

### SPECIFICATIONS

<b>CUSTOMER</b>	:	
<b>SAMPLE CODE</b>	:	SH800480T013-IFC05
<b>MASS PRODUCTION CODE</b>	:	PH800480T013-IFC05
<b>SAMPLE VERSION</b>	:	01
<b>SPECIFICATIONS EDITION</b>	:	003
<b>DRAWING NO. (Ver.)</b>	:	LMD-PH800480T013-IFC05(Ver.002)
<b>PACKAGING NO. (Ver.)</b>	:	PKG-PH800480T013-IFC05(Ver.001)

**Customer Approved**

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**Date:**

Approved	Checked	Designer
林裘中 <b>Daniel Lin</b>	林裘中 <b>Daniel Lin</b>	廖志豪 <b>Rex Liao</b>

- Preliminary specification for design input
- Specification for sample approval

### POWERTIP TECH. CORP.

<b>Headquarters:</b> No.8, 6 <sup>th</sup> Road, Taichung Industrial Park, Taichung, Taiwan 台中市 407 工業區六路 8 號	TEL: 886-4-2355-8168 FAX: 886-4-2355-8166	E-mail: <a href="mailto:sales@powertip.com.tw">sales@powertip.com.tw</a> Http://www.powertip.com.tw
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### History of Version

Date (mm / dd / yyyy)	Ver.	Edi.	Description	Page	Design by
08/20/2018	01	001	Preliminary Drawing.	-	Rex
11/14/2018	01	002	First Sample SPEC	-	Rex
12/19/2019	01	003	Modify Thickness from 12.64mm to 10.4mm Modify Interface Pin Description	4 10	Rex

Total: 22 Pages

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Appendix : 1. LCM Drawing

Note : For detailed information please refer to IC data sheet : FTDI -- FT813

## 1. SPECIFICATIONS

### 1.1 Features

Item	Standard Value
Display Resolution	800 * 3 (RGB) * 480 Dots
LCD Type	a-Si TFT , Normally white, Transmissive type
Touch Panel	True Multi-Touch Capacitive Touch Panel True Multi-touch with up to 5 Points of Absolution
Screen size(inch)	7.0 inch
Viewing Direction	6 O'clock
Color configuration	RGB Vertical Strip
Backlight Type	White LED B/L
Weight	200g
Interface	SPI
ROHS	THIS PRODUCT CONFORMS THE ROHS OF PTC Detail information please refer website : <a href="http://www.powertip.com.tw/news_detail.php?Key=1&amp;clD=1">http://www.powertip.com.tw/news_detail.php?Key=1&amp;clD=1</a>

### 1.2 Mechanical Specifications

Item	Standard Value	Unit
Outline Dimension	186.8(W) x 110.56 (L) x 10.4 (max) (H)	mm
Active Area	154.08 (W) * 85.92 (L)	mm

Note : For detailed information please refer to LCM drawing

### 1.3 Absolute Maximum Ratings

Item	Symbol	Condition	Min.	Max.	Unit	Remark
Power Supply for TFT Panel	VDD	GND=0	-0.3	+4.0	V	-
Power Supply for Backlight Unit	VCC	GND=0	-0.3	+20.0	V	
Operating Temperature	T <sub>OP</sub>	-	-20	70	°C	
Storage Temperature	T <sub>ST</sub>	-	-30	80	°C	

The absolute maximum rating values of this product are not allowed to be exceeded at any times. Should a module be used with any of the absolute maximum ratings exceeded, the characteristics of the module may not be recovered, or in an extreme case, the module may be permanently destroyed.

### 1.4 DC Electrical Characteristics

GND = 0V, Ta = 25°C

Item	Symbol	Condition	Min.	Typ.	Max.	Unit
Power Supply for TFT Panel	VDD	GND=0V	3.0	3.3	3.6	V
Power Supply for Backlight Unit	VCC	GND=0V	5	-	9	V
Input Voltage for TFT Panel	V <sub>IH</sub>	GND=0V	2.0	-	VDD	V
	V <sub>IL</sub>	GND=0V	0	-	0.8	
Supply Current for TFT Panel	IDD	IDD@VDD=3.3V	-	140	180	mA
Supply Current for Backlight Unit	ICC	ICC@VCC=5V	-	480	500	

## 1.5 Optical Characteristics

VDD= 3.3 V, Ta=25°C

Item		Symbol	Condition	Min.	Typ.	Max.	unit	-	
Response time	Tr+Tf	25°C	-	-	25	50	ms	-	
Viewing angle	Top	$\theta Y+$	CR $\geq$ 10		60	-	Deg.	Note 4	
	Bottom	$\theta Y-$			60	-			
	Left	$\theta X-$			60	-			
	Right	$\theta X+$			60	-			
Contrast ratio		CR		500	600	-	-	Note 3	
Color of CIE Coordinate (With B/L & T/P)	White	X	Ta = 25°C $\theta X, \theta Y = 0^\circ$		(0.25)	(0.30)	(0.35)	-	Note 1
		Y			(0.28)	(0.33)	(0.38)		
	Red	X			(0.51)	(0.56)	(0.61)		
		Y			(0.30)	(0.35)	(0.40)		
	Green	X			(0.29)	(0.34)	(0.39)		
		Y			(0.55)	(0.60)	(0.65)		
	Blue	X			(0.10)	(0.15)	(0.20)		
		Y			(0.02)	(0.07)	(0.12)		
Average Brightness Pattern=white display (With T/P)*1		IV	VCC=5.0V (PWM Duty:100%)	380	460	-	cd/m <sup>2</sup>	Note 1	
Uniformity (With T/P)*2		$\Delta B$	VCC=5.0V (PWM Duty:100%)	70	-	-	%	Note 1	

Note 1:

\*1 :  $\Delta B = B(\min) / B(\max) * 100\%$

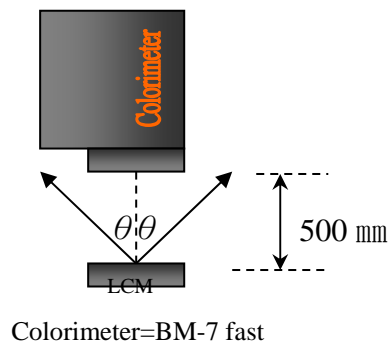
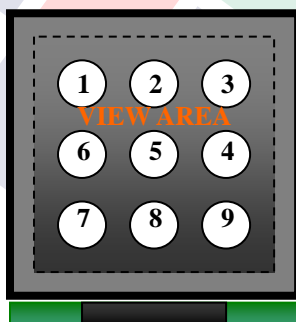
\*2 : Measurement Condition for Optical Characteristics:

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

b : Measurement Distance: 500 ± 50 mm , ( $\theta = 0^\circ$ )

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%



To be measured at the center area of panel with a viewing cone of 1° by Topcon luminance meter BM-7, after 10 minutes operation (module)

Note2: Definition of response time:

The output signals of photo detector are measured when the input signals are changed from “black” to “white”(falling time) and from “white” to “black”(rising time), respectively. The response time is defined as the time interval between the 10% and 90% of Amplitudes.

Refer to figure as below:

Normally White



Normally Black



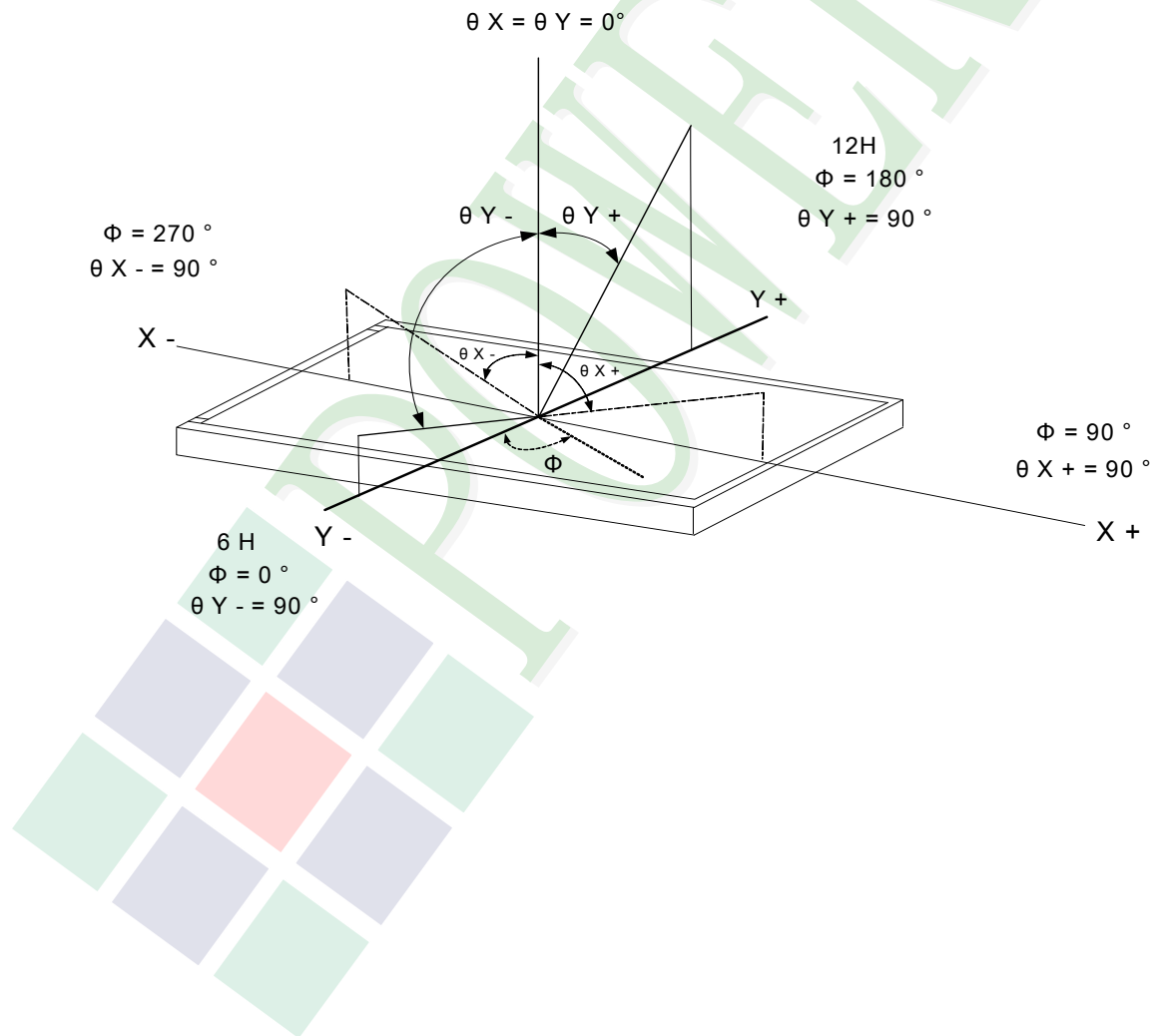
Note3: Definition of contrast ratio:

Contrast ratio is calculated with the following formula

$$\text{Contrast ratio (CR)} = \frac{\text{Photo detector output when LCD is at "White" state}}{\text{Photo detector output when LCD is at "Black" state}}$$

Note4: Definition of viewing angle:

Refer to figure as below:





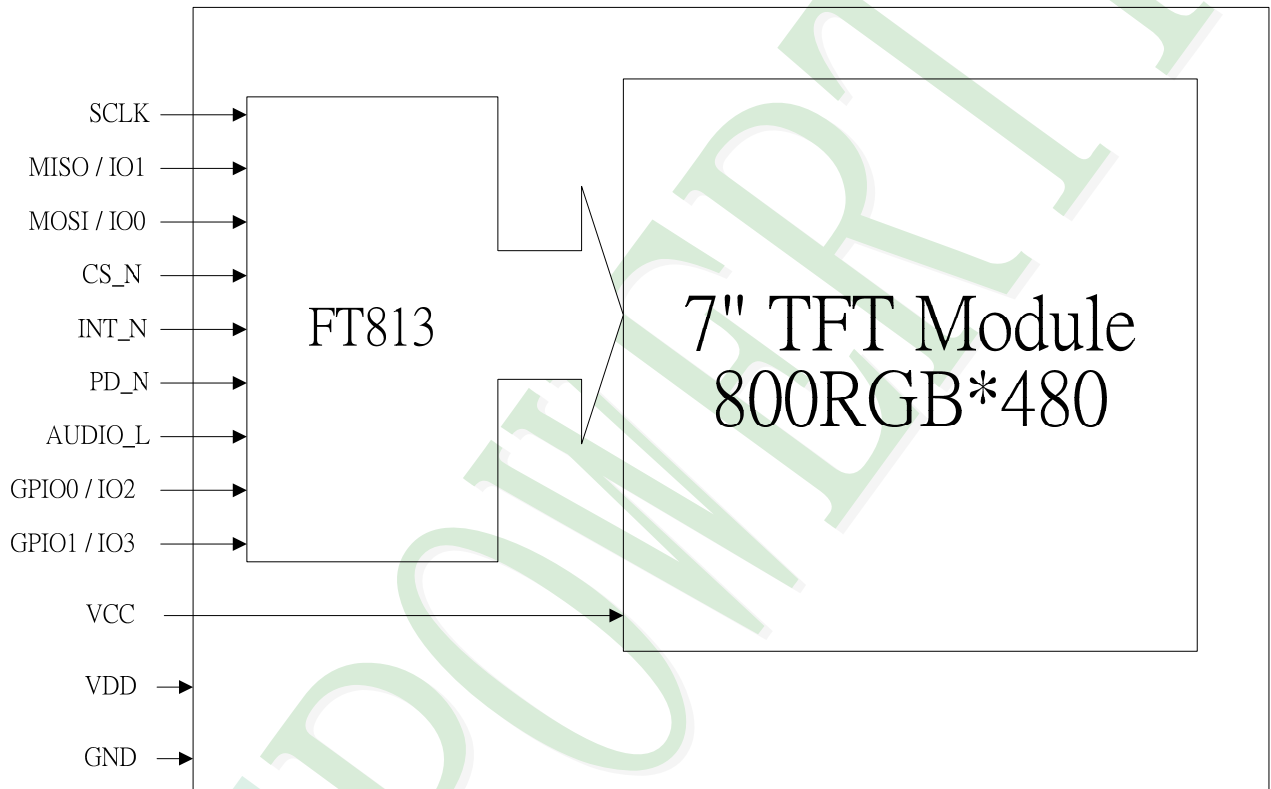
## 2. MODULE STRUCTURE

### 2.1 Counter Drawing

#### 2.1.1 LCM Mechanical Diagram

\* See Appendix

#### 2.1.2 Block Diagram



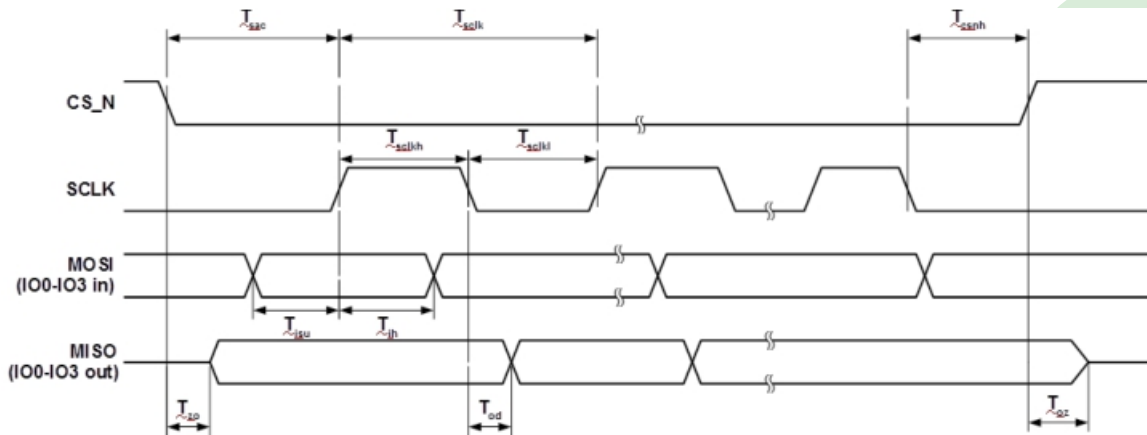
## 2.2 Interface Pin Description

Pin#	Name	DESCRIPTION
1	GND	Ground.
2	VCC	Power Supply for Backlight Unit.
3	VCC	Power Supply for Backlight Unit.
4	NC	Not Used.
5	VDD	Power Supply.
6	GND	Ground.
7	NC	Not Used.
8	AUDIO_L	Audio PWM out
9	NC	Not Used.
10	SCLK	SPI SCK Signal.
11	MISO / IO1	SPI Single mode: SPI MISO output SPI Dual/Quad mode: SPI data line 1
12	MOSI / IO0	SPI Single mode: SPI MOSI input SPI Dual/Quad mode: SPI data line 0
13	CS_N	SPI slave select input
14	INT_N	Interrupt to host, open drain output(default) or push-pull output, active low
15	PD_N	Chip power down mode control input, active low.
16	GPIO0 / IO2	SPI Single/Dual mode: General purpose IO 0. SPI Quad mode: SPI data line 2.
17	GPIO1 / IO3	SPI Single/Dual mode: General purpose IO 1. SPI Quad mode: SPI data line 3.
18	FT813_GPIO2	Connect with FT813 GPIO 2 (pin 12)
19	FT813_GPIO3	Connect with FT813 GPIO 3 (pin 15)
20	GND	Ground.

REG_SPI_WIDTH[1:0]	Channel Mode	Data pins	Max bus speed
00	SINGLE – default mode	MISO, MOSI	30 MHz
01	DUAL	IO0, IO1	30 MHz
10	QUAD	IO0, IO1, IO2, IO3	25 MHz
11	Reserved	-	-

## 2.3 Timing Characteristics

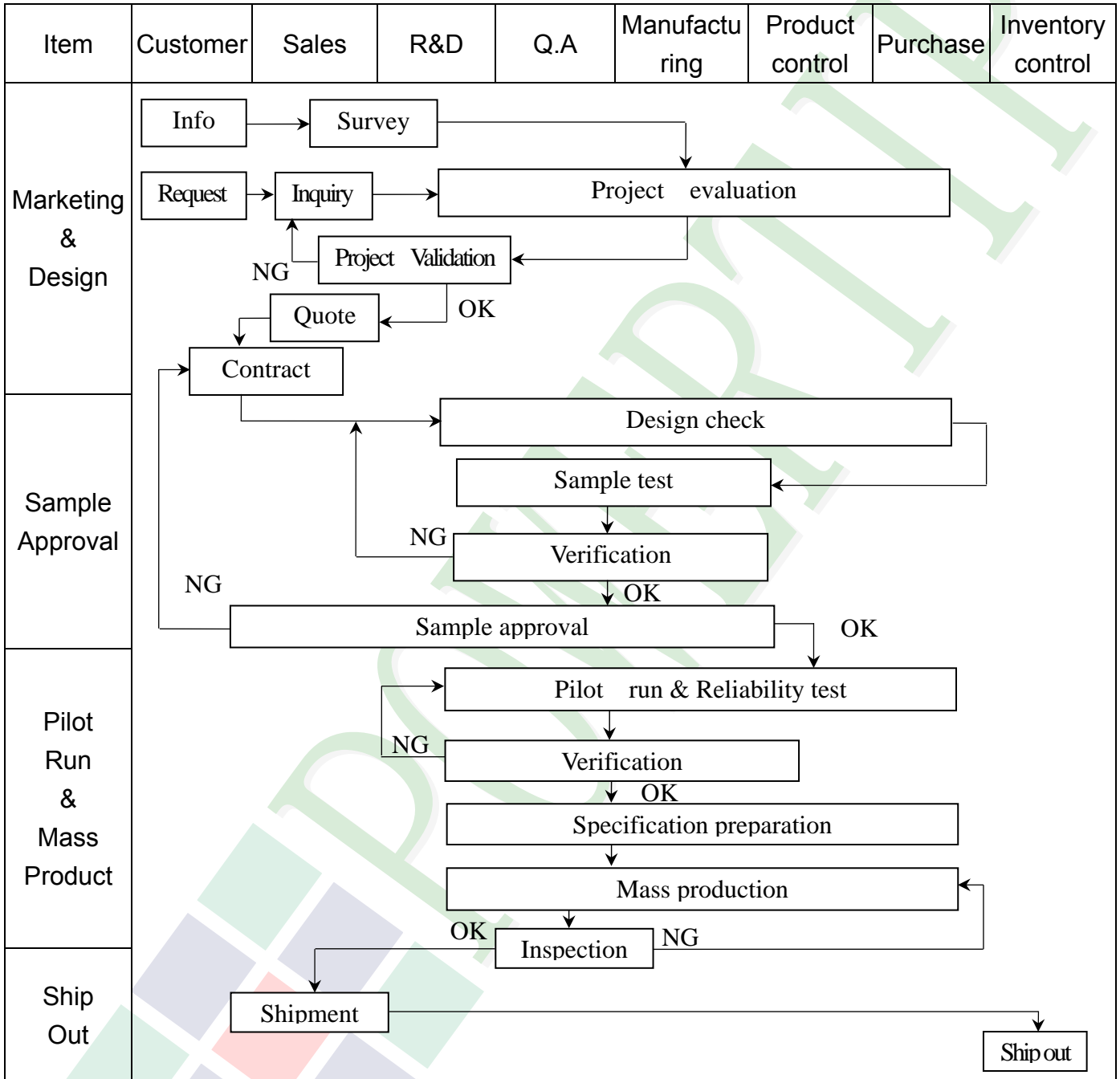
### 2.3.1 SPI Host interface

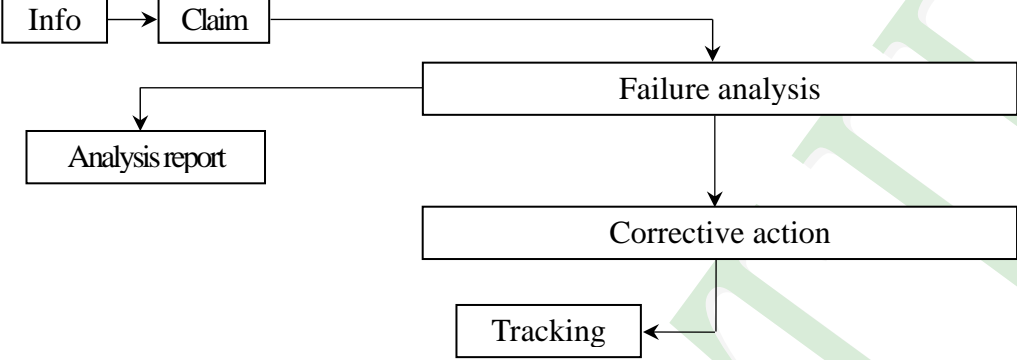


Parameter	Description	Min	Max	Units
Tsclk	SPI clock period (SINGLE/DUAL mode)	33.3		ns
Tsclk	SPI clock period (QUAD mode)	40		ns
Tsckl	SPI clock low duration	13		ns
Tsclkh	SPI clock high duration	13		ns
Tsac	SPI access time	4		ns
Tisu	Input Setup	4		ns
Tih	Input Hold	0		ns
Tzo	Output enable delay		16	ns
Toz	Output disable delay		13	ns
Tod	Output data delay		15	ns
Tcsnh	CSN hold time	0		ns

### 3. QUALITY ASSURANCE SYSTEM

#### 3.1 Quality Assurance Flow Chart



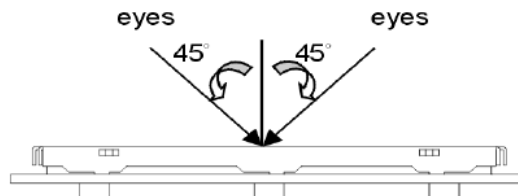
Item	Customer	Sales	R&D	Q.A	Manufacturing	Product control	Purchase	Inventory control
Sales Service	 <pre> graph TD     Info[Info] --&gt; Claim[Claim]     Claim --&gt; Failure[Failure analysis]     Failure --&gt; Report[Analysis report]     Failure --&gt; Action[Corrective action]     Action --&gt; Tracking[Tracking]           </pre>							
Q.A Activity	1. ISO 9001 Maintenance Activities 3. Equipment calibration 5. Standardization Management				2. Process improvement proposal 4. Education And Training Activities			

### 3.2 Inspection Specification

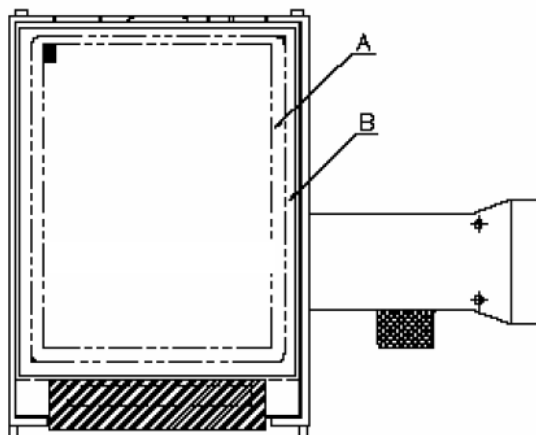
- ◆Scope : The document shall be applied to TFT-LCD Module for 3.5" ~10" (Ver.B01).
- ◆Inspection Standard : MIL-STD-105E Table Normal Inspection Single Sampling Level II.
- ◆Equipment : Gauge 、 MIL-STD 、 Powertip Tester 、 Sample
- ◆Defect Level : Major Defect AQL : 0.4 ; Minor Defect AQL : 1.5
- ◆OUT Going Defect Level : Sampling.
- ◆Standard of the product appearance test :

a. Manner of appearance test :

- (1). The test best be under 20W×2 fluorescent light , and distance of view must be at 30 cm.
- (2). The test direction is base on about around 45° of vertical line.



(3). Definition of area.



*A* area : viewing area

*B* area : Outside of viewing area

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



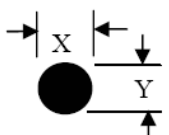
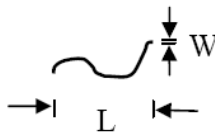
**◆ Specification For TFT-LCD Module 3.5" ~10" :**

(Ver.B01)

NO	Item	Criterion	Level												
01	Product condition	1. 1 The part number is inconsistent with work order of production.	Major												
		1. 2 Mixed product 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 Display malfunction.	Major												
		4. 4 LCD viewing angle defect.	Major												
		4. 5 Current consumption exceeds product specifications.	Major												
05	Dot defect (Bright dot 、 Dark dot)  On -display	<table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="2">Item</th> <th>Acceptance (Q'ty)</th> </tr> </thead> <tbody> <tr> <td rowspan="4" style="text-align: center; vertical-align: middle;">Dot Defect</td> <td style="text-align: center;">Bright Dot</td> <td style="text-align: center;"><math>\leq 4</math></td> </tr> <tr> <td style="text-align: center;">Dark Dot</td> <td style="text-align: center;"><math>\leq 5</math></td> </tr> <tr> <td style="text-align: center;">Joint Dot</td> <td style="text-align: center;"><math>\leq 3</math></td> </tr> <tr> <td style="text-align: center;">Total</td> <td style="text-align: center;"><math>\leq 7</math></td> </tr> </tbody> </table> <p>5. 1 Inspection pattern : full white , full black , Red , Green and blue screens.</p> <p>5. 2 It is defined as dot defect if defect area <math>&gt; 1/2</math> dot.</p> <p>5. 3 The distance between two dot defect <math>\geq 5</math> mm.</p>	Item		Acceptance (Q'ty)	Dot Defect	Bright Dot	$\leq 4$	Dark Dot	$\leq 5$	Joint Dot	$\leq 3$	Total	$\leq 7$	Minor
Item		Acceptance (Q'ty)													
Dot Defect	Bright Dot	$\leq 4$													
	Dark Dot	$\leq 5$													
	Joint Dot	$\leq 3$													
	Total	$\leq 7$													

**◆Specification For TFT-LCD Module 3.5" ~10" :**

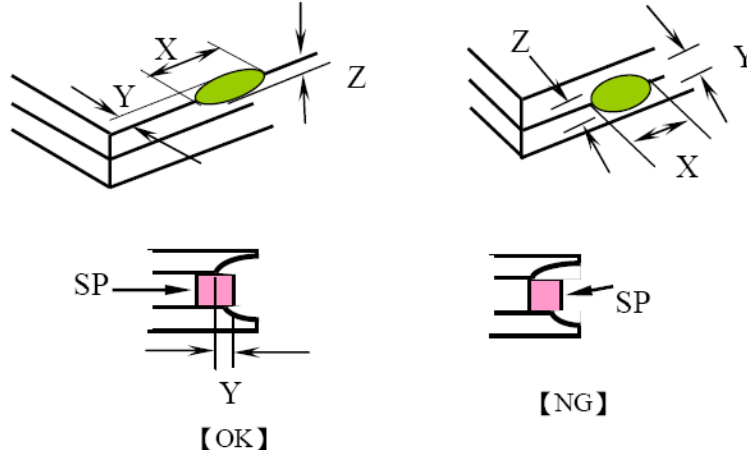
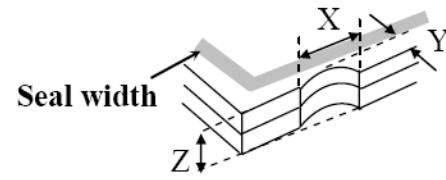
(Ver.B01)

NO	Item	Criterion	Level																																								
06	<p>Black or white dot、scratch、contamination</p> <p>Round type</p>  <p><math>\Phi = (x + y) / 2</math></p> <p>Line type</p> 	<p>6.1 Round type ( Non-display or display ) :</p> <table border="1"> <thead> <tr> <th rowspan="2">Dimension (diameter : <math>\Phi</math>)</th> <th colspan="2">Acceptance (Q'ty)</th> </tr> <tr> <th>A area</th> <th>B area</th> </tr> </thead> <tbody> <tr> <td><math>\Phi \leq 0.25</math></td> <td colspan="2">Ignore</td> </tr> <tr> <td><math>0.25 &lt; \Phi \leq 0.50</math></td> <td>5</td> <td rowspan="3">Ignore</td> </tr> <tr> <td><math>\Phi &gt; 0.50</math></td> <td>0</td> </tr> <tr> <td><b>Total</b></td> <td>5</td> </tr> </tbody> </table> <p>6.2 Line type( Non-display or display ) :</p> <table border="1"> <thead> <tr> <th rowspan="2">Length (L)</th> <th rowspan="2">Width (W)</th> <th colspan="2">Acceptance (Q'ty)</th> </tr> <tr> <th>A area</th> <th>B area</th> </tr> </thead> <tbody> <tr> <td>---</td> <td><math>W \leq 0.03</math></td> <td colspan="2">Ignore</td> </tr> <tr> <td><math>L \leq 10.0</math></td> <td><math>0.03 &lt; W \leq 0.05</math></td> <td>4</td> <td rowspan="3">Ignore</td> </tr> <tr> <td><math>L \leq 5.0</math></td> <td><math>0.05 &lt; W \leq 0.10</math></td> <td>2</td> </tr> <tr> <td>---</td> <td><math>W &gt; 0.10</math></td> <td colspan="2">As round type</td> </tr> <tr> <td colspan="2"><b>Total</b></td> <td colspan="2">5</td> </tr> </tbody> </table>	Dimension (diameter : $\Phi$ )	Acceptance (Q'ty)		A area	B area	$\Phi \leq 0.25$	Ignore		$0.25 < \Phi \leq 0.50$	5	Ignore	$\Phi > 0.50$	0	<b>Total</b>	5	Length (L)	Width (W)	Acceptance (Q'ty)		A area	B area	---	$W \leq 0.03$	Ignore		$L \leq 10.0$	$0.03 < W \leq 0.05$	4	Ignore	$L \leq 5.0$	$0.05 < W \leq 0.10$	2	---	$W > 0.10$	As round type		<b>Total</b>		5		Minor
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07	<p>Polarizer Bubble</p>	<table border="1"> <thead> <tr> <th rowspan="2">Dimension (diameter : <math>\Phi</math>)</th> <th colspan="2">Acceptance (Q'ty)</th> </tr> <tr> <th>A area</th> <th>B area</th> </tr> </thead> <tbody> <tr> <td><math>\Phi \leq 0.25</math></td> <td colspan="2">Ignore</td> </tr> <tr> <td><math>0.25 &lt; \Phi \leq 0.50</math></td> <td>4</td> <td rowspan="3">Ignore</td> </tr> <tr> <td><math>0.50 &lt; \Phi \leq 0.80</math></td> <td>1</td> </tr> <tr> <td><math>\Phi &gt; 0.80</math></td> <td>0</td> </tr> <tr> <td><b>Total</b></td> <td colspan="2">5</td> </tr> </tbody> </table>	Dimension (diameter : $\Phi$ )	Acceptance (Q'ty)		A area	B area	$\Phi \leq 0.25$	Ignore		$0.25 < \Phi \leq 0.50$	4	Ignore	$0.50 < \Phi \leq 0.80$	1	$\Phi > 0.80$	0	<b>Total</b>	5		Minor																						
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**◆ Specification For TFT-LCD Module 3.5" ~10" :**

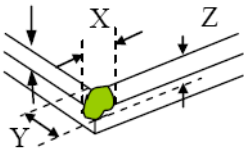
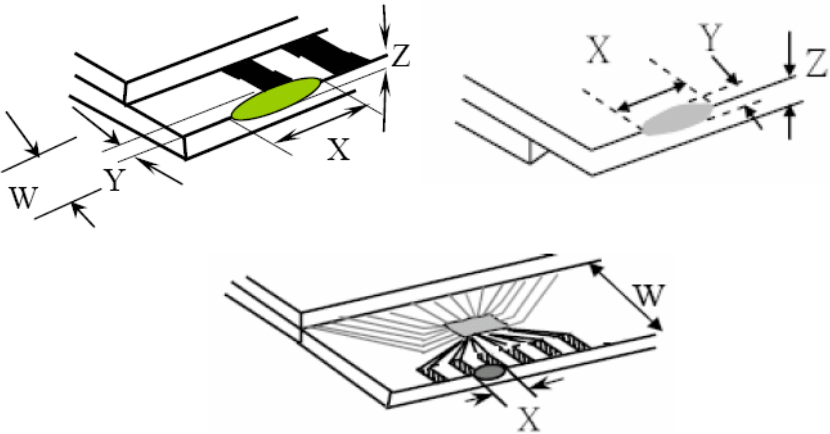
(Ver.B01)

NO	Item	Criterion	Level						
08	The crack of glass	<p><b>Symbols :</b></p> <p><b>X : The length of crack</b>                      <b>Y : The width of crack.</b>  <b>Z : The thickness of crack</b>                      <b>W : terminal length</b>  <b>t : The thickness of glass</b>                      <b>a : LCD side length</b></p> <hr/> <p>8.1 General glass chip :                      8.1.1 Chip on panel surface and crack between panels:</p> 	Minor						
		 <table border="1" data-bbox="542 1545 1340 1836"> <thead> <tr> <th>X</th> <th>Y</th> <th>Z</th> </tr> </thead> <tbody> <tr> <td><math>\leq a</math></td> <td>Crack can't enter viewing area</td> <td><math>\leq 1/2 t</math></td> </tr> <tr> <td><math>\leq a</math></td> <td>Crack can't exceed the half of SP width.</td> <td><math>1/2 t &lt; Z \leq 2 t</math></td> </tr> </tbody> </table>		X	Y	Z	$\leq a$	Crack can't enter viewing area	$\leq 1/2 t$
X	Y	Z							
$\leq a$	Crack can't enter viewing area	$\leq 1/2 t$							
$\leq a$	Crack can't exceed the half of SP width.	$1/2 t < Z \leq 2 t$							



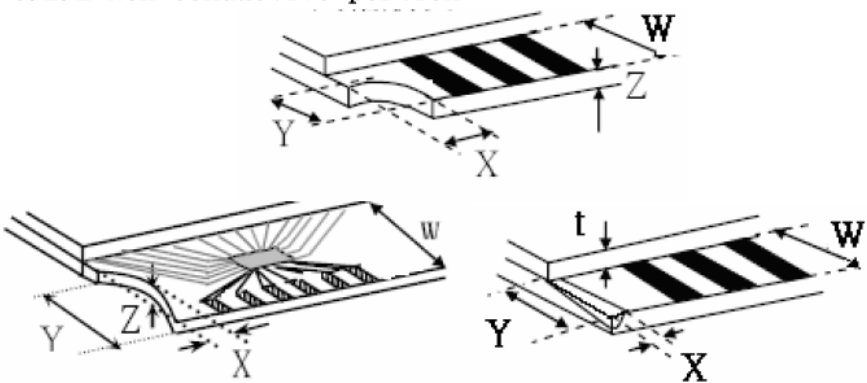
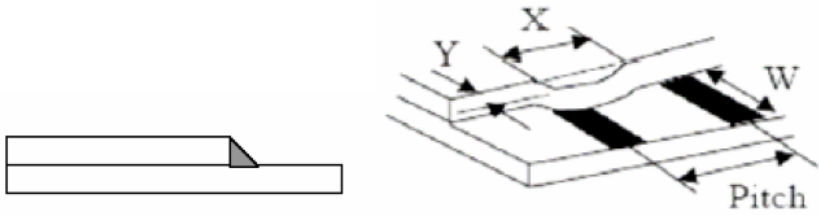
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08	The crack of glass	<p><b>Symbols :</b></p> <p><b>X :</b> The length of crack  <b>Z :</b> The thickness of crack  <b>t :</b> The thickness of glass</p> <p><b>Y :</b> The width of crack.  <b>W :</b> terminal length  <b>a :</b> LCD side length</p> <hr/> <p>8.1.2 Corner crack :</p>  <table border="1" data-bbox="525 759 1334 1048"> <thead> <tr> <th>X</th> <th>Y</th> <th>Z</th> </tr> </thead> <tbody> <tr> <td><math>\leq 1/5 a</math></td> <td>Crack can't enter viewing area</td> <td><math>Z \leq 1/2 t</math></td> </tr> <tr> <td><math>\leq 1/5 a</math></td> <td>Crack can't exceed the half of SP width.</td> <td><math>1/2 t &lt; Z \leq 2 t</math></td> </tr> </tbody> </table>	X	Y	Z	$\leq 1/5 a$	Crack can't enter viewing area	$Z \leq 1/2 t$	$\leq 1/5 a$	Crack can't exceed the half of SP width.	$1/2 t < Z \leq 2 t$		
		X	Y	Z									
$\leq 1/5 a$	Crack can't enter viewing area	$Z \leq 1/2 t$											
$\leq 1/5 a$	Crack can't exceed the half of SP width.	$1/2 t < Z \leq 2 t$											
<p>8.2 Protrusion over terminal :</p> <p>8.2.1 Chip on electrode pad :</p>  <table border="1" data-bbox="563 1680 1345 1850"> <thead> <tr> <th></th> <th>X</th> <th>Y</th> <th>Z</th> </tr> </thead> <tbody> <tr> <td><b>Front</b></td> <td><math>\leq a</math></td> <td><math>\leq 1/2 W</math></td> <td><math>\leq t</math></td> </tr> <tr> <td><b>Back</b></td> <td><math>\leq a</math></td> <td><math>\leq W</math></td> <td><math>\leq 1/2 t</math></td> </tr> </tbody> </table>		X	Y	Z	<b>Front</b>	$\leq a$	$\leq 1/2 W$	$\leq t$	<b>Back</b>	$\leq a$	$\leq W$	$\leq 1/2 t$	Minor
	X	Y	Z										
<b>Front</b>	$\leq a$	$\leq 1/2 W$	$\leq t$										
<b>Back</b>	$\leq a$	$\leq W$	$\leq 1/2 t$										

**◆ Specification For TFT-LCD Module 3.5" ~10" :**

(Ver.B01)

NO	Item	Criterion	Level									
08	The crack of glass	<p><b>Symbols :</b></p> <p><b>X : The length of crack</b>                      <b>Y : The width of crack.</b>  <b>Z : The thickness of crack</b>                      <b>W : terminal length</b>  <b>t : The thickness of glass</b>                      <b>a : LCD side length</b></p>	Minor									
		<p>8.2.2 Non-conductive portion :</p>  <table border="1" data-bbox="630 963 1260 1120"> <thead> <tr> <th>X</th> <th>Y</th> <th>Z</th> </tr> </thead> <tbody> <tr> <td><math>\leq 1/3 a</math></td> <td><math>\leq W</math></td> <td><math>\leq t</math></td> </tr> </tbody> </table> <p>⊙ If the chipped area touches the ITO terminal, over 2/3 of the ITO must remain and be inspected according to electrode terminal specifications.</p> <p>8.2.3 Glass remain :</p>  <table border="1" data-bbox="550 1736 1244 1881"> <thead> <tr> <th>X</th> <th>Y</th> <th>Z</th> </tr> </thead> <tbody> <tr> <td><math>\leq a</math></td> <td><math>\leq 1/3 W</math></td> <td><math>\leq t</math></td> </tr> </tbody> </table>		X	Y	Z	$\leq 1/3 a$	$\leq W$	$\leq t$	X	Y	Z
X	Y	Z										
$\leq 1/3 a$	$\leq W$	$\leq t$										
X	Y	Z										
$\leq a$	$\leq 1/3 W$	$\leq t$										

**◆Specification For TFT-LCD Module 3.5" ~10" :**

(Ver.B01)

NO	Item	Criterion	Level
09	Backlight elements	9. 1 Backlight can't work normally.	Major
		9. 2 Backlight doesn't light or color is wrong.	Major
		9. 3 Illumination source flickers when lit.	Major
10	General appearance	10. 1 Pin type 、 quantity 、 dimension must match type in structure diagram.	Major
		10. 2 No short circuits in components on PCB or FPC .	Major
		10. 3 Parts on PCB or FPC must be the same as on the production characteristic chart .There should be no wrong parts , missing parts or excess parts.	Major
		10. 4 Product packaging must the same as specified on packaging specification sheet.	Minor
		10. 5 The folding and peeled off in polarizer are not acceptable.	Minor
		10. 6 The PCB or FPC between B/L assembled distance(PCB or FPC ) is $\leq 1.5$ mm.	Minor





## 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

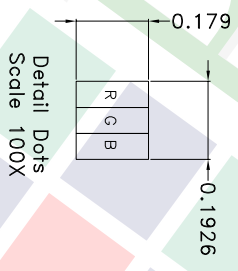
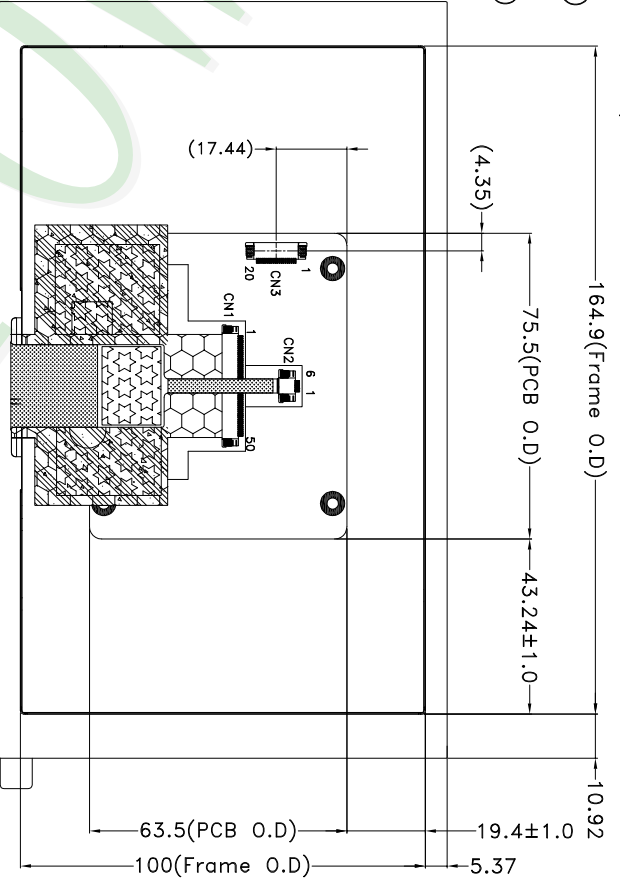
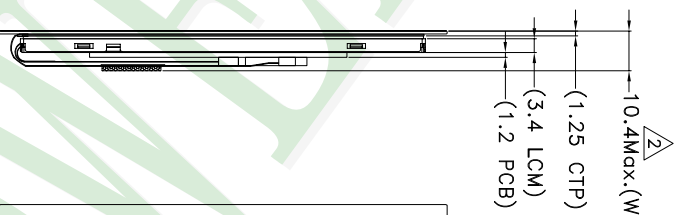
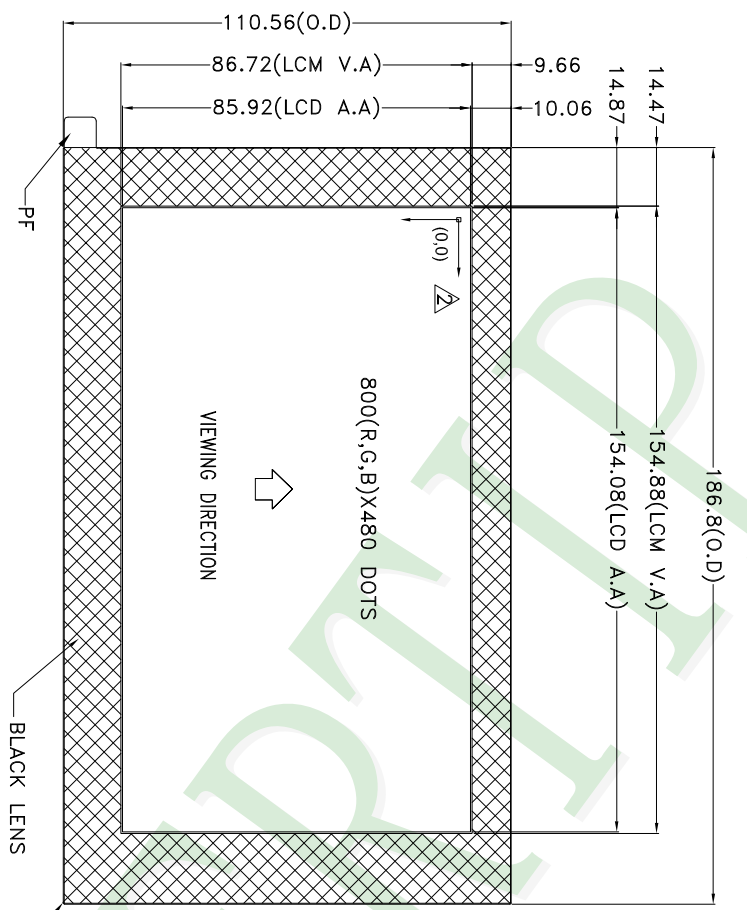
- 5.2.1 Avoid any strong mechanical shock which can break the glass.
- 5.2.2 Avoid static electricity which can damage the CMOS LSI—When working with the module , be sure to ground your body and any electrical equipment you may be using.
- 5.2.3 Do not remove the panel or frame from the module.
- 5.2.4 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.
- 5.2.8 To control temperature and time of soldering is  $320\pm 10^{\circ}\text{C}$  and 3-5 sec.
- 5.2.9 To avoid liquid (include organic solvent) stained on LCM .

### 5.3 STORAGE

- 5.3.1 Store the panel or module in a dark place where the temperature is  $25^{\circ}\text{C} \pm 5^{\circ}\text{C}$  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.



- NOTES:
- 1.LCD TYPE: TFT
  - 2.LCD DISPLAY: POSITIVE/TRANSMISSIVE
  - 3.VIEW DIRECTION: 6 O'CLOCK
  - 4.The tolerance unless classified  $\pm 0.3\text{mm}$
  5. :Component & Unbending area
  6. :EMI Film, :Aluminum Foil Conductive Adhesive Tape, :Shielding tape

007					
006					
005					
004					
003					
002	Modify Thickness & module zero coordinates	Tina	2018/11/20		
001	NEW DRAWING	Bob	2018/8/17		
REV		REV BY		REVISER	DATE

PART NO:		PH800480T013-IFC05
DRAWING NAME :		LMD-PH800480T013-IFC05
TITLE:		LCD MODULE DRAWING

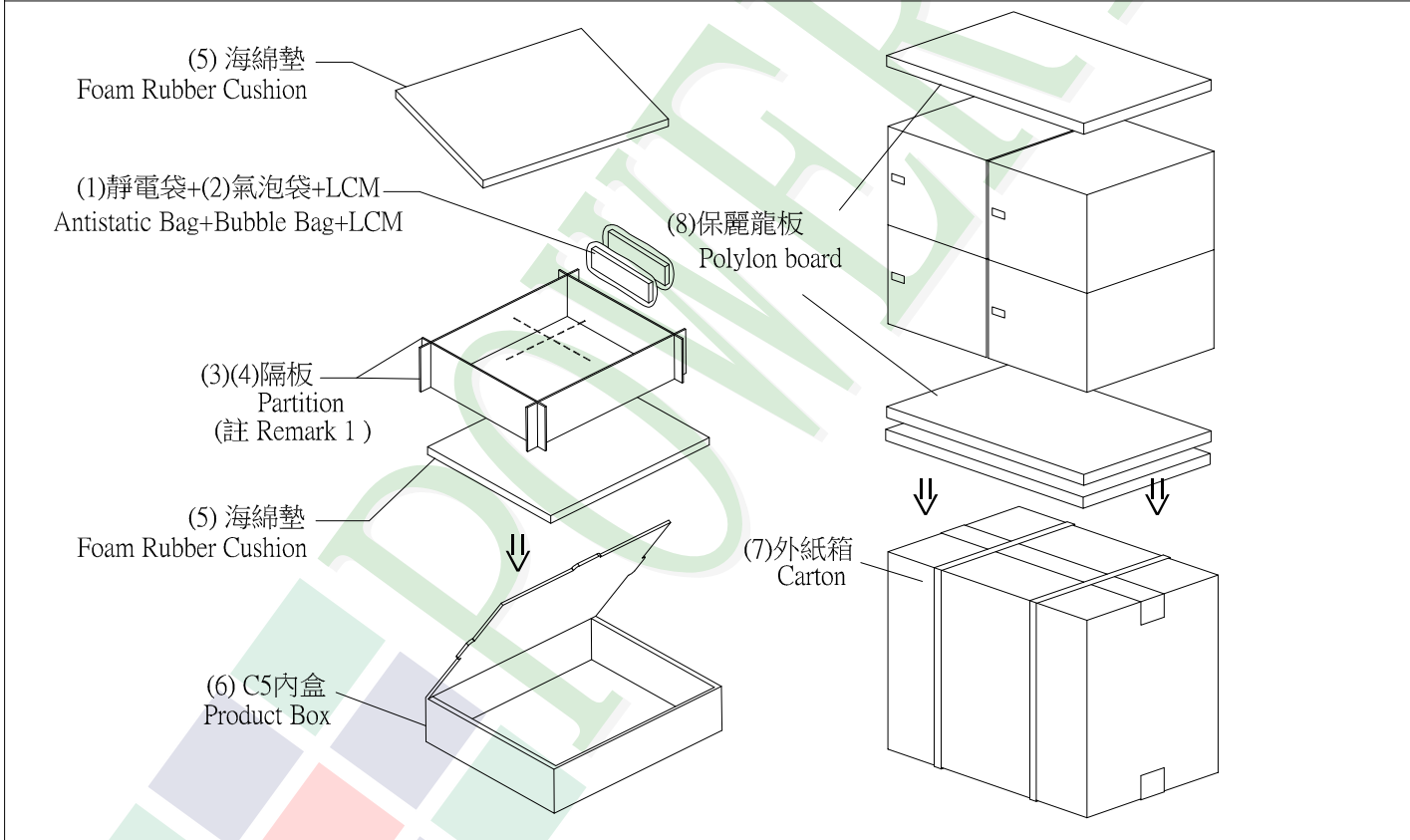
		Design		Bob Zhang	
		Check		Tina Chen	
		Approve		Jimmy Chen	
		Page		1/1	
Surface		Unit		Material	
Precision Level		Scale		Thickness	
Precision Level		Quantity		Quantity	
Precision Level		Quantity		Quantity	



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)	PH800480T013-IFC05	186.8 X 110.56	0.19	56	10.64
2	靜電袋(1)Antistatic Bag	BAG240170ARABA	240 X 170	0.0048	56	0.2688
3	氣泡袋(2)Bubble Bag	BAG170150BRABA	170 X 150	0.0045	56	0.252
4	A9隔板(3)A9 Partition	BX00000000058	245 X 125 X 4	0.0204	36	0.7344
5	B9隔板(4)B9 Partition	BX00000000057	295 X 125 X 4	0.0209	8	0.1672
6	海綿墊(5)Foam Rubber Cushion	OTFOAM00006ABA	290 X 240 X 10	0.02	8	0.16
7	C5內盒(6)Product Box	BX00000000059	310 X 255 X 155	0.248	4	0.992
8	外紙箱(7)Carton	BX52732536CCBA	527 X 325 X 360	0.83	1	0.83
9	保麗龍板(8)Polylon board	OTPLB00000017	510 X 310 X 15	0.025	3	0.075

2. 一整箱總重量 (Total LCD Weight in carton) : 14.12 Kg±10%  
 3. 單箱數量規格表 (Packaging Specifications and Quantity) :  
 (1)Quantity Of Spacer : A9隔板 X 9 , B9隔板 X 2  
 (2)Total LCM quantity in carton : quantity per box 14 x no of boxes 4 = 60



特 記 事 項 (REMARK)

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

▨ 模組(LCM) X 2pcs.



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[RVT43ULFNWC03 V4](#) [SM-RVT101HVBFWCA0](#) [SM-RVT101HVBNWCA0](#) [SM-RVT35HHBFWCA0](#) [SM-RVT35HHBNWCA0](#) [SM-](#)  
[RVT43HLBFWCA0](#) [SM-RVT43HLBNWCA0](#) [SM-RVT50HQBNWCA0](#) [SM-RVT70HSBFWCA0](#) [SM-RVT70HSBNWCA0](#) [PIM579](#)  
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[PIC32](#) [MIKROMEDIA FOR STELLARIS M3](#) [MIKROMEDIA HMI 3.5 RES](#) [MIKROMEDIA HMI 5](#) [MIKROMEDIA PLUS FOR FT90X](#)  
[MIKROMEDIA PLUS FOR PIC32MX7 SHIELD](#) [MIKROMEDIA PROTO SHIELD](#) [14628](#) [MIKROMEDIA 5 FOR TIVA](#) [MIKROMEDIA 5](#)  
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