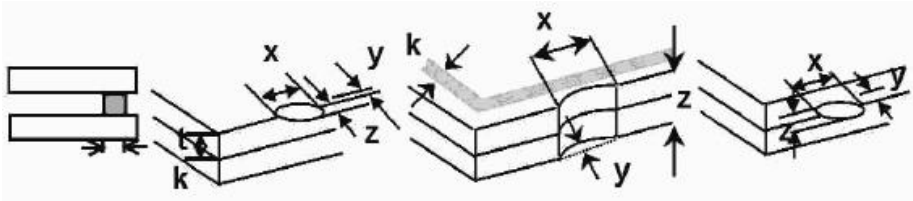
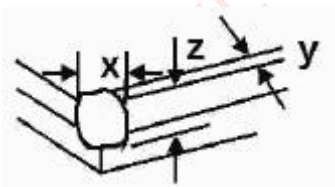
Defect out of viewing area can be neglected

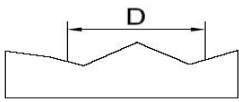
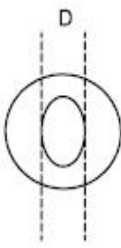
NO	Item	Criterion	AQL												
01	Electrical Testing	1.1 Missing vertical, horizontal segment, segment contrast defect. 1.2 Missing character, dot or icon. 1.3 Display malfunction. 1.4 No function or no display. 1.5 Current consumption exceeds product specifications. 1.6 LCD viewing angle defect. 1.7 Mixed product types. 1.8 Flicker	0.65												
02	Black or White spots or Bright spots or Color spots on LCD (Display only)	2.1 White and black or color spots on display $\leq 0.25\text{mm}$, no more than Five spots. 2.2 Densely spaced: No more than three spots within 3mm.	2.5												
03	LCD and Touch Panel black spots, white spots, contamination (non – display)	3.1 Round type: As following drawing $\Phi = (X+Y) / 2$  <table border="1"> <thead> <tr> <th>Size(mm)</th> <th>Acceptable Q'ty</th> </tr> </thead> <tbody> <tr> <td>$\Phi \leq 0.10$</td> <td>Accept no dense</td> </tr> <tr> <td>$0.10 < \Phi \leq 0.20$</td> <td>3</td> </tr> <tr> <td>$0.20 < \Phi \leq 0.25$</td> <td>2</td> </tr> <tr> <td>$0.25 < \Phi \leq 0.30$</td> <td>1</td> </tr> <tr> <td>$0.30 < \Phi$</td> <td>0</td> </tr> </tbody> </table> * Densely spaced: No more than two spots within 3mm.	Size(mm)	Acceptable Q'ty	$\Phi \leq 0.10$	Accept no dense	$0.10 < \Phi \leq 0.20$	3	$0.20 < \Phi \leq 0.25$	2	$0.25 < \Phi \leq 0.30$	1	$0.30 < \Phi$	0	2.5
		Size(mm)	Acceptable Q'ty												
$\Phi \leq 0.10$	Accept no dense														
$0.10 < \Phi \leq 0.20$	3														
$0.20 < \Phi \leq 0.25$	2														
$0.25 < \Phi \leq 0.30$	1														
$0.30 < \Phi$	0														
3.2 Line type: (As following drawing)  <table border="1"> <thead> <tr> <th>Length(mm)</th> <th>Width(mm)</th> <th>Acceptable Q'ty</th> </tr> </thead> <tbody> <tr> <td>---</td> <td>$W \leq 0.02$</td> <td>Accept no dense</td> </tr> <tr> <td>$L \leq 3.0$</td> <td>$0.02 < W \leq 0.05$</td> <td rowspan="2">2</td> </tr> <tr> <td>$L \leq 2.5$</td> <td>$0.03 < W \leq 0.15$</td> </tr> <tr> <td>---</td> <td>$0.15 < W$</td> <td>Rejection</td> </tr> </tbody> </table> * Densely spaced: No more than two lines within 3mm.	Length(mm)	Width(mm)	Acceptable Q'ty	---	$W \leq 0.02$	Accept no dense	$L \leq 3.0$	$0.02 < W \leq 0.05$	2	$L \leq 2.5$	$0.03 < W \leq 0.15$	---	$0.15 < W$	Rejection	2.5
Length(mm)	Width(mm)	Acceptable Q'ty													
---	$W \leq 0.02$	Accept no dense													
$L \leq 3.0$	$0.02 < W \leq 0.05$	2													
$L \leq 2.5$	$0.03 < W \leq 0.15$														
---	$0.15 < W$	Rejection													

NO	Item	Criterion		AQL										
04	Polarizer bubbles	If bubbles are visible, judge using black spot specifications, not easy to find, must check in specify direction	Size Φ (mm)	Acceptable Q'ty	2.5									
			$\Phi \leq 0.20$	Accept no dense										
			$0.20 < \Phi \leq 0.50$	3										
			$0.50 < \Phi \leq 1.00$	2										
			$1.00 < \Phi$	0										
			Total Q'ty	3										
05	Scratches	Follow NO.3 -2 Line Type.												
06	Chipped glass	Symbols: x: Chip length y: Chip width z: Chip thickness k: Seal width t: Glass thickness a: LCD side length L: Electrode pad length 6.1 General glass chip: 6.1.1 Chip on panel surface and crack between panels :				2.5								
		<table><tr><td>z: Chip thickness</td><td>y: Chip width</td><td>x: Chip length</td></tr><tr><td>$Z \leq 1/2t$</td><td>Not over viewing are</td><td>$x \leq 1/8a$</td></tr><tr><td>$1/2t < z \leq 2t$</td><td>Not exceed 1/3k</td><td>$x \leq 1/8a$</td></tr></table>	z: Chip thickness	y: Chip width	x: Chip length		$Z \leq 1/2t$	Not over viewing are	$x \leq 1/8a$	$1/2t < z \leq 2t$	Not exceed 1/3k	$x \leq 1/8a$		
		z: Chip thickness	y: Chip width	x: Chip length										
		$Z \leq 1/2t$	Not over viewing are	$x \leq 1/8a$										
		$1/2t < z \leq 2t$	Not exceed 1/3k	$x \leq 1/8a$										
		⊙ Unit: mm												
		⊙ If there are 2 or more chips, x is the total length of each chip												
		6.1.2 Corner crack :												
														
		<table><tr><td>z: Chip thickness</td><td>y: Chip width</td><td>x: Chip length</td></tr><tr><td>$Z \leq 1/2t$</td><td>Not over viewing area</td><td>$x \leq 1/8a$</td></tr><tr><td>$1/2t < z \leq 2t$</td><td>Not exceed1/3k</td><td>$x \leq 1/8a$</td></tr></table>	z: Chip thickness	y: Chip width	x: Chip length		$Z \leq 1/2t$	Not over viewing area	$x \leq 1/8a$	$1/2t < z \leq 2t$	Not exceed1/3k	$x \leq 1/8a$		
z: Chip thickness	y: Chip width	x: Chip length												
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⊙ Unit: mm														
⊙ If there are 2 or more chips, x is the total length of each chip														

NO	Item	Criterion	AQL																
07	Glass crack	Symbols: x: Chip length y: Chip width z: Chip thickness k: Seal width t: Glass thickness a: LCD side length L: Electrode pad length 7.2 Protrusion over terminal : 7.2.1 Chip on electrode pad :  <table><tr><td>y: Chip width</td><td>x: Chip length</td><td>z: Chip thickness</td></tr><tr><td>$y \leq 0.5\text{mm}$</td><td>$x \leq 1/8a$</td><td>$0 < z \leq t$</td></tr></table> 7.2.2 Non-conductive portion :  <table><tr><td>y: Chip width</td><td>x: Chip length</td><td>z: Chip thickness</td></tr><tr><td>$y \leq L$</td><td>$x \leq 1/8a$</td><td>$0 < z \leq t$</td></tr></table> ⊙ If there chipped area touches the ITO terminal, over 2/3 of the ITO must remain and be inspected according to electrode terminal specifications. ⊙ If the product will be heat sealed by the customer, the alignment mark must not be damaged. 7.2.3 Substrate protuberance and internal crack  <table><tr><td>y: width</td><td>x: length</td></tr><tr><td>$y \leq 1/3L$</td><td>$X \leq a$</td></tr></table>	y: Chip width	x: Chip length	z: Chip thickness	$y \leq 0.5\text{mm}$	$x \leq 1/8a$	$0 < z \leq t$	y: Chip width	x: Chip length	z: Chip thickness	$y \leq L$	$x \leq 1/8a$	$0 < z \leq t$	y: width	x: length	$y \leq 1/3L$	$X \leq a$	2.5
		y: Chip width	x: Chip length	z: Chip thickness															
		$y \leq 0.5\text{mm}$	$x \leq 1/8a$	$0 < z \leq t$															
		y: Chip width	x: Chip length	z: Chip thickness															
$y \leq L$	$x \leq 1/8a$	$0 < z \leq t$																	
y: width	x: length																		
$y \leq 1/3L$	$X \leq a$																		

NO	Item	Criterion	AQL
08	Cracked glass	The LCD with extensive crack is not acceptable.	2.5
09	Backlight elements	9.1 Illumination source flickers when lit.	2.5
		9.2 Spots or scratches that appear when lit must be judged. Using LCD spot, lines and contamination standards.	2.5
		9.3 Backlight doesn't light or color is wrong.	0.65
10	Bezel	Bezel must comply with product specifications.	2.5
11	PCB、COB	11.1 COB seal may not have pinholes larger than 0.2mm or contamination.	2.5
		11.2 COB seal surface may not have pinholes through to the IC.	2.5
		11.3 The height of the COB should not exceed the height indicated in the assembly diagram.	2.5
		11.4 There may not be more than 2mm of sealant outside the seal area on PCB. And there should be no more than three places.	0.65
		11.5 Parts on PCB must be the same as on the production characteristic chart, There should be no wrong parts, missing parts or excess parts.	0.65
		11.6 The jumper on the PCB should conform to the product characteristic chart.	
12	FPC	12.1 FPC terminal damage $\leq 1/2$ FPC terminal width and can not affect the function, we judge accept.	2.5
		12.2 FPC alignment hole damage $\leq 1/2$ alignment area and can not affect the function, we judge accept.	2.5
13	Soldering	13.1 No cold solder joints, missing solder connections, oxidation or icicle.	2.5
		13.2 No short circuits in components on PCB or FPC.	0.65

NO	Item	Criterion	AQL												
14	Touch Panel Chipped glass	Symbols : x: Chip length y: Chip width z: Chip thickness k: Seal width t: Glass thickness a: LCD side length L: Electrode pad length 14.1 General glass chip : 14.1.1 Chip on panel surface and crack between panels:  <table><tr><td>z: Chip thickness</td><td>y: Chip width</td><td>x: Chip length</td></tr><tr><td>$Z \leq t$</td><td>$\leq 1/2 k$ and not over viewing area</td><td>$x \leq 1/8a$</td></tr></table> ⊙ Unit: mm ⊙ If there are 2 or more chips, x is the total length of each chip 14.1.2 Corner crack:  <table><tr><td>z: Chip thickness</td><td>y: Chip width</td><td>x: Chip length</td></tr><tr><td>$z \leq t$</td><td>$\leq 1/2 k$ and not over viewing area</td><td>$x \leq 1/8a$</td></tr></table> ⊙ Unit: mm ⊙ If there are 2 or more chips, x is the total length of each chip	z: Chip thickness	y: Chip width	x: Chip length	$Z \leq t$	$\leq 1/2 k$ and not over viewing area	$x \leq 1/8a$	z: Chip thickness	y: Chip width	x: Chip length	$z \leq t$	$\leq 1/2 k$ and not over viewing area	$x \leq 1/8a$	2.5
z: Chip thickness	y: Chip width	x: Chip length													
$Z \leq t$	$\leq 1/2 k$ and not over viewing area	$x \leq 1/8a$													
z: Chip thickness	y: Chip width	x: Chip length													
$z \leq t$	$\leq 1/2 k$ and not over viewing area	$x \leq 1/8a$													

NO	Item	Criterion	AQL										
15	Touch Panel(Fish eye、dent and bubble on film)	<table><tr><th>SIZE(mm)</th><th>Acceptable Q'ty</th></tr><tr><td>$\Phi \leq 0.2$</td><td>Accept no dese</td></tr><tr><td>$0.2 < D \leq 0.4$</td><td>5</td></tr><tr><td>$0.4 < D \leq 0.5$</td><td>2</td></tr><tr><td>$0.5 < D$</td><td>0</td></tr></table>	SIZE(mm)	Acceptable Q'ty	$\Phi \leq 0.2$	Accept no dese	$0.2 < D \leq 0.4$	5	$0.4 < D \leq 0.5$	2	$0.5 < D$	0	2.5
		SIZE(mm)	Acceptable Q'ty										
		$\Phi \leq 0.2$	Accept no dese										
		$0.2 < D \leq 0.4$	5										
		$0.4 < D \leq 0.5$	2										
$0.5 < D$	0												
													
													
16	Touch Panel Newton ring	Newton ring dimension $\leq 1/2$ touch panel area and not affect font and line distortion ($\leq 2.5\%$), it is acceptable.	2.5										
17	Touch Panel Linearity	Less than 2.5% is acceptable.	2.5										
18	LCD Ripple	Touch the touch panel, can not see the LCD ripple. Pen: R 1.0mm silicon rubber. Operation Force: 80g	2.5										
19	General appearance	19.1 Pin type must match type in specification sheet.	0.65										
		19.2 LCD pin loose or missing pins.	0.65										
		19.3 Product packaging must the same as specified on packaging specification sheet.	0.65										
		19.4 Product dimension and structure must conform to product specification sheet.	0.65										

9. Handling Precaution :

9-1 Handling of LCM

- Don't give external shock.
- Don't apply excessive force on the surface.
- Liquid in LCD is hazardous substance. Must not lick and swallow. when the liquid is attach to your hand, skin, cloth etc. Wash it out thoroughly and immediately.
- Don't operate it above the absolute maximum rating.
- Don't disassemble the LCM.
- The operators should be grounded whenever he/she comes into contact with the module. Never touch any of the conductive parts such as the LSI pads, the copper leads on the PCB and the interface terminals with any parts of the human body.
- The modules should be kept in antistatic bags or other containers resistant to static for storage.
- The module is coated with a film to protect the display surface. Be care when peeling off this protective film since static electricity may be generated.

9-2 Storage

- Store in an ambient temperature of $25\pm 10^{\circ}\text{C}$, and in a relative humidity of $50\pm 10\%\text{RH}$. Don't expose to sunlight or fluorescent light.
- Storage in a clean environment, free from dust, active gas, and solvent.
- Store in anti-static electricity container.
- Store without any physical load.

9-3 Soldering

- Use only soldering irons with proper grounding and no leakage.
- Iron: No higher than $280\pm 10^{\circ}\text{C}$ and less than 3 sec during Hand soldering.
- Rewiring: no more than 2 times.

10. PACKAGE DRAWING

14. PACKING SPECIFICATIONS

14.1 INNER BOX SPECIFICATIONS

