POWERTIP TECH. CORP.

SPECIFICATIONS

CUSTOMER	:	CUS999
SAMPLE CODE	:	SG320240WRFQNNH10Q
MASS PRODUCTION CODE	:	PG320240WRFQNNH10Q
SAMPLE VERSION	:	01
SPECIFICATIONS EDITION	:	003
DRAWING NO. (Ver.)	:	JLMD-PG320240WRFQNNH10Q_001
PACKAGING NO. (Ver.)	:	JPKG-PG320240WRFQNNH10Q_001

Customer Approved

Date:

POWERTIP
2014.12.25
JS RD APPROVED

Approved	Checked	Designer
閆偉	張久慧	劉進

□ Preliminary specification for design input

■ Specification for sample approval

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History of Version

Date (mm / dd / yyyy)	Ver.	Edi.	Description	Page	Design by
05/08/2014	01	001	New Drawing	-	劉進
06/28/2014	01	002	Sample Specification	-	劉進
12/23/2014	01	003	Update Specification	13	劉進

Total : 28 Page

Contents

Note：For detailed information please refer to IC data sheet：AVANT ---SDN8080G-LQFPG

1. SPECIFICATIONS

1.1 Features

Item	Standard Value
Display Type	320 * 240 Dots
LCD Type	FSTN, Positive, Transflective
Driver Condition	LCD Module: 1/240 Duty, 1/14.5 Bias
Viewing Direction	6 O'clock
Weight	214 g
Interface	4 bits parallel data input
Driver IC	AVANT ---SDN8080G-LQFPG
ROHS	THIS PRODUCT CONFORMS THE ROHS OF PTC Detail information please refer web site : http://www.powertip.com.tw/news.php?area_id_view=1085560481/

1.2 Mechanical Specifications

Item	Standard Value	Unit
Outline Dimension	162.0 (L) * 109.0 (W) * 12.5 (Max)	mm
Viewing Area	120.14 (L) * 90.0 (W)	mm
Active Area	115.185 (L) * 86.385 (W)	mm
Dot Size	0.345 (L) * 0.345 (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	Vop	-	0	+30	V
Operating Temperature	T_{OP}	-	-20	70	°C
Storage Temperature.	T_{ST}	-	-30	80	°C
Storage Humidity	H_D	Ta＜60 ℃	20	90	%RH

1.4 DC Electrical Characteristics

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

Item	Symbol	Condition	Min.	Typ.	Max.	Unit
Logic Supply Voltage	VDD	-	4.5	5.0	5.5	V
“H” Input Voltage	V_{IH}	-	0.8V_{DD}	-	V_{DD}	V
“L” Input Voltage	V_{IL}	-	0	-	0.2V_{DD}	V
“H” Output Voltage	V_{OH}	IOH=-0.4mA	V_{DD}-0.4	-	-	V
“L” Output Voltage	V_{OL}	IOL=0.4mA	-	-	0.4	V
Supply Current	Idd	V_{DD}= 5V ; V_{OP}= 23.2V; Pattern= Horizontal line*1	-	100	150	mA
LCM Driver Voltage	VOP*2	-20℃	23.4	23.6	23.8	V
		25℃	22.9	23.2	23.5	
		70℃	22.6	22.8	23.0	

NOTE: *1 The Maximum current display;

*2 The VOP test point is VOP+ ~ VOP-.

1.5 Optical Characteristics

LCD Panel: 1/240 Duty, 1/14.5 Bias, V_{op} =23.4 V, Ta = 25°C

Item		Symbol	Conditions	Min.	Typ.	Max.	Unit	Reference
Response Time	Rise	tr	25℃	-	170	255	ms	Note 2
	Fall	tf	25℃	-	360	540		
Viewing angle range	Top	ΘY+	C≥2.0, ∅ =270°	-	35	-	-	Note 1
	Bottom	ΘY-		-	40	-		
	Left	ΘX-		-	40	-		
	Right	ΘX+		-	40	-		
Contrast Ratio		CR	θ = 0°, ∅ =270°	2	-	-	-	Note 4
Average Brightness (With B/L)		IV	IF= 160mA	35	45		cd/m^2	-
CIE Color Coordinate (With B/L)		X		0.28	0.33	0.38	-	Note 4
		Y		0.30	0.35	0.40		
Uniformity		△B	IF= 160mA	70	-	-	%	-

Note 4:

1：△B=B(min) / B(max) * 100%

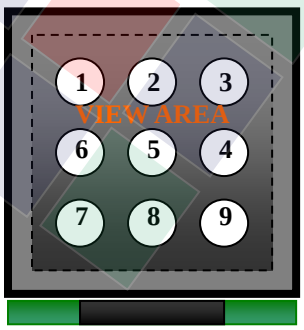
2：Measurement Condition for Optical Characteristics:

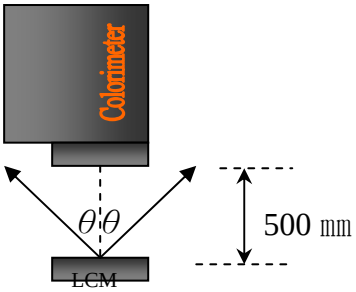
a：Environment: 25℃±5℃ / 60±20%R.H，no wind，dark room below 10 Lux at typical lamp current and typical operating frequency.

b：Measurement Distance: 500 ± 50 ㎜ ，(θ= 0°)

c：Equipment: TOPCON BM-7 fast，(field 1°)，after 10 minutes operation.

d：The uncertainty of the C.I.E coordinate measurement ±0.01，Average Brightness ± 4%



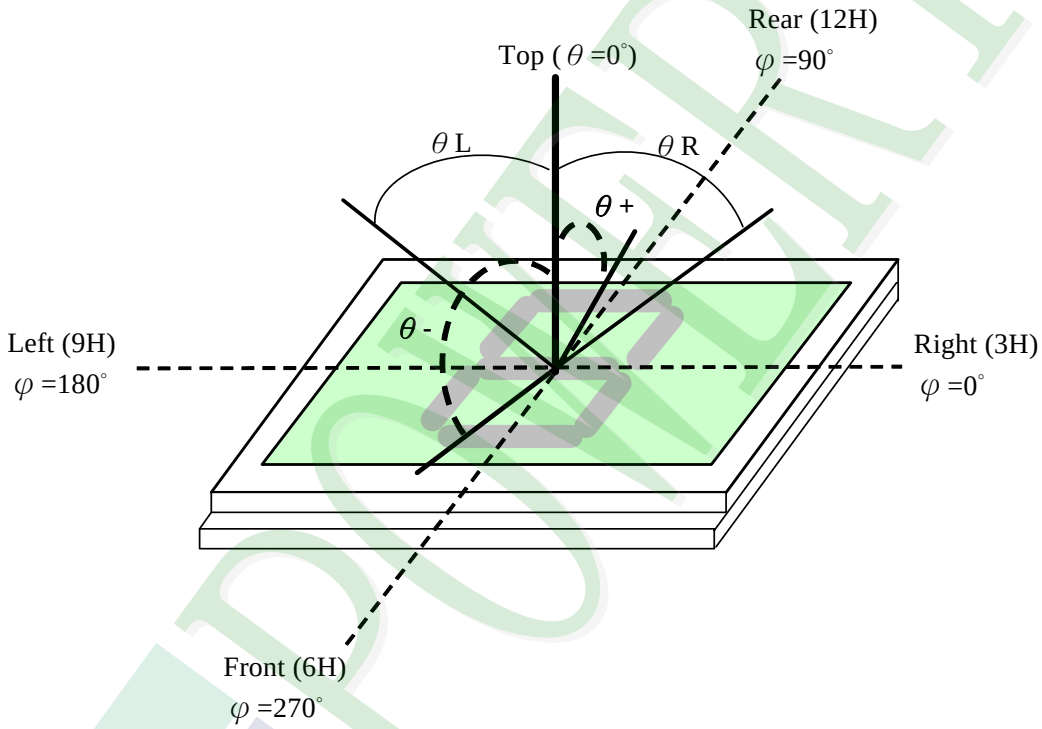


Colorimeter=BM-7 fast

Note 1.

Optical characteristics-2

Viewing angle

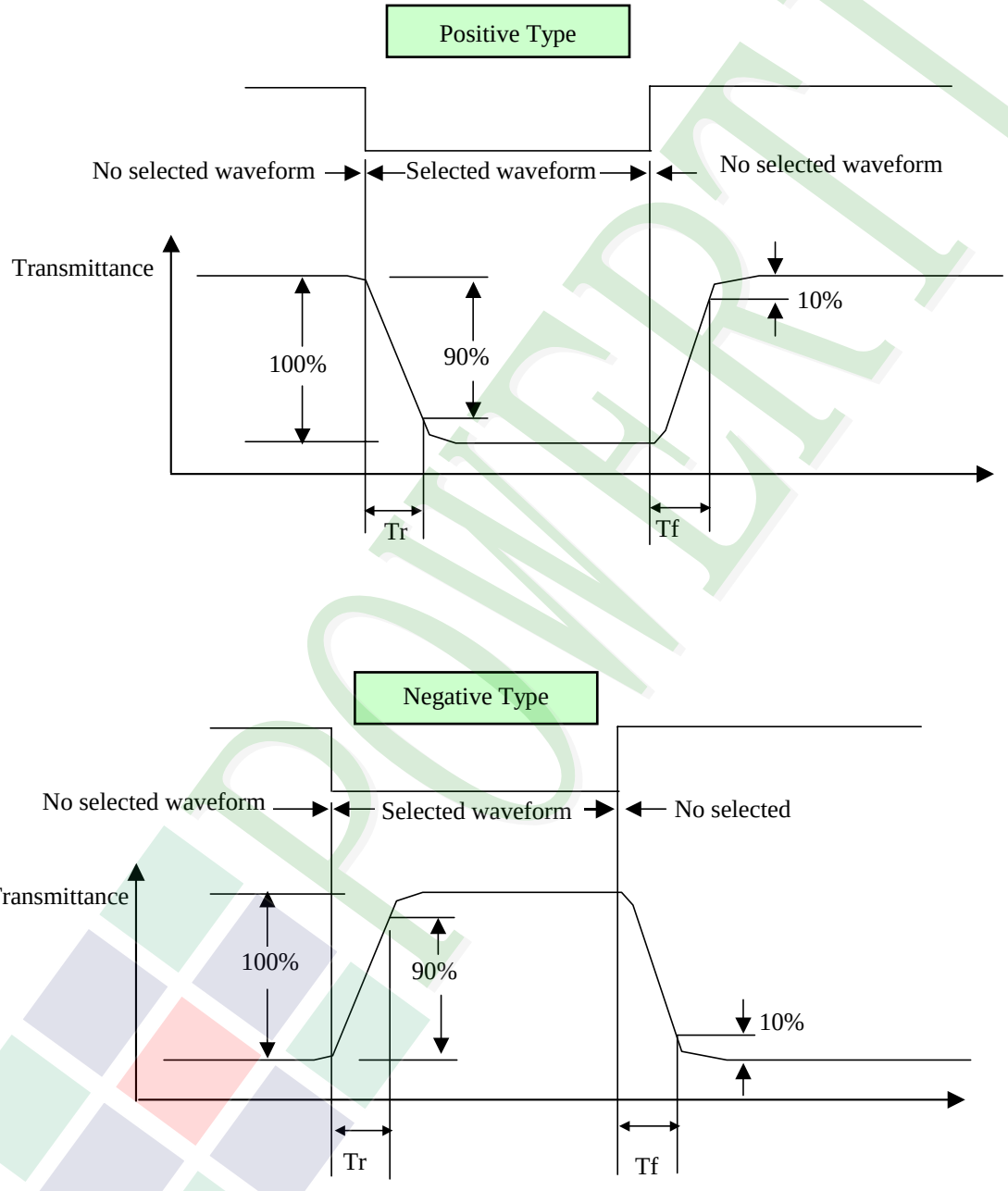


Viewing angle

Note 2.

Optical characteristics-3

Fig.2 Definition of response time



Electrical characteristics-2

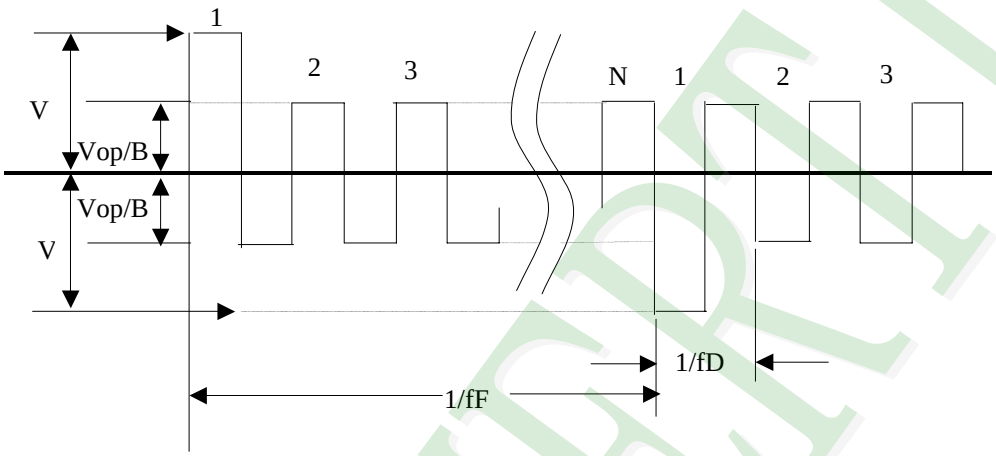
※2 Drive waveform

Vop: Drive voltage fF: Frame frequency

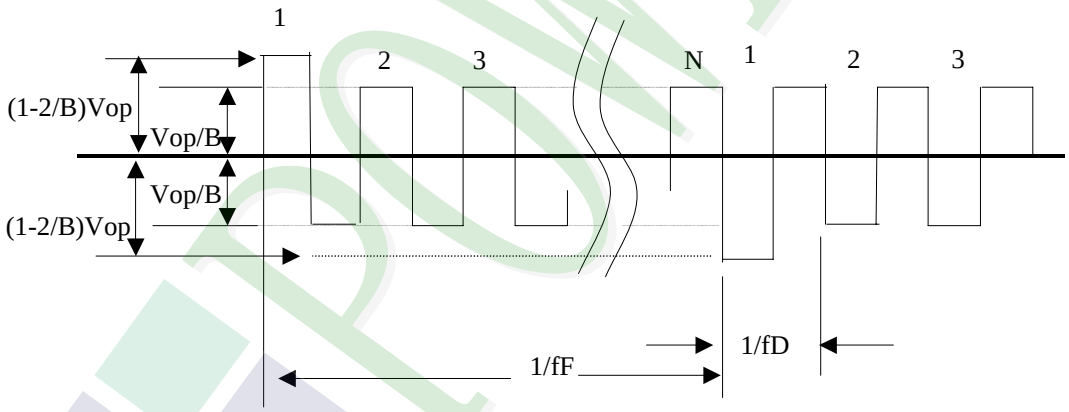
1/B: Bias fD: Drive frequency

N: Duty

(1) Selected waveform



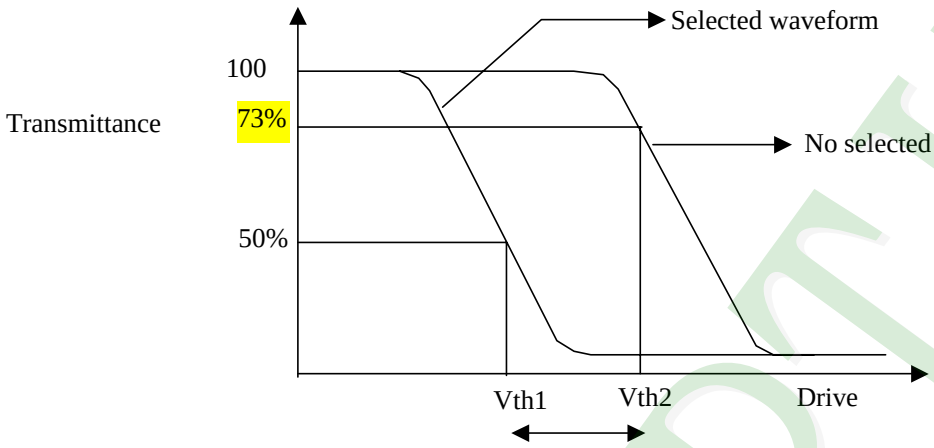
(2) Non- Selected wave form



Note:

Frame frequency is defined as follows: Common side supply voltage peak - to - peak /2 = 1 period

Note 3. : Definition of Vth

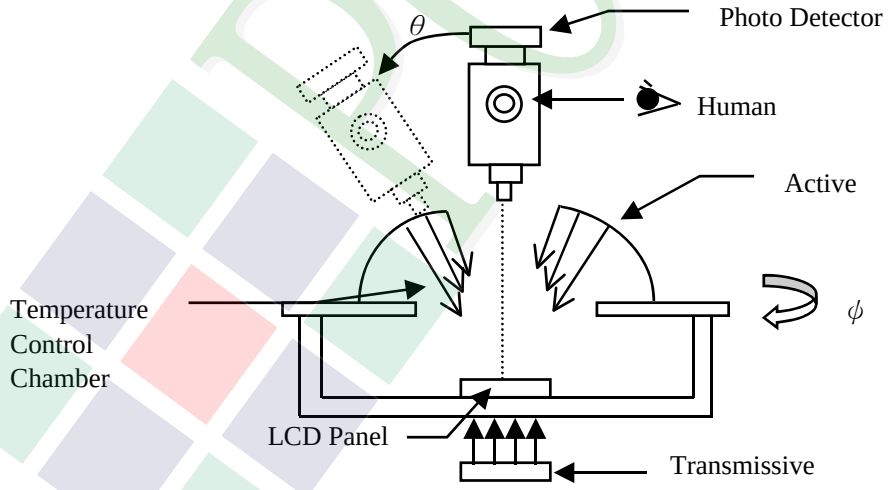


Active voltage range

	Vth1	Vth2
View direction	10°	40°
Drive waveform	(Selected waveform)	(No selected waveform)
Transmittance	50%	73%

※1 Contrast ratio
= (Brightness in OFF state) / (Brightness in ON state)

Outline of Electro-Optical Characteristics Measuring System



Measuring System: Autronic DMS-803

1.6 Backlight Characteristics

LCD Module with LED Backlight

Maximum Ratings

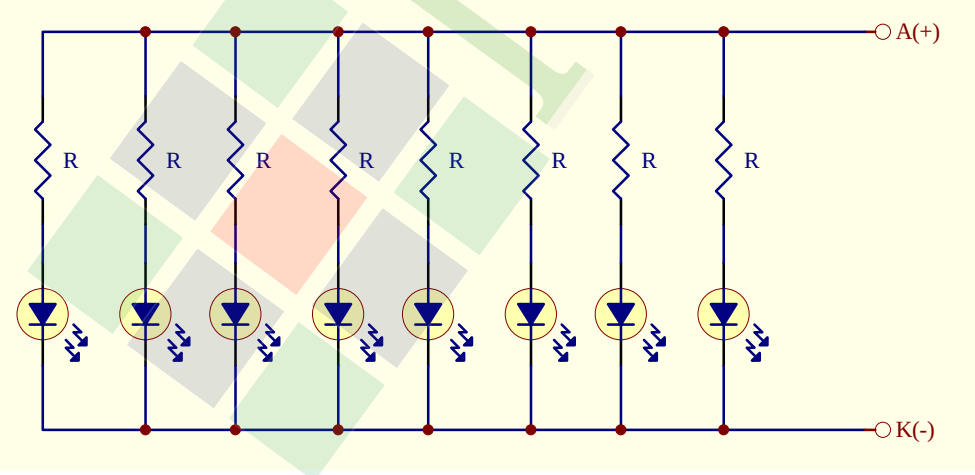
Item	Symbol	Conditions	Min.	Max.	Unit
Forward Current	I_F	Ta =25°C	-	240	mA
Power Dissipation	Po	Ta =25℃	-	1.01	W
Operating Temperature	T_{OP}	-	-20	70	℃
Storage Temperature.	T_{ST}	-	-30	80	℃

Electrical / Optical Characteristics

Ta =25℃

Item	Symbol	Conditions	Min.	Typ.	Max.	Unit
Forward Voltage	VF	IF = 160mA	-	3.7	4.2	V
Average Brightness (Without LCD)	IV		500	600	-	cd/m^2
CIE Color Coordinate (Without LCD)	X		0.27	0.30	0.33	-
	Y		0.27	0.30	0.33	-
Color	White					

Internal Circuit Diagram:



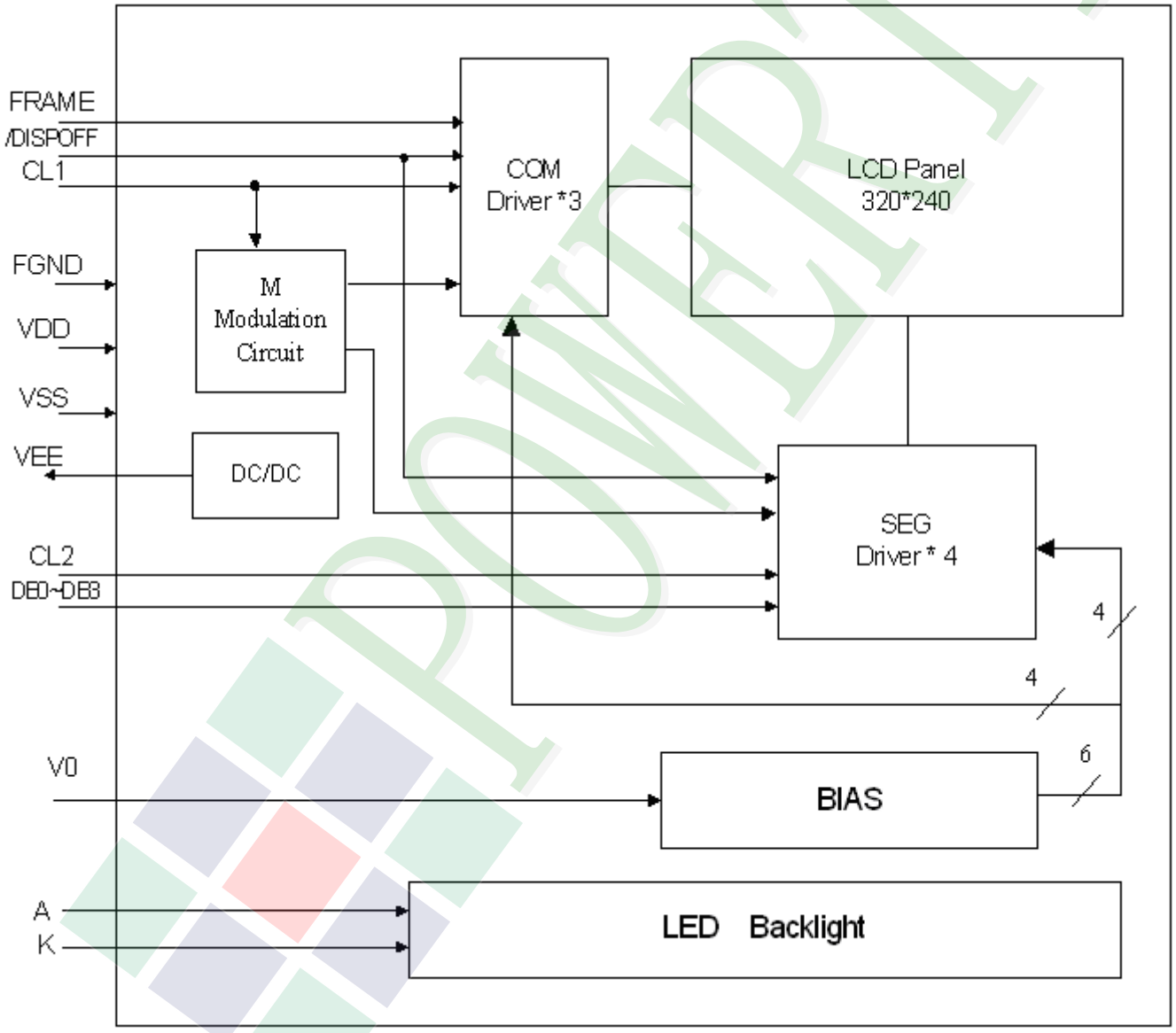
2. MODULE STRUCTURE

2.1 Counter Drawing

2.1.1 LCM Mechanical Diagram

* See Appendix

1.1.2 Block Diagram



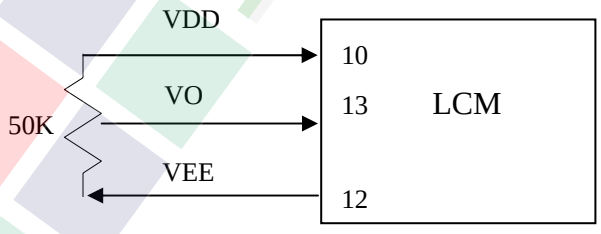
2.2 Interface Pin Description

Pin No.	Symbol	Function
1	DB0	Data bus bit 0
2	DB1	Data bus bit 1
3	DB2	Data bus bit 2
4	DB3	Data bus bit 3
5	/DISPOFF	Enable driver on (H) or off (L)
6	FRAME	First Line Marker
7	N C	Not Connect , Must be open
8	CL1	Input data latch signal
9	CL2	Data input shift signal
10	VDD	Logic system power supply pin
11	VSS	System ground
12	VEE	Negative voltage (supplied by LCM DC/DC converter)
13	VO	LCD contrast adjust
14	FGND	Frame ground (connected to metal bezel)

B/L Interface Pin Description

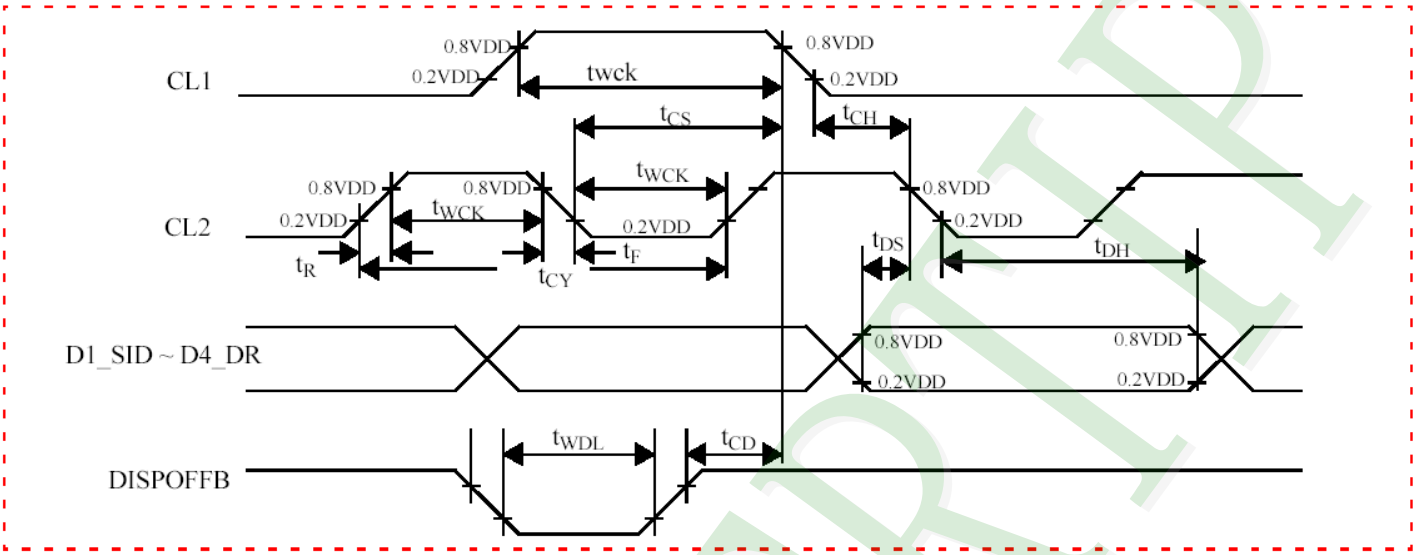
Pin No.	Symbol	Function
1	A	Power supply for LED backlight anode input
2	-	-
3	K	Power supply for LED backlight cathode input

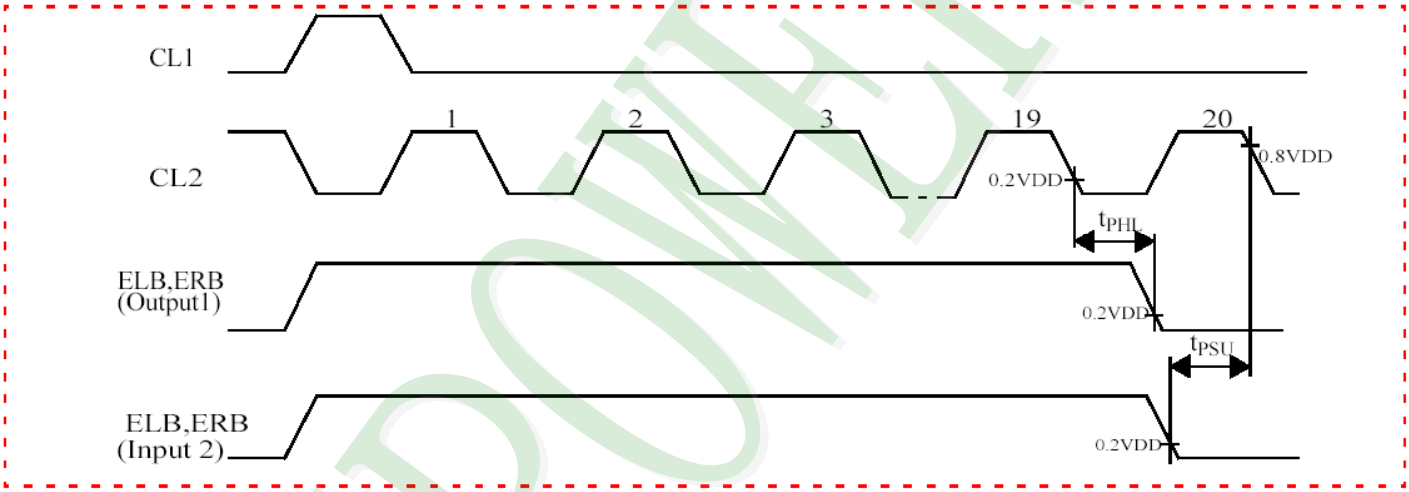
2.2.1 Application Notes

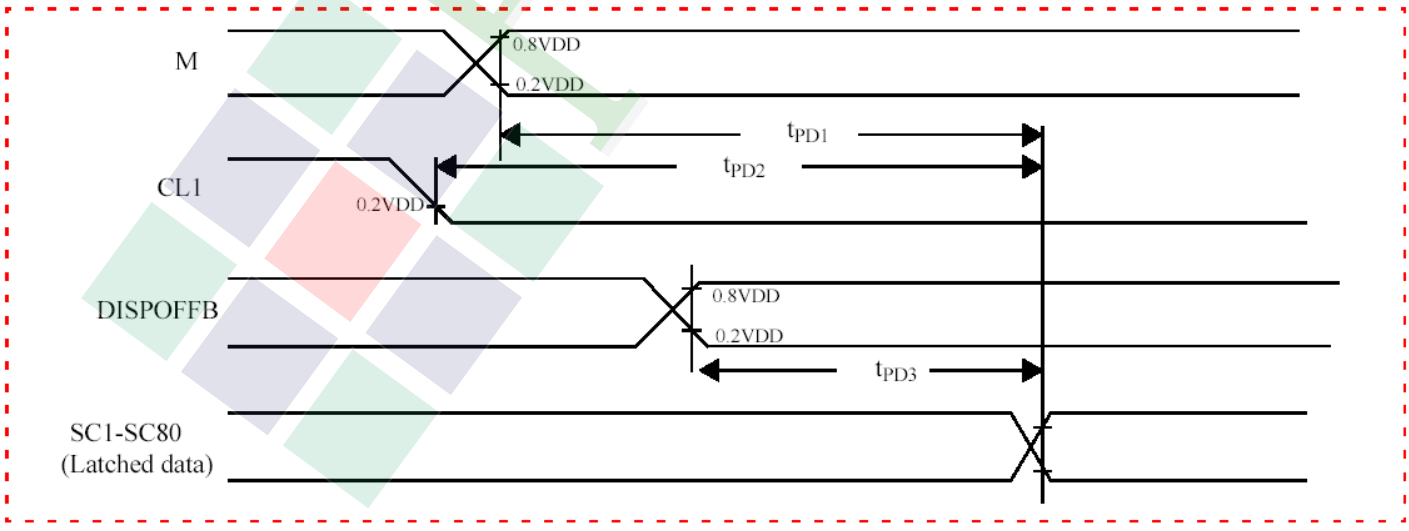


2.3 Timing Characteristics

Timing diagram for SEGMENT driver application

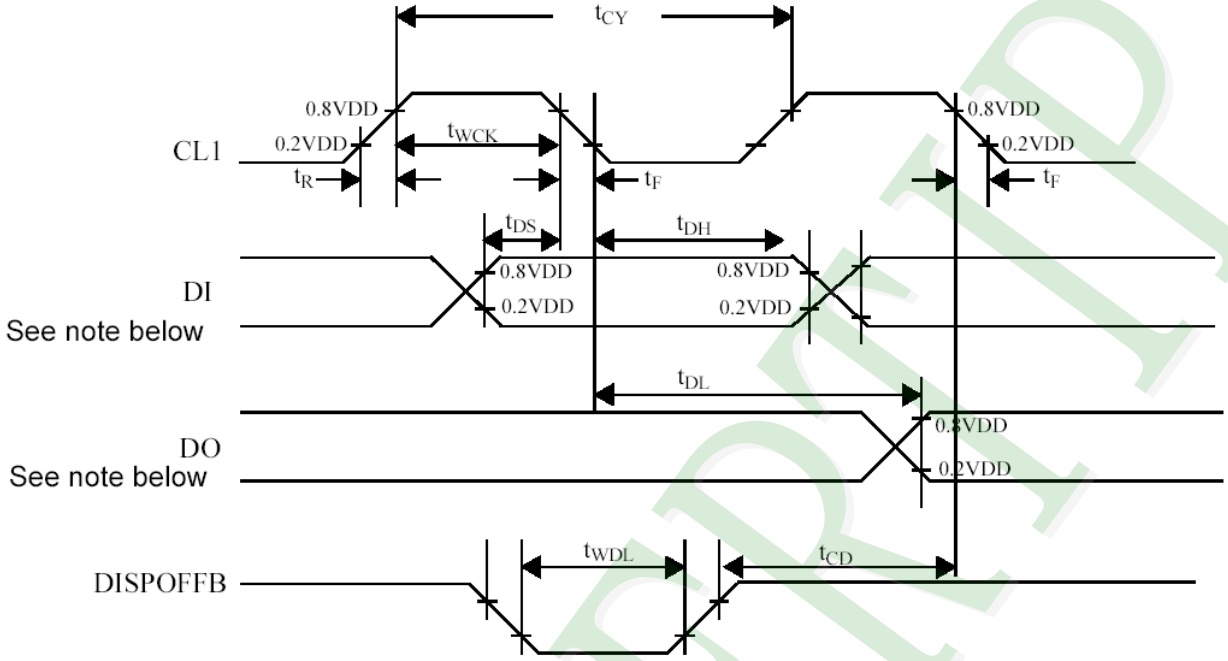






SYMBOL	PARAMETER	VDD=5V±10%			VDD=3V±10%			Test condition	UNIT
		MIN.	TYP	MAX.	MIN.		MAX.		
t_{CY}	Clock cycle time	125			250			Duty=50%	ns
t_{WCK}	Clock pulse width	45			95				ns
t_R, t_F	Clock rise/fall time			30			30		ns
t_{DS}	Data set-up time	30			65				ns
t_{DH}	Data hold time	30			65				ns
t_{CS}	Clock set-up time	80			120				ns
t_{CH}	Clock hold time	80			120				ns
t_{PHL}	Propagation delay time (ELB output)			60			125		ns
t_{PHL}	Propagation delay time (ERB output)			60			125		ns
t_{PSU}	ELB set-up time	30			65			ELB input	ns
t_{PSU}	ERB set-up time	30			65			ERB input	ns
t_{WDL}	DISPOFFB low pulse width	1200			1200				ns
t_{CD}	DISPOFFB clear time	100			100				ns
t_{PD1}	M - OUT propagation delay time			1000			1200	C_L= 15 pF	ns
t_{PD2}	CL1 - OUT propagation delay time			1000			1200	C_L= 15 pF	ns
t_{PD3}	DISPOFFB - OUT propagation delay time			1000			1200	C_L= 15 pF	ns

Timing diagram for COMMON driver application



Note:

When in single-type interface mode:

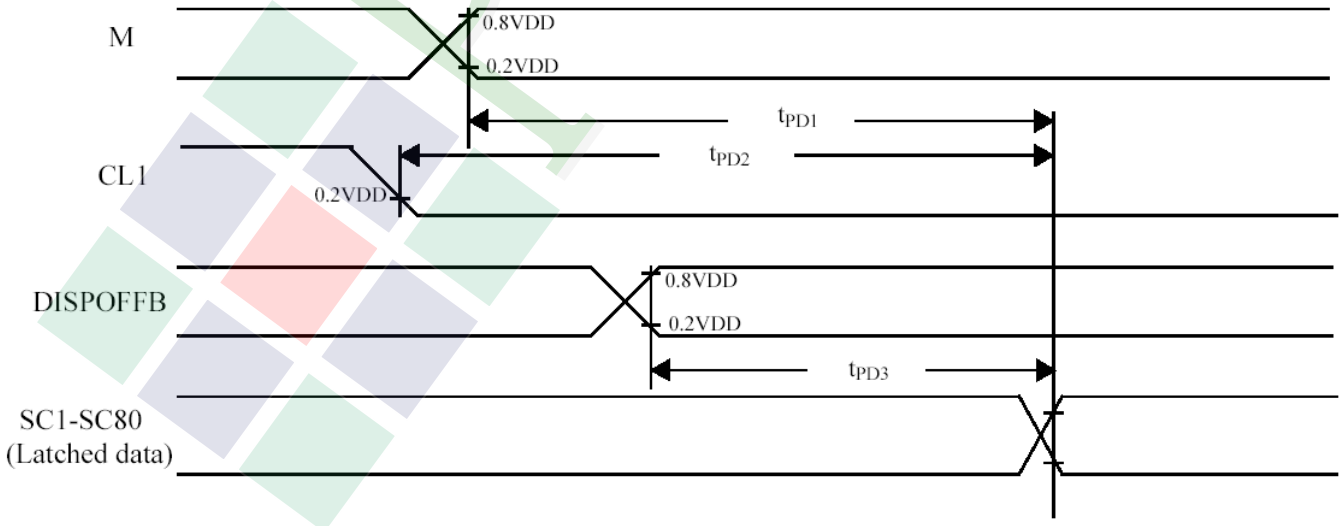
(1) DI=> D2_DL (SHL=L), D4_DR (SHL=H).

(2) DO=> D4_DR (SHL=L), D2_DL (SHL=H).

When in dual-type interface mode:

(3) DI=>D2_DL and D3_DM (SHL=L), D4_DR and D3_DM (SHL=H)

(4) DO=>D4_DR (SHL=L), D2_DL (SHL=H).

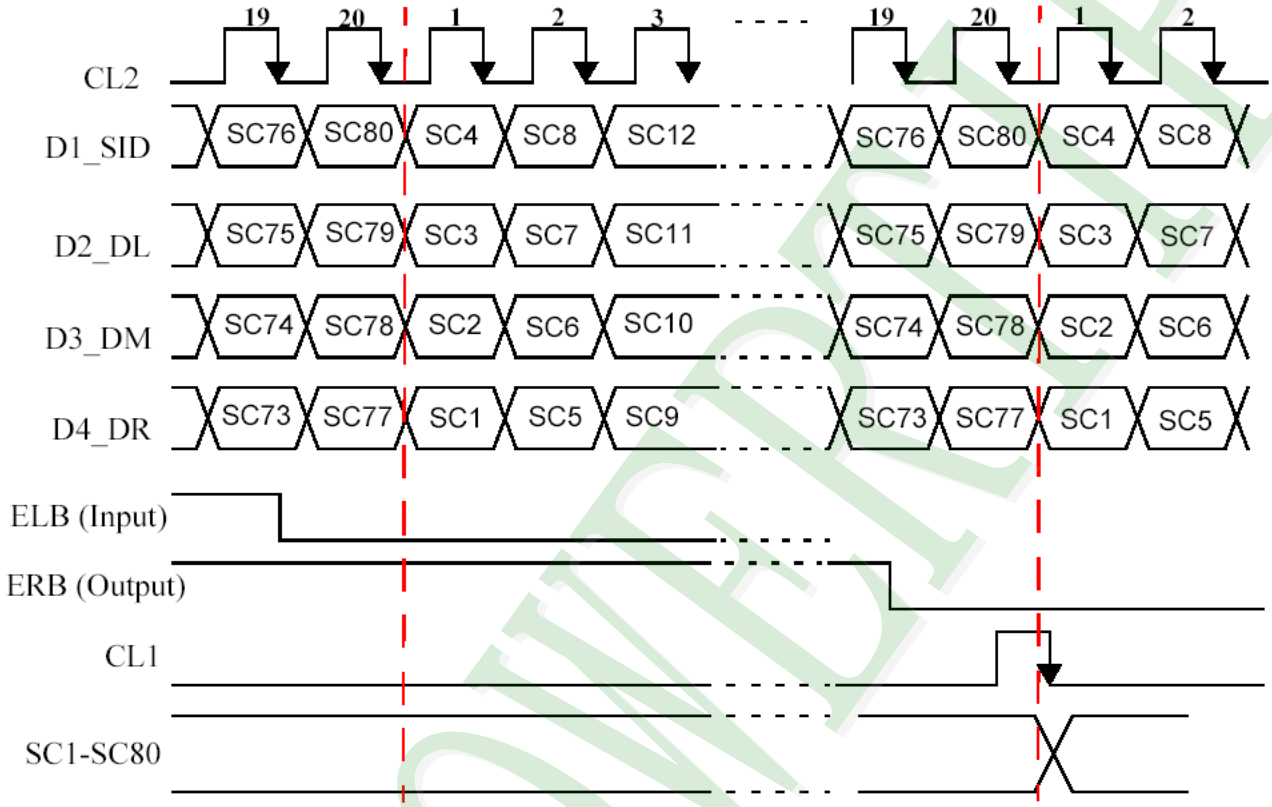


SYMBOL	PARAMETER	VDD=5V±10%			VDD=3V±10%			Test condition	UNIT
		MIN.	TYP	MAX.	MIN.		MAX.		
t_{CY}	Clock cycle time	250			500			Duty=50%	ns
t_{WCK}	Clock pulse width	45			95				ns
t_R, t_F	Clock rise/fall time			50			50		ns
t_{DS}	Data set-up time	30			65				ns
t_{DH}	Data hold time	30			65				ns
t_{WDL}	DISPOFFB low pulse width	1200			1200				ns
t_{CD}	DISPOFFB clear time	100			100				ns
t_{DL}	Output delay time			200			250	C_L= 15 pF	ns

SYMBOL	PARAMETER	VDD=5V±10%			VDD=3V±10%			Test condition	UNIT
		MIN.	TYP	MAX.	MIN.		MAX.		
t_{PD1}	M - OUT propagation delay time			1000			1200	C_L= 15 pF	ns
t_{PD2}	CL1 - OUT propagation delay time			1000			1200	C_L= 15 pF	ns
t_{PD3}	DISPOFFB - OUT propagation delay time			1000			1200	C_L= 15 pF	ns

OPERATION TIMING DIAGRAM

4-bit parallel mode interface (SEGMENT driver)

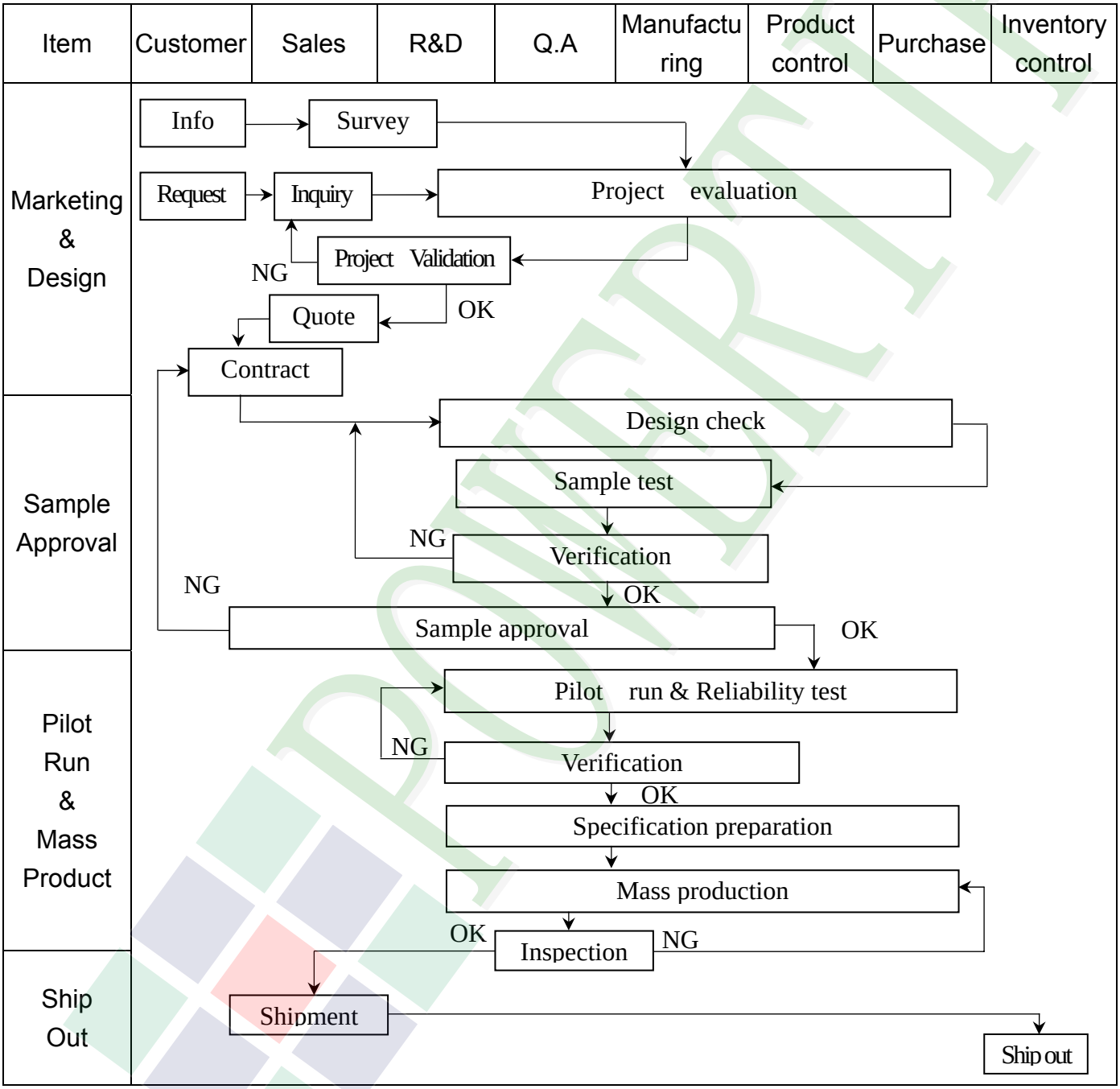


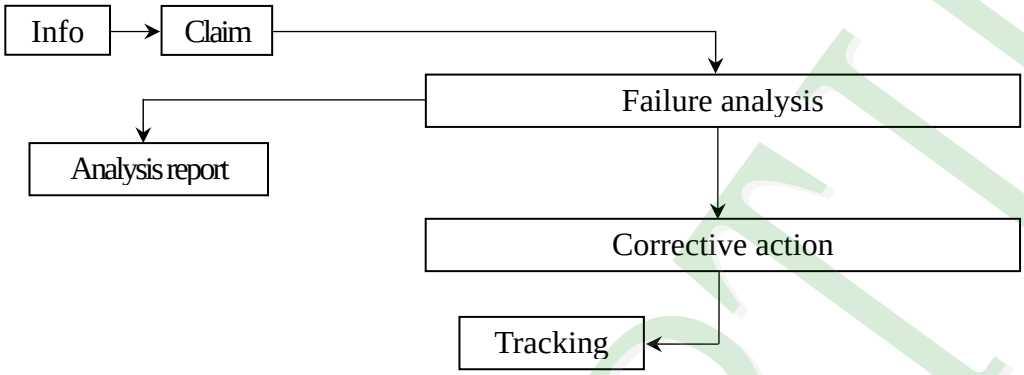
2.4 Jumper (Setting different use)

JR,JPM0-2,JPM1-1,JPM2-2,JPM3-2,JPM4-1,JPM5-1,JPM6-2,JPM7-1 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. B01).

◆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)

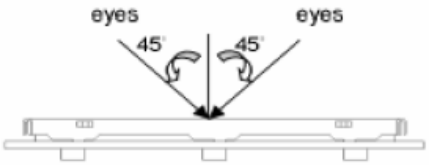


Fig.1

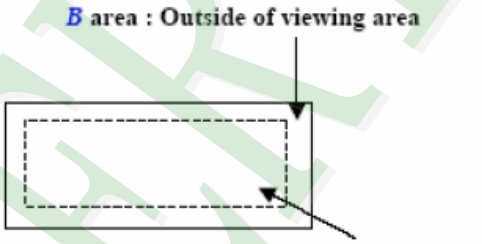


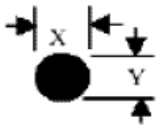
Fig. 2

◆ Specification:

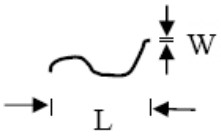
NO	Item	Criterion	Level
01	Product condition	1.1 The part number is inconsistent with work order of Production.	Major
		1.2 Mixed production types.	Major
		1.3 Assembled in inverse direction.	Major
02	Quantity	2.1 The quantity is inconsistent with work order of production.	Major
03	Outline dimension	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.B01)

<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 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 ≦ 0.10</td><td>Accept no dense</td><td rowspan="4">Ignore</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 rowspan="3">Ignore</td></tr>
<tr><td>L ≦ 3.0</td><td>0.03 ＜ W ≦ 0.05</td><td rowspan="2">4</td></tr>
<tr><td>L ≦ 2.5</td><td>0.05 ＜W ≦ 0.075</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 rowspan="5">Ignore</td></tr>
<tr><td>0.20 ＜Φ ≦ 0.50</td><td>3</td></tr>
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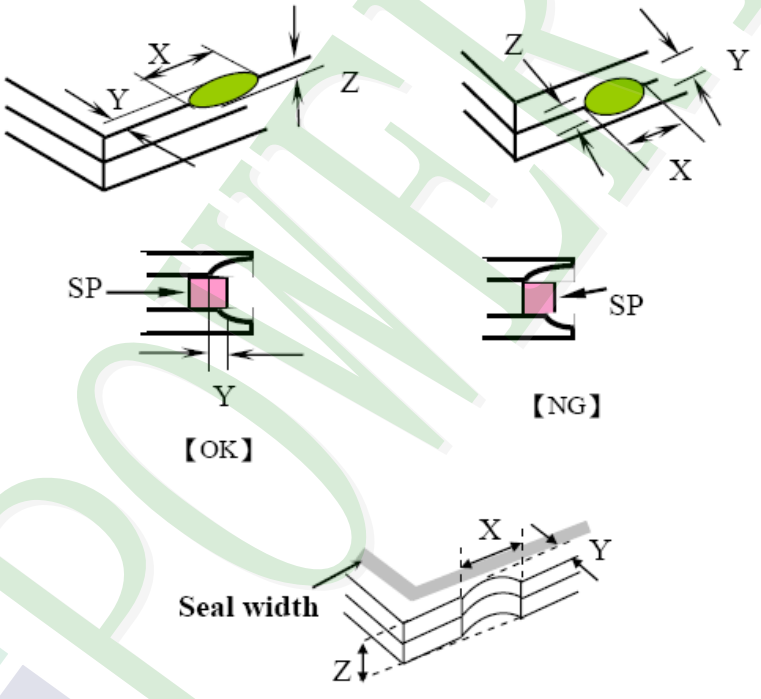
<tr><td>Φ ＞ 1.00</td><td>0</td></tr>
<tr><td>Total quantity</td><td>4</td></tr>
</table></td><td>Minor</td></tr>
</table>

◆Specification For Monotype and Color STN：　(Ver. B01)

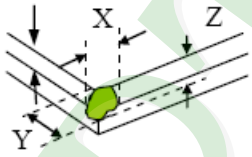
NO	Item	Criterion	Level
07	The crack of glass	Symbols： X : The length of crack　Y : The width of crack. Z : The thickness of crack　W : terminal length t : The thickness of glass　a : LCD side length 7.1 General glass chip： 7.1.1 Chip on panel surface and crack between panels:  【OK】　【NG】 	Minor

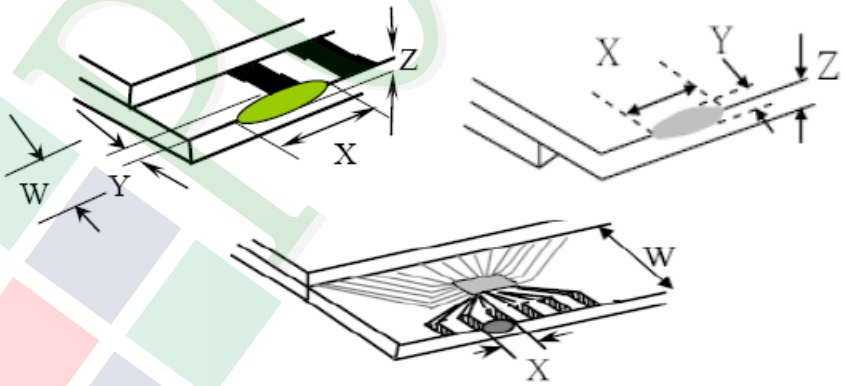
X	Y	Z
≦ a	Crack can't enter viewing area	≦1/2 t
≦ a	Crack can't exceed the half of SP width.	1/2 t < Z ≦2 t

◆Specification For Monotype and Color STN：　(Ver. B01)

<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　　W : terminal length
t : The thickness of glass　　a : LCD side length

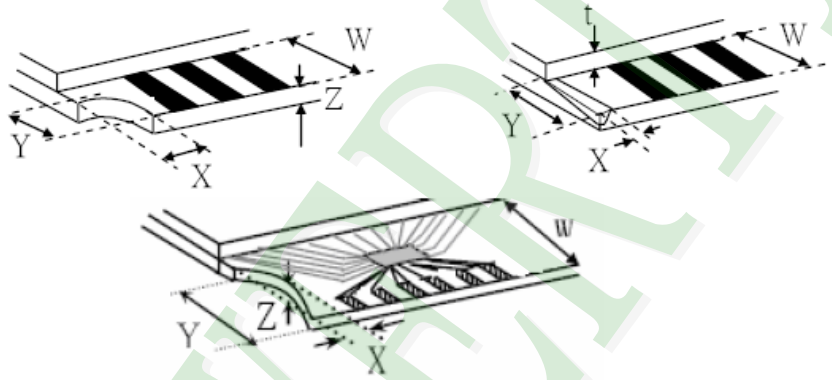
7.1.2 Corner crack：


<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>
7.2 Protrusion over terminal：
7.2.1 Chip on electrode pad：


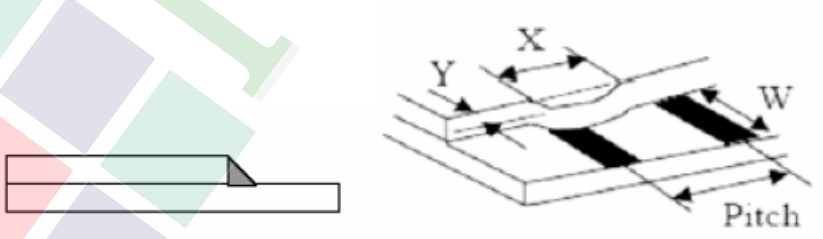
<table>
<tr><th></th><th>X</th><th>Y</th><th>Z</th></tr>
<tr><td>Front</td><td>≦ a</td><td>≦ 1/2 W</td><td>≦ t</td></tr>
<tr><td>Back</td><td colspan="3">Neglect</td></tr>
</table>
</td><td>Minor</td></tr>
</table>

◆Specification For Monotype and Color STN：　(Ver. B01)

<table>
<tr><th>NO</th><th>Item</th><th>Criterion</th><th>Level</th></tr>
<tr><td rowspan="2">07</td><td rowspan="2">The crack of glass</td><td>Symbols：

X : The length of crack　　Y : The width of crack.
Z : The thickness of crack　　W : terminal length
t : The thickness of glass　　a : LCD side length</td><td rowspan="2">Minor</td></tr>
<tr><td>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>≦W</td><td>≦t</td></tr></table>
⊙ If the chipped area touches the ITO terminal, over 2/3 of the ITO must remain and be inspected according to electrode terminal specifications.

7.2.3 Glass remain：
 

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

◆Specification For Monotype and Color STN：　(Ver.B01)

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 (Ver.B01)

<table>
<tr><th>NO.</th><th>TEST ITEM</th><th>TEST CONDITION</th></tr>
<tr><td>1</td><td>High Temperature Storage Test</td><td>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>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>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>4</td><td>Temperature Cycling Storage Test</td><td>-30℃ → +25℃ → +80℃ → +25℃
(30mins) (5mins) (30mins) (5mins)
10 Cycle
Surrounding temperature, then storage at normal condition 4hrs.</td></tr>
<tr><td rowspan="2">5</td><td rowspan="2">ESD Test</td><td>Air Discharge:
Apply 2 KV with 5 times
Discharge for each polarity +/-</td><td>Contact Discharge:
Apply 250 V with 5 times
discharge for each polarity +/-</td></tr>
<tr><td colspan="2">1. Temperature ambiance : 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 sec) (Tolerance if the output voltage indication : ±5%)</td></tr>
<tr><td>6</td><td>Vibration Test (Packaged)</td><td colspan="2">1. Sine wave 10～55 Hz frequency (1 min/sweep)
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 each 1time
</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.

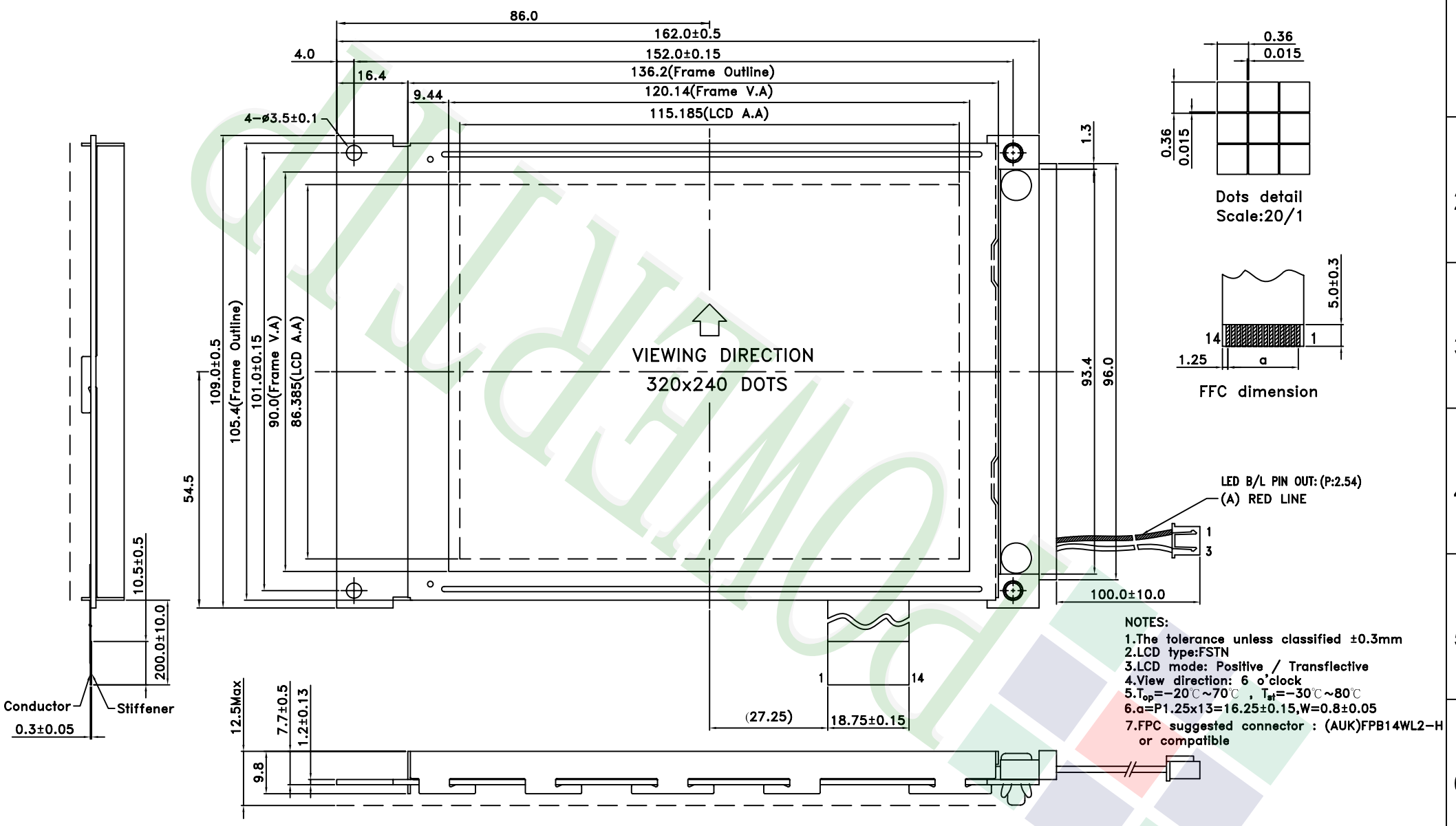
5.4 TERMS OF WARRANTY

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.



REV	REV BY	REVISER	DATE
007			
006			
005			
004			
003			
002			
001	NEW DRAWING	Sally	2014/05/06

PART NO: PG320240WRFQNNH10Q

DRAWING NAME : JLMD-PG320240WRFQNNH10Q

TITLE: LCD MODULE DRAWING

久正光電股份有限公司
POWERTIP TECHNOLOGY CORPORATION

Design	Sally	(3)	Surface		
Check	Terry	Unit	MM	Material	
Approve	Ryan	Scale	1:1	Thickness	
		Page	1/1	Quantity	

Length(Min) (mm) \ Precision Level	Precision Level
1 ~ 4	-
4 ~ 16	-
16 ~ 63	-
63 ~ 250	-
250 ~ 1000	-

Ver.001

Documents NO.	JPKG-PG320240WRFQNNH10Q

LCM包裝規格書
LCM Packaging Specifications

Approve	Check	Contact
Ryan	Terry	Sally

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

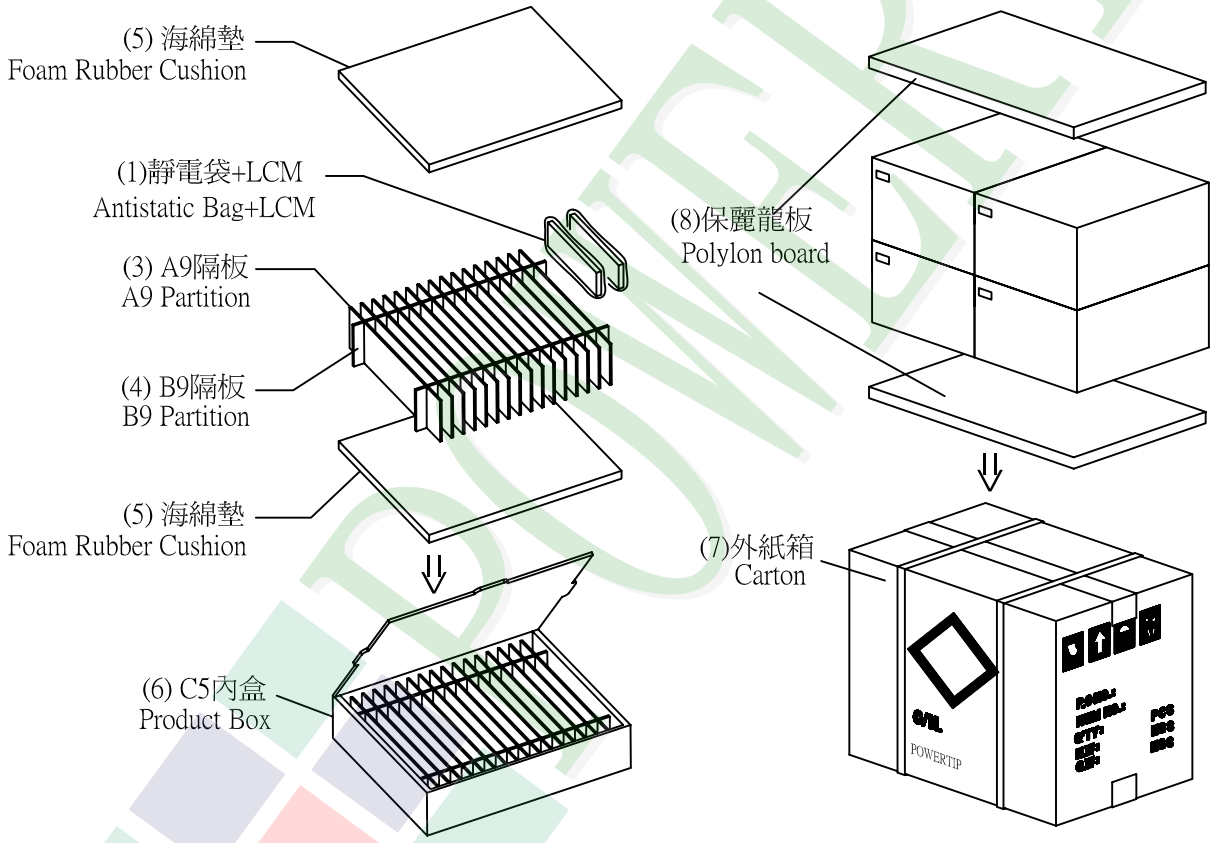
No.	Item	Model	Dimensions (mm)	1Pcs Weight	Quantity	Total Weight
1	成品 (LCM)	PG320240WRFQNNH10Q	162.0 X 109.0	0.214	60	12.84
2	靜電袋(1)Antistatic Bag	BAG240170ARABA	240 X 170	0.0048	60	0.288
3	A9隔板(3)A9 Partition	BX00000000058	245 X 125 X 4	0.0204	64	1.3056
4	B9隔板(4)B9 Partition	BX00000000057	295 X 125 X 4	0.0209	8	0.1672
5	海綿墊(5)Foam Rubber Cushion	OTFOAM00006ABA	290 X 240 X 10	0.02	8	0.16
6	C5內盒(6)Product Box	BX00000000059	310 X 255 X 155	0.248	4	0.992
7	外紙箱(7)Carton	BX52732536CCBA	527 X 325 X 360	0.83	1	0.83
8	保麗龍板(8)Polylon board	OTPLB00000017	510 X 310 X 15	0.025	2	0.05
9						

2.一 整箱總重量 (Total LCD Weight in carton) : 16.63 Kg±10%

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

(1)Quantity Of Spacer : A9隔板 X 16 , B9隔板 X 2

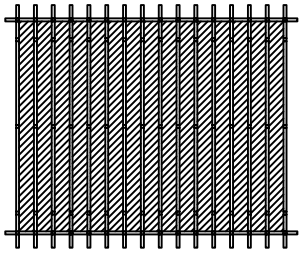
(2)Total LCM quantity in carton : quantity per box 15 x no of boxes 4 = 60



特 記 事 項 (REMARK)

4. Label Specifications :
依廠內標準作業

5. LCM排放示意圖(前後間隔不放置):
5. LCM placed as figure showing:
(First and last slot should be empty)



模組(LCM) X 1pcs.