POWERTIP TECH. CORP.

SPECIFICATIONS

CUSTOMER	:	CES008
SAMPLE CODE (Ver.)	:	PS320240WRM-002I01 (Ver.0)
MASS PRODUCTION CODE (Ver.)	:	PE320240WRM002IP1Q (Ver.0)
DRAWING NO. (Ver.)	:	PE-05011-005 (Ver.0)

Customer Approved

Date:

Approved	QC Confirmed	Designer
研發 2006-9-26. 黃永源	Q.A. DEPT. SEP 2 5. 2006 POWERTIP TECH CORP. 何國安 20060925	研發 95. 9. 25 張慶源 研發 2006-9-15. 陳建成

■ Approval For Specifications Only.

* This specification is subject to change without notice.

Please contact Powertip or it's representative before designing your product based on this specification.

☐ Approval For Specifications and Sample.

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RECORDS OF REVISION

Date	Ver.	Description	Page	Design by
2006/09/15	0	MASS PRODUCTION	-	Louis

Total : 23 Page

Contents

Note：For detailed information please refer to IC data sheet：RAIO --- RA8835P3N

1. SPECIFICATIONS

1.1 Features

Item	Standard Value
Display Type	320 * 240 Dots
LCD Type	STN, Negative, Transmissive
Driver Condition	LCD Module: 1/240 Duty, 1/15 Bias
Viewing Direction	6 O'clock
Backlight	LED B/L
Weight	250 g
Interface	Support 8080 MPU Parallel 8 Bits data bus
Controller IC	RAIO RA8835P3N
ROHS	THIS PRODUCT CONFORMS THE ROHS OF PTC Detail information please refer web side : http://www.powertip.com.tw/news/LatestNews.asp

1.2 Mechanical Specifications

Item	Standard Value	Unit
Outline Dimension	153.54 (L) * 120.24 (w) * 18.9(H)(Max)	mm
Viewing Area	120.14 (L) * 92.14 (w)	mm
Active Area	115.18 (L) *86.38 (w)	mm
Dot Size	0.34 (L) * 0.34 (w)	mm
Dot Pitch	0.36(L) * 0.36 (w)	mm

Note：For detailed information please refer to LCM drawing

1.3 Absolute Maximum Ratings

Item	Symbol	Condition	Min.	Max.	Unit
Power Supply Voltage	V_{DD}–V_{SS}	—	-0.3	+7.0	V
LCD Driver Supply Voltage	V_0 –V_{SS}	—	-0.3	+25.0	V
Input Voltage	V_{IN}	—	-0.3	V_{DD}+0.3	V
Operating Temperature	T_{OP}	—	-20	70	°C
Storage Temperature.	T_{ST}	—	-30	80	°C
Storage Humidity	H_D	Ta＜40 ℃	20	90	%RH

1.4 DC Electrical Characteristics

V_{DD} = 4.5V ~ 5.5 V，V_{SS} = 0V，Ta = 25℃

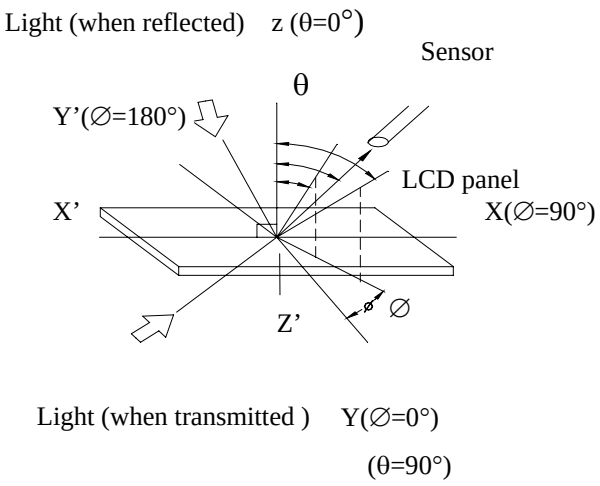
Item	Symbol	Condition	Min.	Typ.	Max.	Unit
Logic Supply Voltage	V_{DD}	—	4.5	5.0	5.5	V
“H” Input Voltage	V_{IH}	—	0.5 V_{DD}	—	V_{DD}	V
“L” Input Voltage	V_{IL}	—	V_{SS}	—	0.2 V_{DD}	V
“H” Output Voltage	V_{OH}	I_{OH}=-5.0mA	2.4	—	—	V
“L” Output Voltage	V_{OL}	I_{OL}=+5.0mA	—	—	VSS+0.4	V
Supply current	I_{DD}	V_{DD} = 5.0 V	-	40	80	mA
LCM driving voltage	V_{OP} (V_{OP+} ~V_{OP-})	-20°C	21.7	21.9	22.1	V
		25°C	21.2	21.5	21.8	
		70°C	20.2	20.4	20.6	

1.5 Optical Characteristics

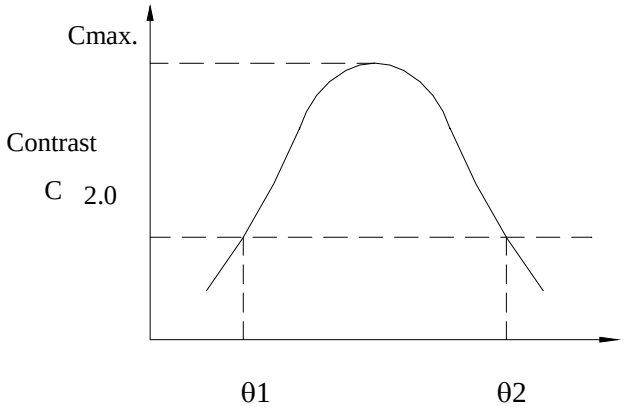
LCD Panel: 1/240 Duty, 1/15 Bias, V_{LCD} = 22.0 V, Ta = 25°C

Item	Symbol	Conditions	Min.	Typ.	Max.	Reference
View Angle	θ	C≥2.0, ∅ = 270°	-40°	-	40°	Notes 1 & 2
Contrast Ratio	C	θ = -5°, ∅ = 270°	2	4	-	Note 3
Response Time(rise)	tr	θ = -5°, ∅ = 270°	-	230 ms	345 ms	Note 4
Response Time(fall)	tf	θ = -5°, ∅ = 270°	-	130 ms	195 ms	

Note 1: Definition of angles θ and ∅



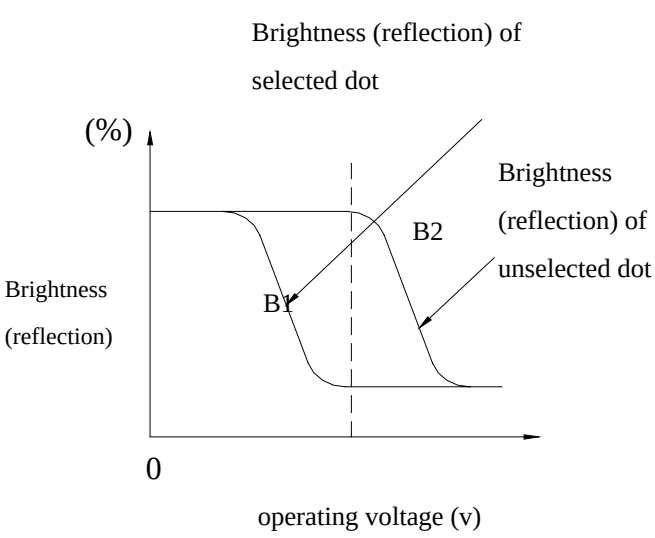
Note 2: Definition of viewing angles θ1 and θ2



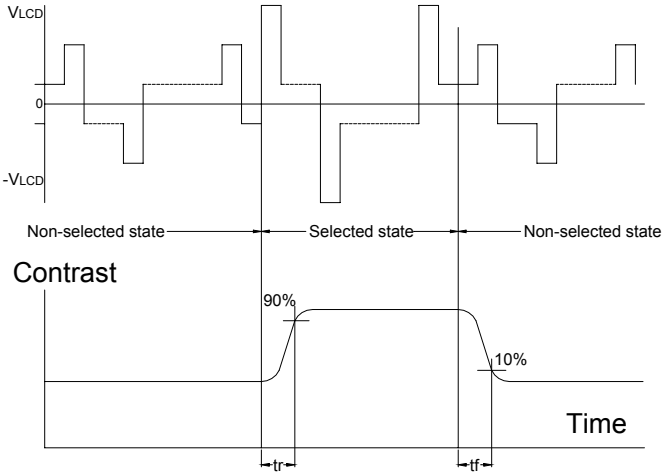
Note : Optimum viewing angle with the naked eye and viewing angle θ at Cmax. Above are not always the same

Note 3: Definition of contrast C

$$C = \frac{\text{Brightness (reflection) of unselected dot (B2)}}{\text{Brightness (reflection) of selected dot (B1)}}$$



Note 4: Definition of response time



Note: Measured with a transmissive LCD panel which is displayed 1 cm^2

V_{LCD} : Operating voltage f_{FRM} : Frame frequency

t_r : Response time (rise) t_f : Response time (fall)

1.6 Backlight Characteristics

LCD Module with LED Backlight

Maximum Ratings

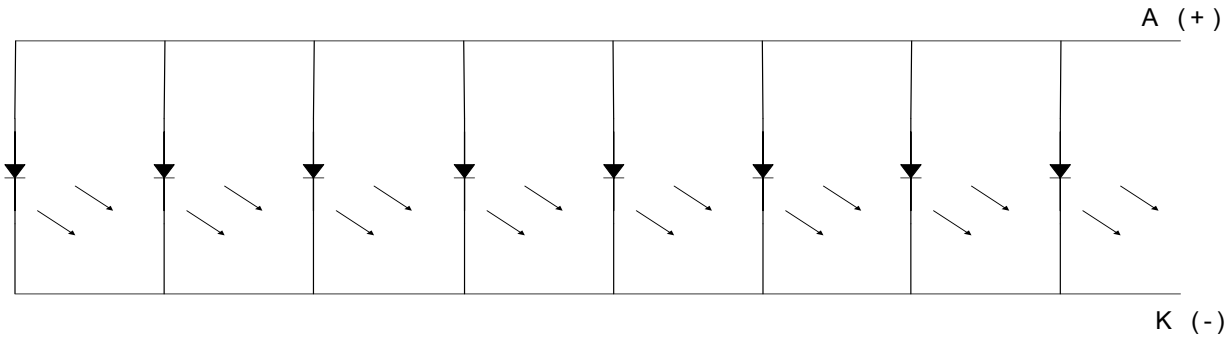
Item	Symbol	Conditions	Min.	Max.	Unit
Forward Current	I_F	Ta =25°C	-	160	mA
Reverse Voltage	V_R	Ta =25°C	-	5	V
Power Dissipation	P_D	Ta =25°C	-	0.67	W

Electrical / Optical Characteristics

Ta =25℃

Item	Symbol	Conditions	Min.	Typ.	Max.	Unit
Forward Voltage	VF	IF= 160 mA	-	3.7	4.2	V
Reverse Current	IR	VR= 5 V	-	-	10	μA
Average Brightness (with LCD) *1	IV	IF=160 mA	35	45	-	cd/m^2
CIE Color Coordinate (With LCD) *1	x	IF= 160 mA	0.31	0.34	0.37	-
	Y		0.32	0.35	0.38	
Uniformity *2	△B	IF= 160mA	70	-	-	%
Color	white					

*1. △B=B(min) / B(max) *100%



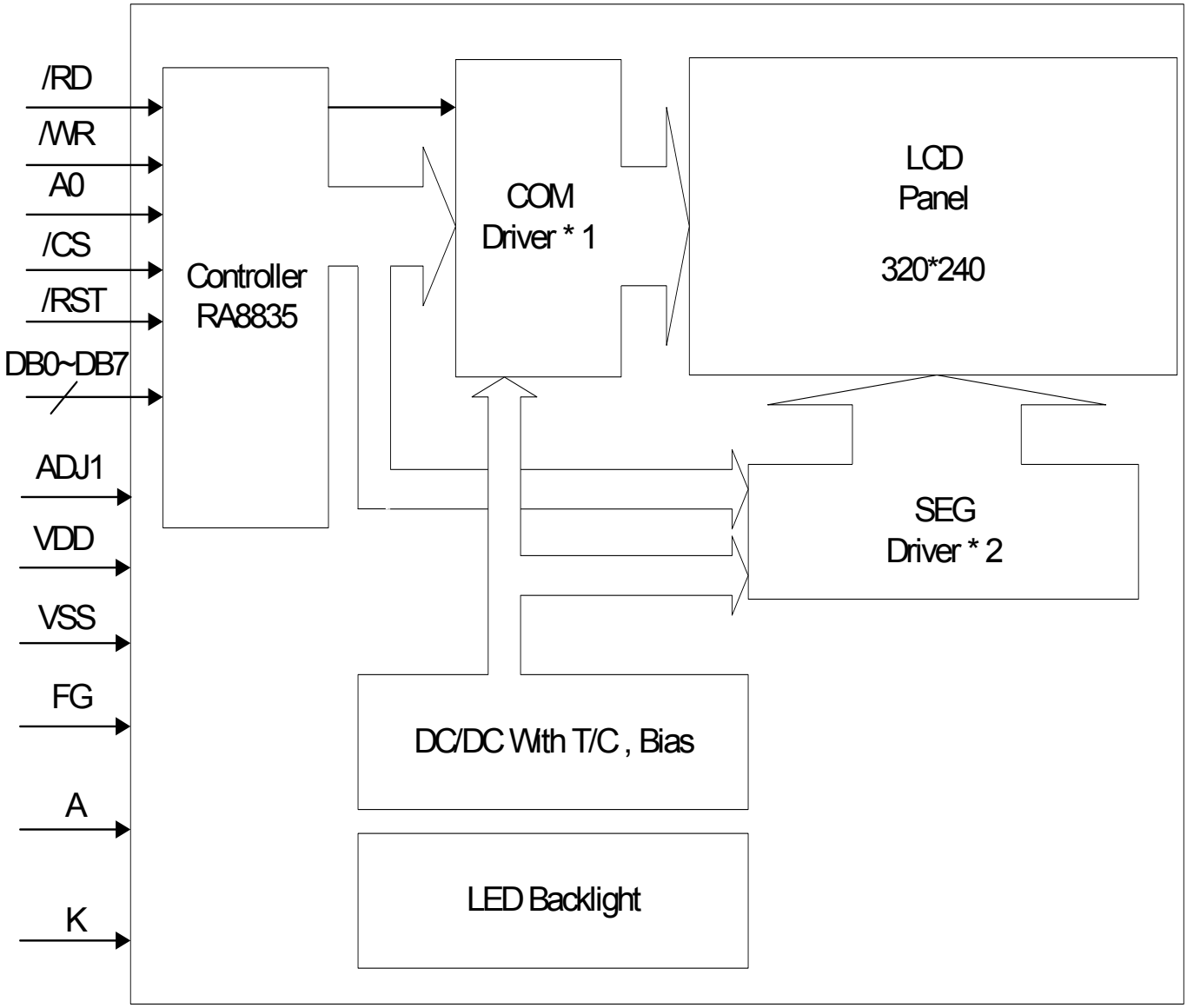
2. MODULE STRUCTURE

2.1 Counter Drawing

2.1.1 LCM Mechanical Diagram

* See Appendix

2.1.2 Block Diagram



2.2 Interface Pin Description

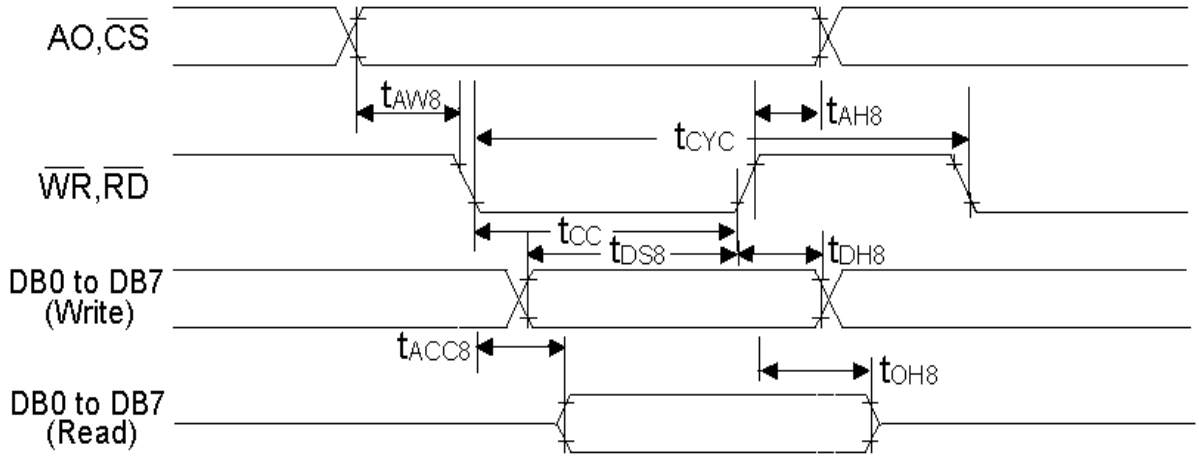
Pin No.	Symbol	Function
1	V_{SS}	Ground (V_{SS}=0 V)
2	V_{DD}	Power Supply (V_{DD} = 5.0 V)
3	ADJ1	Operating voltage for LCD . (Must be open)
4	/RD	Data read (read data from the module at "L")
5	/WR	Data write (write data to the module at "L")
6	A0	Command / Data read or write select (H : command L : data)
7	DB0	Data bus bit 0
8	DB1	Data bus bit 1
9	DB2	Data bus bit 2
10	DB3	Data bus bit 3
11	DB4	Data bus bit 4
12	DB5	Data bus bit 5
13	DB6	Data bus bit 6
14	DB7	Data bus bit 7
15	/CS	Chip select , active “L”
16	/RST	Reset input , active “L”
17	ADJ1	Operating voltage for LCD . (Must be open)
18	FG	Frame ground (connected to metal bezel)
19	NC	Not connection (Must be open)
20	NC	Not connection (Must be open)
	A	Power supply for LED backlight anode input.
	K	Power supply for LED backlight cathode input .

Built in positive voltage generator circuit and temperature compensation circuit.

Built in Timing mode for 8080 family.

2.3 Timing Characteristics

8080 family interface timing



Signal	Symbol	Parameter	Min	Max	Unit
AO , /CS	t_{AH8}	Address hold time	10	-	ns
	t_{AW8}	Address setup time	0	-	ns
/WR , /RD	t_{CYC8}	System cycle time	See note	-	ns
	t_{CC}	Strobe pulse width	120	-	ns
DB0 to DB7	t_{DS8}	Data setup time	120	-	ns
	t_{DH8}	Data hold time	5	-	ns
	t_{ACC8}	RD access time	-	50	ns
	t_{OH8}	Output disable time	10	50	ns

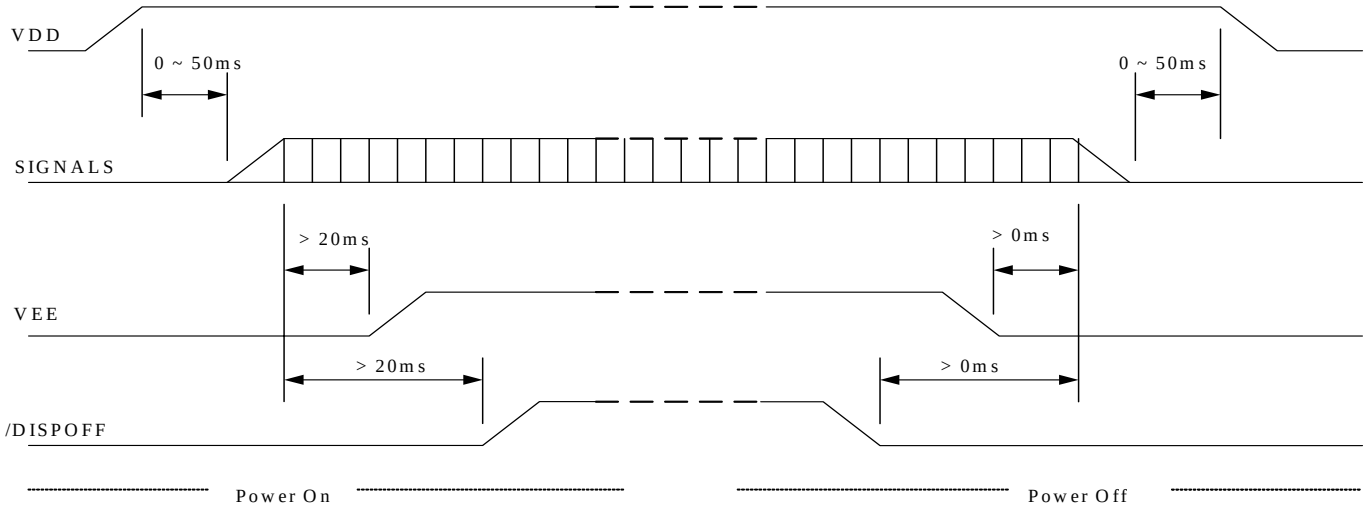
Note : For memory control and system control command:

$t_{CYC8}=2t_C+t_{CC}+t_{CEA}+75 > t_{ACV}+245$

For all other commands:

$t_{CYC8}=4t_C+t_{CC}+30$

Timing of power supply for graphic modules



2.4 Display Command

Class	Command	Code											Hex	Command description	Command read Parameters	
		RD	WR	A0	D7	D6	D5	D4	D3	D2	D1	D0			Number of bytes	Section
System control	SYSTEM SET	1	0	1	0	1	0	0	0	0	0	0	40	Initialize device and display	8	9.2.1
	SLEEP IN	1	0	1	0	1	0	1	0	0	1	1	53	Enter standby mode	0	9.2.2
Display control	DISP ON/OFF	1	0	1	0	1	0	1	1	0	0	D	58. 59	Enable and disable display and display flashing	1	9.3.1
	SCROLL	1	0	1	0	1	0	0	0	1	0	0	44	Set display start address and display regions	10	9.3.2
	CSRFORM	1	0	1	0	1	0	1	1	1	0	1	5D	Set cursor type	2	9.3.3
	CGRAM ADR	1	0	1	0	1	0	1	1	1	0	0	5C	Set start address of character generator RAM	2	9.3.6
	CSRDIR	1	0	1	0	1	0	0	1	1	CD 1	CD 0	4C to 4F	Set direction of cursor movement	0	9.3.4
	HDOT SCR	1	0	1	0	1	0	1	1	0	1	0	5A	Set horizontal scroll position	1	9.3.7
	OVLAY	1	0	1	0	1	0	1	1	0	1	1	5B	Set display overlay format	1	9.3.5
Drawing control	CSRW	1	0	1	0	1	0	0	0	1	1	0	46	Set cursor address	2	9-r1
	CSRR	1	0	1	0	1	0	0	0	1	1	1	47	Read cursor address	2	9.4.2
Memory control	MWRITE	1	0	1	0	1	0	0	0	0	1	0	42	Write to display memory	-	9.5.1
	MRAD	1	0	1	0	1	0	0	0	0	1	1	43	Read from display memory	-	9.5.2

Notes

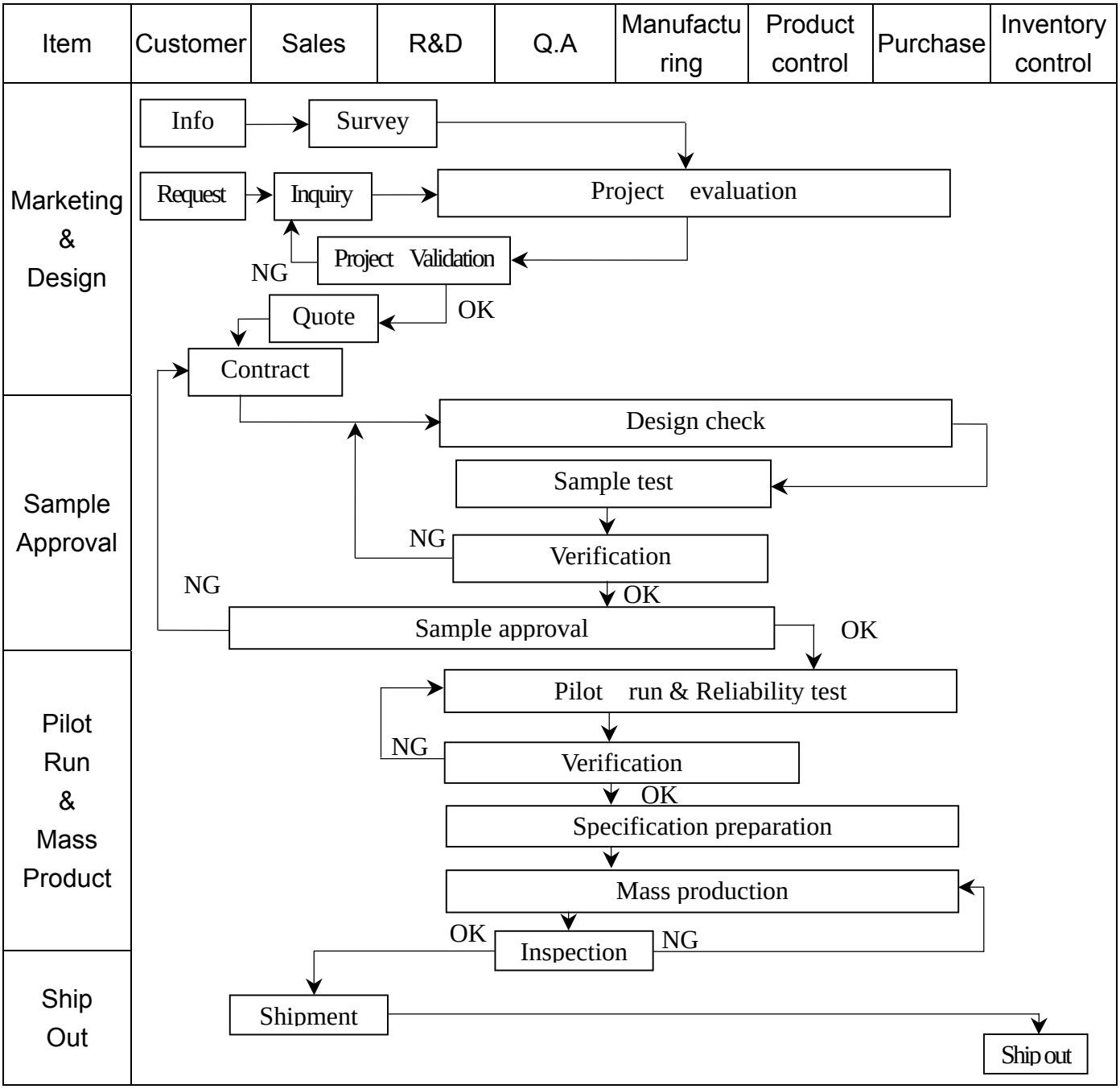
1. In general, the internal registers of the RA8835 series are modified as each command parameter is input. However, the microprocessor does not have to set all the parameters of a command and may send a new input will have been changed but the remaining parameter registers are unchanged.
   2-byte parameters (where two bytes are treated as 1 data item) are handled as follows:
   a. CSRW, CSRR: Each byte is processed individually. The microprocessor may read or write just the low byte of the cursor address.
   b. SYSTEM SET, SCROLL, CGRAM ADR: Both parameter bytes are processed together. If the command is changed after half of the parameter has been input, the single byte is ignored.
2. APL and APH are 2-byte parameters, but are treated as two 1-byte parameters.

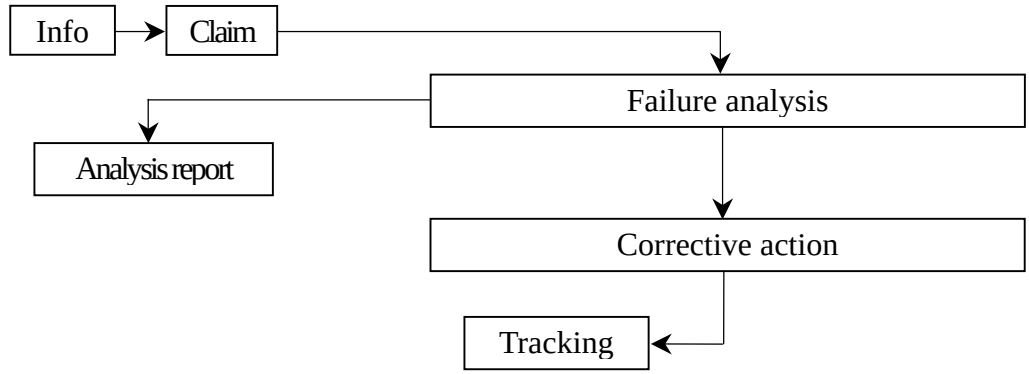
2.5 JUMPER(Setting different use)

JMS(1),JDS(1),JP70(2),JP71(1),JP72(1), JP73(1),JP74(2),JP75(1),JP76(2),JP77(2),JF Short

3. QUALITY ASSURANCE SYSTEM

3.1 Quality Assurance Flow Chart



Item	Customer	Sales	R&D	Q.A	Manufacturing	Product control	Purchase	Inventory control
Sales Service								
Q.A Activity	1. ISO 9001 Maintenance Activities 2. Process improvement proposal 3. Equipment calibration 4. Education And Training Activities 5. Standardization Management							

3.2 Inspection Specification

◆Scope : The document shall be applied to LCD Module for Monotype and Color STN(Ver. 01).

◆Inspection Standard : MIL-STD-105E Table Normal Inspection Single Sampling Level Ⅱ .

◆Equipment : Gauge、MIL-STD、Powertip Tester、Sample

◆Defect Level : Major Defect AQL：0.4 ; Minor Defect：AQL： 1.5 .

◆OUT Going Defect Level : Sampling .

◆Manner of appearance test :

(1). The test be under 20W×2 fluorescent light ' and distance of view must be at 30 cm.

(2). Standard of inspection： (Unit：mm)

(3). The test direction is base on about around 45° of vertical line. (Fig. 1)

(4). Definition of area . (Fig. 2)

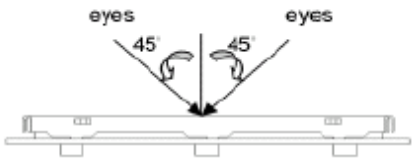


Fig.1

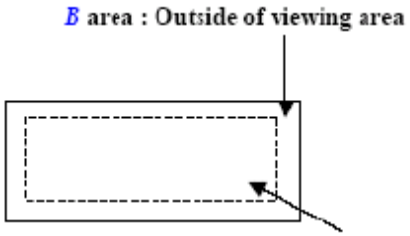


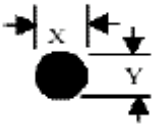
Fig. 2 A area : viewing area

◆ Specification:

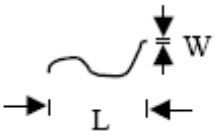
NO	Item	Criterion	level
01	Product condition	1.1 The part number is inconsistent with work order of Production.	Major
		1.2 Mixed production types.	Major
		1.3 Assembled in inverse direction.	Major
02	Quantity	2.1 The quantity is inconsistent with work order of production.	Major
03	Outline dimension	3.1 Product dimension and structure must conform to Structure diagram.	Major
04	Electrical Testing	4.1 Missing line character and icon.	Major
		4.2 No function or no display.	Major
		4.3 Output data is error.	Major
		4.4 LCD viewing angle defect.	Major
		4.5 Current consumption exceeds product specifications.	Major

◆Specification For Monotype and Color STN：　(Ver. 01)

<table>
<tr><th>NO</th><th>Item</th><th>Criterion</th><th>level</th></tr>
<tr><td>05</td><td>Black or white dot、scratch、contamination

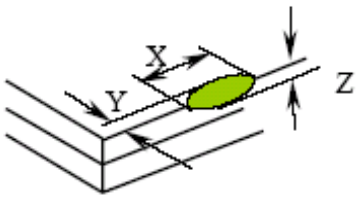
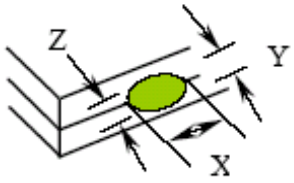
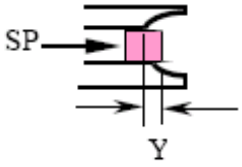
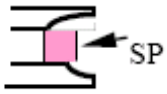
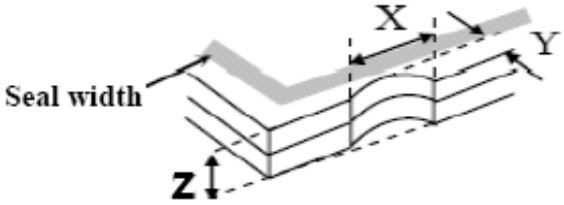
Round type
 

Φ=(x+y)/2

Line type
 
</td><td>5. 1 Round type:
5. 1. 1 display only :
• White and black spots on display ≦ 0. 30 mm , no more than 4 white or black spots present.
• Densely spaced : NO more than two spots or lines within 3 mm.

5. 1. 2 Non-display :
<table>
<tr><th>Dimension (diameter : Φ)</th><th>Acceptance (Q'ty)</th></tr>
<tr><td>Φ ≦0. 10</td><td>Accept no dense</td></tr>
<tr><td>0. 10 ＜ Φ ≦ 0. 20</td><td>3</td></tr>
<tr><td>0. 20 ＜ Φ ≦ 0. 30</td><td>2</td></tr>
<tr><td>Total quantity</td><td>4</td></tr>
</table>
5. 1. 3 Line type:
<table>
<tr><th colspan="2">Dimension</th><th colspan="2">Acceptance (Q'ty)</th></tr>
<tr><th>Length (L)</th><th>Width (W)</th><th>A area</th><th>B area</th></tr>
<tr><td>---</td><td>W ≦ 0. 03</td><td>Accept no dense</td><td>Don't count</td></tr>
<tr><td>L ≦ 3. 0</td><td>0. 03 ＜ W ≦ 0. 05</td><td rowspan="2">4</td><td>Don't count</td></tr>
<tr><td>L ≦ 2. 5</td><td>0. 05 ＜ W ≦ 0. 075</td><td>Don't count</td></tr>
<tr><td>---</td><td>W ＞0. 075</td><td colspan="2">As round type</td></tr>
</table></td><td>Minor</td></tr>
<tr><td>06</td><td>Polarizer Bubble</td><td>
<table>
<tr><th rowspan="2">Dimension (diameter : Φ)</th><th colspan="2">Acceptance (Q'ty)</th></tr>
<tr><th>A area</th><th>B area</th></tr>
<tr><td>Φ ≦ 0. 20</td><td>Accept no dense</td><td>Don't count</td></tr>
<tr><td>0. 20 ＜Φ ≦ 0. 50</td><td>3</td><td>Don't count</td></tr>
<tr><td>0. 50 ＜Φ ≦ 1. 00</td><td>2</td><td>Don't count</td></tr>
<tr><td>Φ ＞ 1. 00</td><td>0</td><td>Don't count</td></tr>
<tr><td>Total quantity</td><td>4</td><td>Don't count</td></tr>
</table></td><td>Minor</td></tr>
</table>

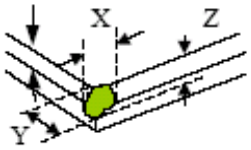
◆Specification For Monotype and Color STN：　(Ver. 01)

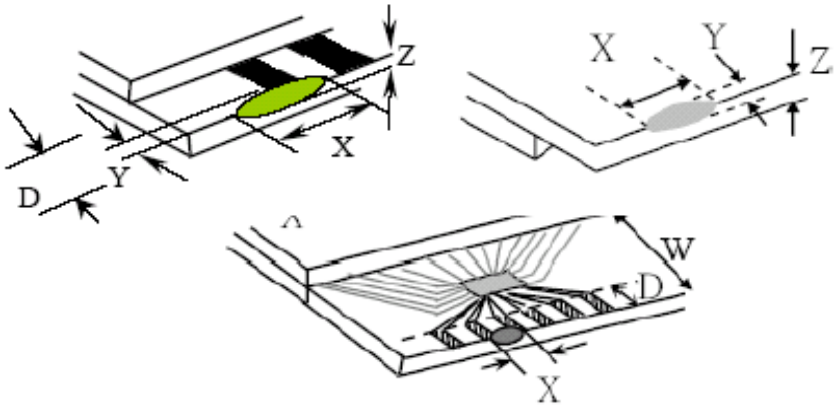
NO	Item	Criterion	Level
07	The crack of glass	Symbols： X : The length of crack　Y : The width of crack. Z : The thickness of crack　D : terminal length t : The thickness of glass　a : LCD side length 7.1 General glass chip： 7.1.1 Chip on panel surface and crack between panels:    【OK】  【NG】  	Minor

X	Y	Z
≦ a	Crack can't enter viewing area	≦1/2 t
≦ a	Crack can't exceed the half of SP width.	1/2 t < Z ≦2 t

◆Specification For Monotype and Color STN：　(Ver.01)

<table>
<tr><th>NO</th><th>Item</th><th>Criterion</th><th>Level</th></tr>
<tr><td rowspan="3">07</td><td rowspan="3">The crack of glass</td><td>Symbols：

X : The length of crack　　Y : The width of crack.
Z : The thickness of crack　　D : terminal length
t : The thickness of glass　　a : LCD side length</td><td rowspan="3">Minor</td></tr>
<tr><td>7.1.2 Corner crack：
 

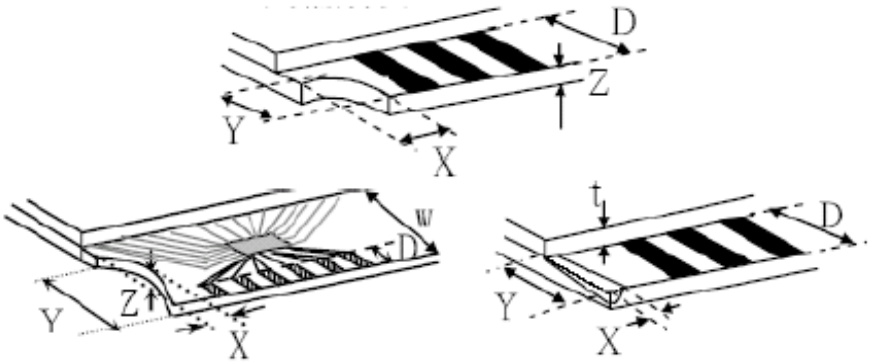
<table>
<tr><th>X</th><th>Y</th><th>Z</th></tr>
<tr><td>≦1/5 a</td><td>Crack can’t enter viewing area</td><td>Z ≦ 1/2 t</td></tr>
<tr><td>≦1/5 a</td><td>Crack can’t exceed the half of SP width.</td><td>1/2 t < Z ≦ 2 t</td></tr>
</table></td></tr>
<tr><td>7.2 Protrusion over terminal：
7.2.1 Chip on electrode pad：
 

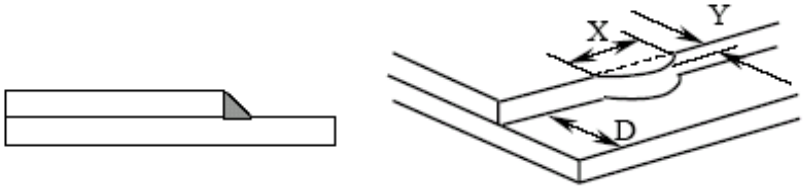
<table>
<tr><th></th><th>X</th><th>Y</th><th>Z</th></tr>
<tr><td>Front</td><td>≦ a</td><td>≦ 1/2 D</td><td>≦ t</td></tr>
<tr><td>Back</td><td colspan="3">Neglect</td></tr>
</table></td></tr>
</table>

◆Specification For Monotype and Color STN：　(Ver.01)

<table>
<tr><th>NO</th><th>Item</th><th>Criterion</th><th>Level</th></tr>
<tr><td>07</td><td>The crack of glass</td><td>
Symbols：

X : The length of crack　　Y : The width of crack.
Z : The thickness of crack　　D : terminal length
t : The thickness of glass　　a : LCD side length

7.2.2 Non-conductive portion：


<table>
<tr><th>X</th><th>Y</th><th>Z</th></tr>
<tr><td>≦1/3 a</td><td>≦D</td><td>≦t</td></tr>
</table>
7.2.3 Glass remain：


<table>
<tr><th>X</th><th>Y</th><th>Z</th></tr>
<tr><td>≦ a</td><td>≦ 1/3 D</td><td>≦ t</td></tr>
</table>
</td><td>Minor</td></tr>
</table>

◆Specification For Monotype and Color STN：　(Ver. 01)

NO	Item	Criterion	Level
08	Backlight elements	8. 1 Backlight can't work normally.	Major
		8. 2 Backlight doesn't light or color is wrong.	Major
		8. 3 Illumination source flickers when lit.	Major
09	General appearance	9. 1 Pin type must match type in specification sheet.	Major
		9. 2 No short circuits in components on PCB or FPC.	Major
		9. 3 Product packaging must the same as specified on packaging specification sheet.	Minor
		9. 4 The folding and peeled off in polarizer are not acceptable.	Minor
		9. 5 The PCB or FPC between B/L assembled distance (PCB or FPC) is ≦1. 5 mm.	Minor

4. RELIABILITY TEST

4.1 Reliability Test Condition

<table>
<tr><th>NO.</th><th>TEST ITEM</th><th colspan="2">TEST CONDITION</th></tr>
<tr><td>1</td><td>High Temperature Storage Test</td><td colspan="2">Keep in +80 ±2℃ 96 hrs
Surrounding temperature, then storage at normal condition 4hrs.</td></tr>
<tr><td>2</td><td>Low Temperature Storage Test</td><td colspan="2">Keep in -30 ±2℃ 96 hrs
Surrounding temperature, then storage at normal condition 4hrs.</td></tr>
<tr><td>3</td><td>High Temperature / High Humidity Storage Test</td><td colspan="2">Keep in +60℃ / 90% R.H duration for 96 hrs
Surrounding temperature, then storage at normal condition 4hrs.
(Excluding the polarizer)</td></tr>
<tr><td rowspan="2">4</td><td rowspan="2">ESD Test</td><td>Air Discharge:
Apply 6 KV with 5 times
Discharge for each polarity +/-</td><td>Contact Discharge:
Apply 250V with 5 times
discharge for each polarity +/-</td></tr>
<tr><td colspan="2">1. Temperature ambinace:15℃～35℃
2. Humidity relative:30%～60%
3. Energy Storage Capacitance(Cs+Cd):150pF±10%
4. Discharge Resistance(Rd):330Ω±10%
5. Discharge, mode of operation:
Single Discharge (time between successive discharges at least 1 s)
(Tolerance if the output voltage indication: ±5%)</td></tr>
<tr><td>5</td><td>Temperature Cycling Storage Test</td><td colspan="2">-20℃ → +25℃ → +70℃ → +25℃
(30mins) (5mins) (30mins) (5mins)
10 Cycle
Surrounding temperature, then storage at normal condition 4hrs.</td></tr>
<tr><td>6</td><td>Vibration Test (Packaged)</td><td colspan="2">1. Sine wave 10～55 Hz frequency (1 min)
2. The amplitude of vibration :1.5 mm
3. Each direction (X、Y、Z) duration for 2 Hrs</td></tr>
<tr><td>7</td><td>Drop Test (Packaged)</td><td colspan="2"><table><tr><th>Packing Weight (Kg)</th><th>Drop Height (cm)</th></tr><tr><td>0 ~ 45.4</td><td>122</td></tr><tr><td>45.4 ~ 90.8</td><td>76</td></tr><tr><td>90.8 ~ 454</td><td>61</td></tr><tr><td>Over 454</td><td>46</td></tr></table>Drop direction :※ 1 corner / 3 edges / 6 sides etch 1times</td></tr>
</table>

5. PRECAUTION RELATING PRODUCT HANDLING

5.1 SAFETY

5.1.1 If the LCD panel breaks , be careful not to get the liquid crystal to touch your skin.

5.1.2 If the liquid crystal touches your skin or clothes , please wash it off immediately by using soap and water.

5.2 HANDLING

5.2.1 Avoid any strong mechanical shock which can break the glass.

5.2.2 Avoid static electricity which can damage the CMOS LSI—When working with the module , be sure to ground your body and any electrical equipment you may be using.

5.2.3 Do not remove the panel or frame from the module.

5.2.4 The polarizing plate of the display is very fragile. So , please handle it very carefully ,do not touch , push or rub the exposed polarizing with anything harder than an HB pencil lead (glass , tweezers , etc.)

5.2.5 Do not wipe the polarizing plate with a dry cloth , as it may easily scratch the surface of plate.

5.2.6 Do not touch the display area with bare hands , this will stain the display area.

5.2.7 Do not use ketonics solvent & aromatic solvent. Use with a soft cloth soaked with a cleaning naphtha solvent.

5.3 STORAGE

5.3.1 Store the panel or module in a dark place where the temperature is 25℃ ±5℃ and the humidity is below 65% RH.

5.3.2 Do not place the module near organics solvents or corrosive gases.

5.3.3 Do not crush , shake , or jolt the module.

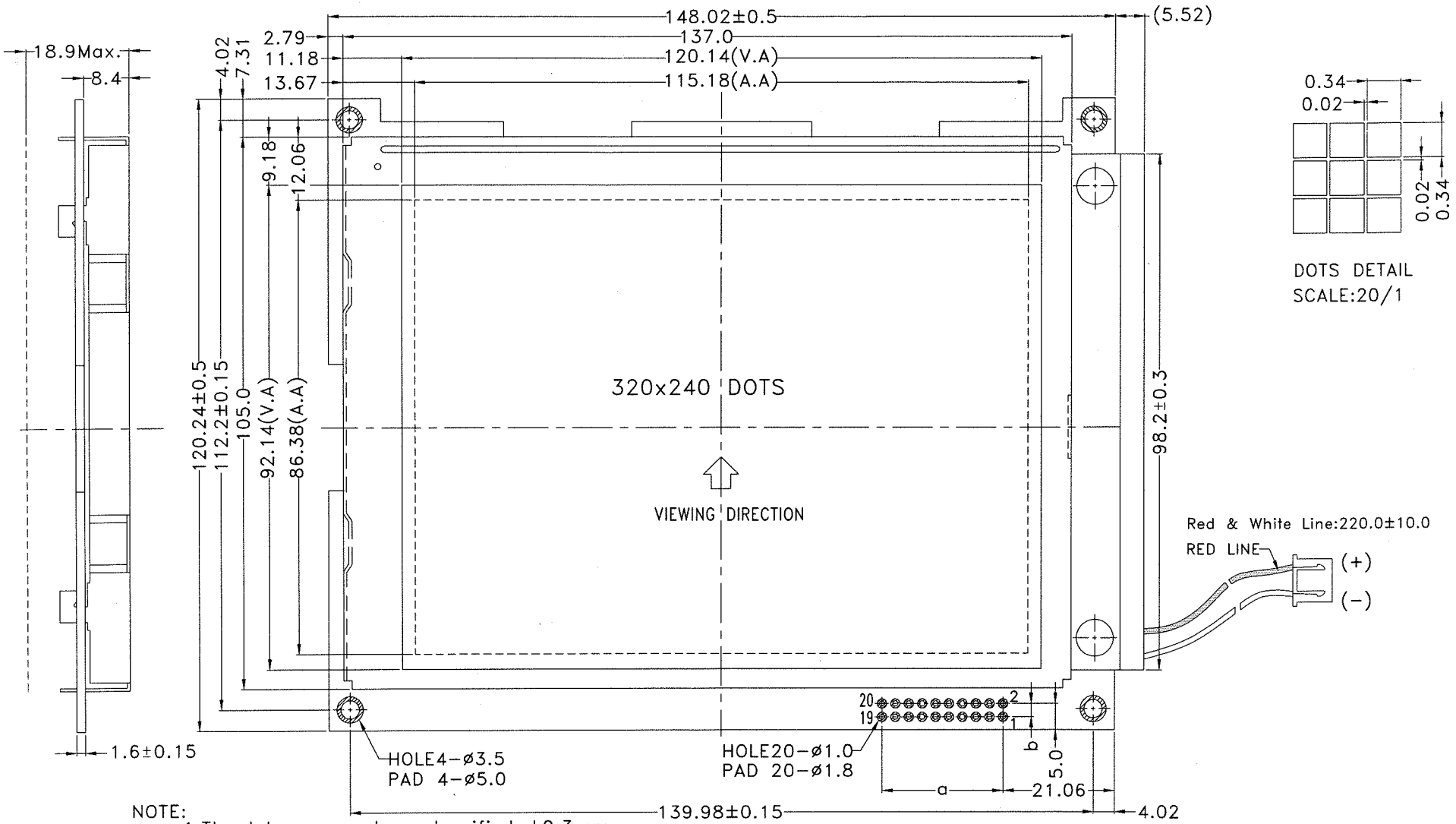
5.4 TERMS OF WARRANTY

5.4.1 Applicable warrant period

The period is within thirteen months since the date of shipping out under normal using and storage conditions.

5.4.2 Unaccepted responsibility

This product has been manufactured to your company's specification as a part for use in your company's general electronic products. It is guaranteed to perform according to delivery specifications. For any other use apart from general electronic equipment , we cannot take responsibility if the product is used in nuclear power control equipment , aerospace equipment , fire and security systems or any other applications in which there is a direct risk to human life and where extremely high levels of reliability are required.



NOTE:

1. The tolerance unless classified ±0.3mm
2. a=P2.54x9=22.86±0.1
3. b=2.54±0.1
4. LCD type:STN
5. LCD mode:Negative/Transmissive
6. Top:-20°~70° , Tst:-30°~80°
7. Viewing Direction : 6 O'clock
8. IC= RAIO RA8835P3N

REV	DESCRIPTION	DATE

久 正 光 電 股 份 有 限 公 司
POWERTIP TECHNOLOGY CORPORATION

				APPROVED	CHECKER	DRAWN
SCALE:1/1.1	UNIT:mm	PAGE:1/1				
圖面名稱	PE320240WRM002IP1Q					
圖面編號	PE-05011-005	EDI	0	2006-9-26. 黃敬源	2006-9-15. 李美倫	2006-9-15. 郭玫玲

2-060-01-01

LCM Model	PE320240WRM002IP1Q
版次Ver.0	

LCM包裝規格書
LCM Packaging Specifications

Approve	Check	Contact
研發 2005-9-26. 黃秋蓮	研發 2005-9-15. 李美倫	研發 2005-9-15. 郭玫玲

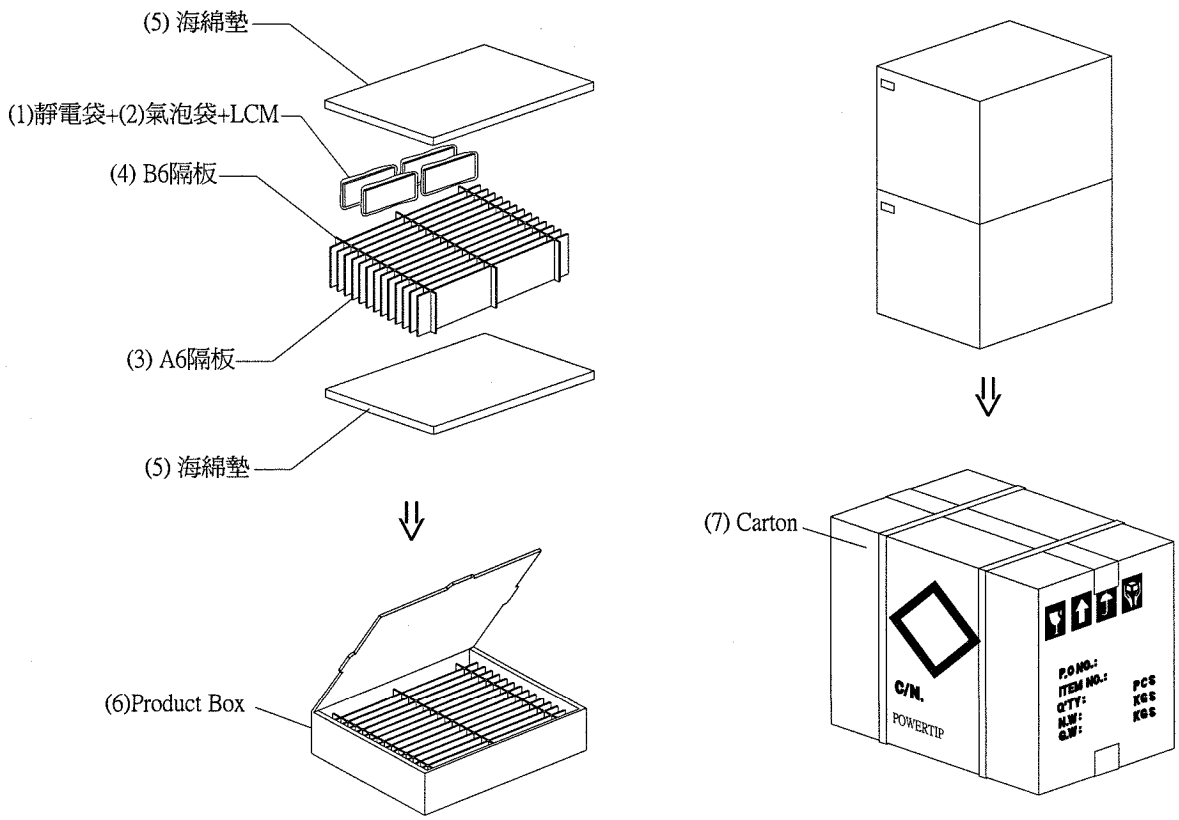
1.包裝材料規格表 (Packaging Material) : (per carton)

No.	Item	Model	Dimensions (mm)	Quantity
1	成品 (LCM)	PE320240WRM002IP1Q	148.02 X 120.24	28
2	靜電袋(1)	BAG240170ARABA	240 X 170	28
3	氣泡袋(2)	BAG170150AWBBA	170 X 150	28
4	A6隔板(3)	BX33800012BZBA	338 X 125 X 3	16
5	B6隔板(4)	BX29800012BZBA	293 X 125 X 3	6
6	海綿墊(5)	OTFOAM00005ABA	330 X 290 X 10	4
7	C4內盒(6)Product Box	BX36031014AABA	360 X 310 X 142	2
8	外紙箱(7)Carton	BX39432432CCBA	394 X 324 X 321	1
9				

2.單箱數量規格表 (Packaging Specifications and Quantity) :

(1)Quantity Of Spacer : A6隔板 X 8 , B6隔板 X 3

(2)Total LCM quantity in carton : quantity per box 14 x no of boxes 2 = 28



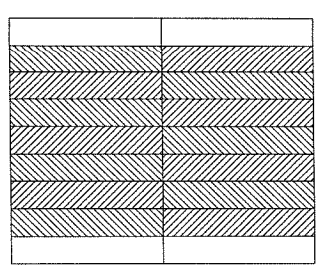
特 記 事 項 (REMARK)

1. Label Specifications :

MODEL:
LOT NO:
QUANTITY:
CHECK:

2. 每個間隔放1片模組，前後間隔不放置模組。(如放置格示意圖)

3.放置格示意圖:



1. 模組 2. 空格