



# SPECIFICATION

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PH128800T004-ZNA01

10.1" - WXGA - LVDS

Version: 00.5  
Date: 24.10.2023

Note: This specification is subject to change without prior notice



## SPECIFICATIONS

CUSTOMER	:	CDE021
SAMPLE CODE	:	SH128800T004-ZNA01
MASS PRODUCTION CODE	:	PH128800T004-ZNA01
SAMPLE VERSION	:	04
SPECIFICATIONS EDITION	:	005
DRAWING NO. (Ver.)	:	JLMD-PH128800T004-ZNA01_003
PACKAGING NO. (Ver.)	:	JPKG-PH128800T004-ZNA01_001

### Customer Approved

Date:


Approved	Checked	Designer
劉進 Jin Liu	劉進 Jin Liu	陳璐 Lu Chen

- Preliminary specification for design input
- Specification for sample approval

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## 1. SPECIFICATIONS

### 1.1 Features

<u>Item</u>	<u>Standard Value</u>
Screen size(Inch)	10.1(Diagonal)
Resolution	1280* (R、G、B) * 800 Dots
Display mode	Transmissive, Normally Black
Color	16.7M
Interface	8 bit LVDS
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;Cid=1">http://www.powertip.com.tw/news_detail.php?Key=1&amp;Cid=1</a>

### 1.2 Mechanical Specifications

<u>Item</u>	<u>Standard Value</u>	<u>Unit</u>
Outline Dimension	229.8(W) * 149 (L) * 10.0 (H)Max	mm

#### LCD panel

<u>Item</u>	<u>Standard Value</u>	<u>Unit</u>
Active Area	216.96 (W) * 135.6 (L)	mm

Note : For detailed information please refer to LCM drawing.

### 1.3 Absolute Maximum Ratings

Item	Symbol	Condition	Min.	Max.	Unit
Power Supply Voltage	VDD	-	-0.3	+4.0	V
Power Supply Voltage	LED_VCC	-	-0.3	+27	V
Operating Temperature	T <sub>OP</sub> (Ts)	Note 1	-30	+80	°C
Storage Temperature	T <sub>ST</sub> (Ta)	Note 2	-30	+80	°C
Storage Humidity	H <sub>D</sub>	Ta < 60 °C	10	90	%RH

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.

Note 1 : Ts is the temperature of panel's surface.

Note 2 : Ta is the ambient temperature of samples.

### 1.4 DC Electrical Characteristics

Item	Symbol	Condition	Min.	Typ.	Max.	Unit
Power Supply Voltage for LCD Driver	VDD	-	2.75	3.3	3.6	V
Power Supply Voltage for LED Driver	LED_VCC	-	9.0	12.0	15.0	V
Power Supply Current	IDD*1	VDD=3.3V	-	400	600	mA
Power Supply Current For LED Driver	I <sub>LED_VCC</sub>	LED_VCC =12V	-	600	1000	mA
Power Consumption (non-Touch Panel)	Pd	VDD=3.3V LED_VCC =12V	-	-	1.98+12	W
PWM Signal Voltage	High	VPWM	-	1.9	-	V
	Low		-	-	0.8	V
LED Enable Voltage	High	V <sub>LED_EN</sub>	-	1.9	-	V
	Low		-	-	0.8	V
LED PWM Frequency	FPWM	-	100	-	20000	Hz

## 1.5 Optical Characteristics

Ta=25°C

Item	Symbol	Condition	Min.	Typ.	Max.	Unit	-
Response time	Tr + Tf	-	-	25	50	ms	Note2
Viewing angle	Top	ΘY+	-	85	-	Deg.	Note4
	Bottom	ΘY-	-	85	-		
	Left	ΘX-	-	85	-		
	Right	ΘX+	-	85	-		
Contrast ratio	CR		600	800	-	-	Note3
Color of CIE Coordinate (With B/L )	White	X	0.26	0.31	0.36	-	Note1
		Y	0.30	0.35	0.40		
	Red	X	0.56	0.61	0.66		
		Y	0.29	0.34	0.39		
	Green	X	0.28	0.33	0.38		
		Y	0.53	0.58	0.63		
	Blue	X	0.10	0.15	0.20		
		Y	0.11	0.16	0.21		
Average Brightness Pattern=white display (With B/L)	IV	If=200mA	800	1000	-	cd/m2	Note1
Luminance uniformity	YU	-	70	-	-	%	Note1

Note1:

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

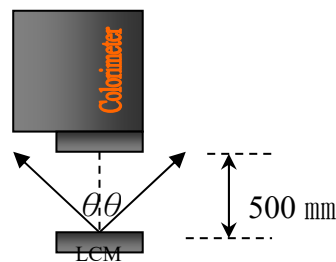
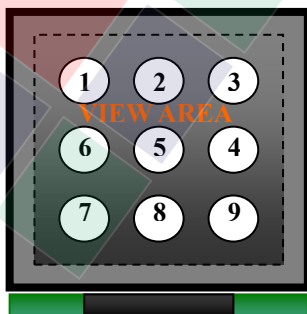
2 : Measurement Condition for Optical Characteristics:

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 , (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%

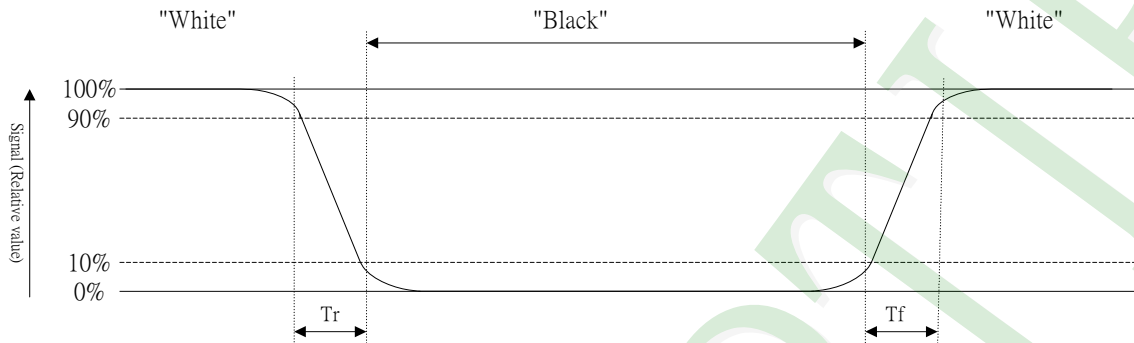


Colorimeter=BM-7 fast

**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:



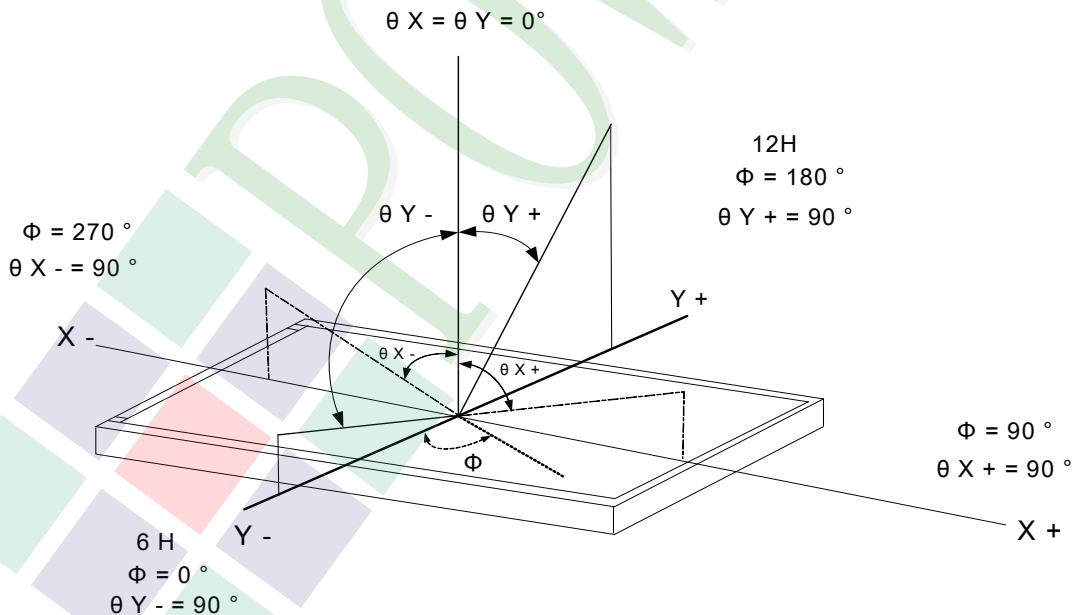
**Note3: Definition of contrast ratio:**

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:





## 1.6 Backlight Unit Characteristics

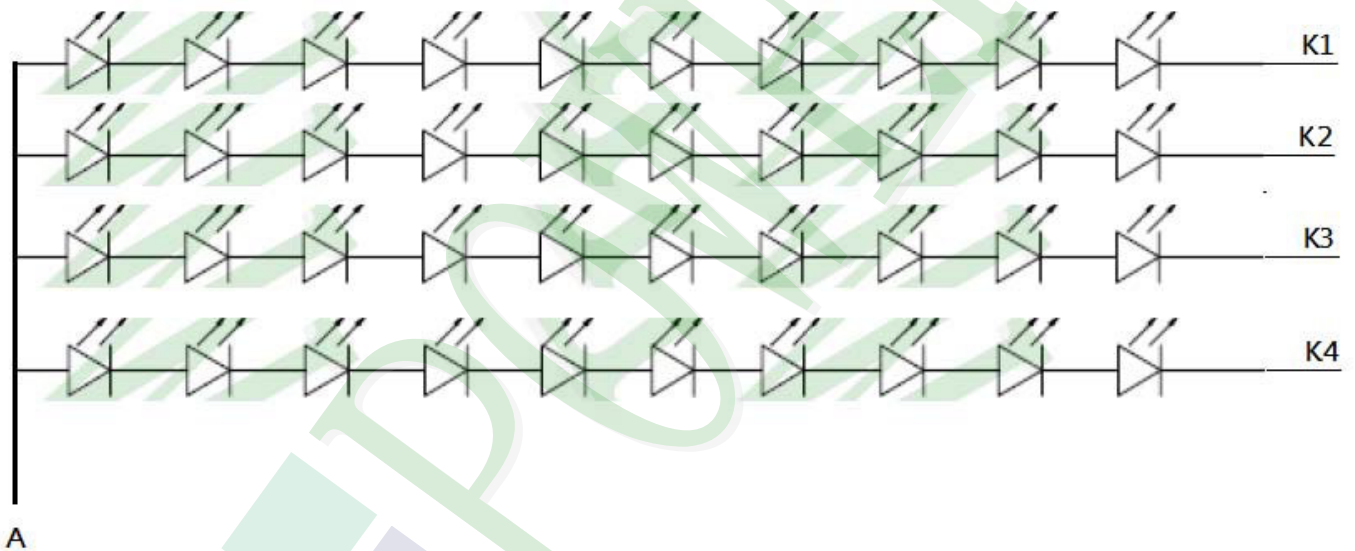
### Maximum Ratings

Item	Symbol	Conditions	Min.	Typ.	Max.	Unit
Power Dissipation	Pd	1 LED	-	-	306	mW
LED Forward Current	IF		-	-	90	mA
LED Reverse Voltage	VR		-	-	0.5	V

### Electrical / Optical Characteristics

Item	Symbol	Conditions	Min.	Typ.	Max.	Unit
Voltage for LED Backlight	VF	If=200mA	26	28	30	V
Current for LED Backlight	IF		-	200	-	mA
Color	White					

### Internal Circuit Diagram



### Other Description

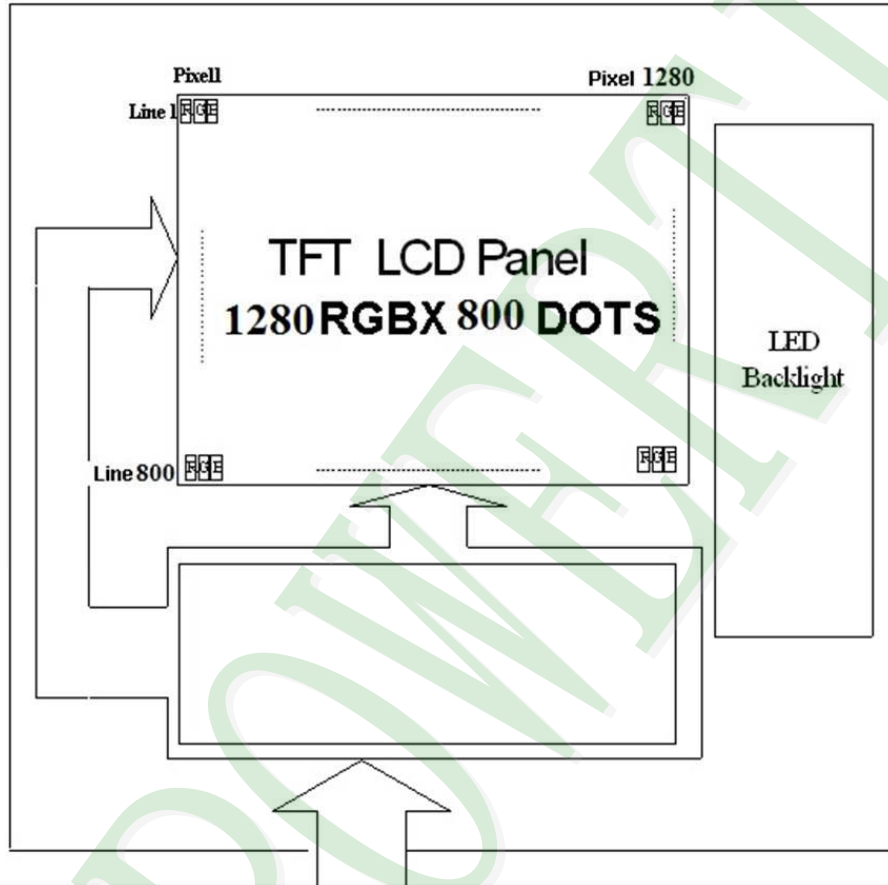
Item	Conditions	Description
Life Time	Ta =25°C IF= 200mA	70000 hrs

## 2. MODULE STRUCTURE

### 2.1 Counter Drawing

#### 2.1.1 LCM Mechanical Diagram

\* See Appendix



1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40		
NC	VDD	VDD	NC	NC	NC	NC	LV0N	LV0P	GND	LV1P	LV1N	LV2N	LV2P	GND	LVCLN	LVCLP	GND	NC	NC	NC	LED_GND	LED_GND	LED_GND	LED_GND	NC	LED_PWM	LED_EN	NC	NC	LED_VCC	LED_VCC	LED_VCC	NC	NC	NC	NC	NC	NC	NC	NC	NC

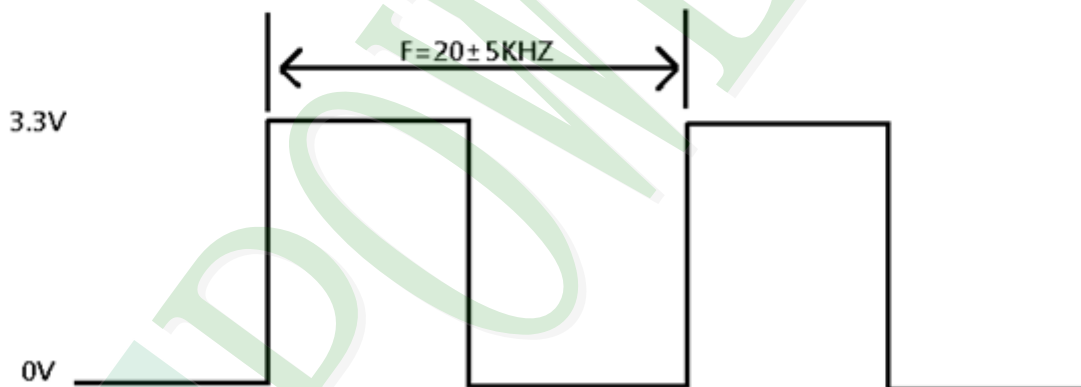
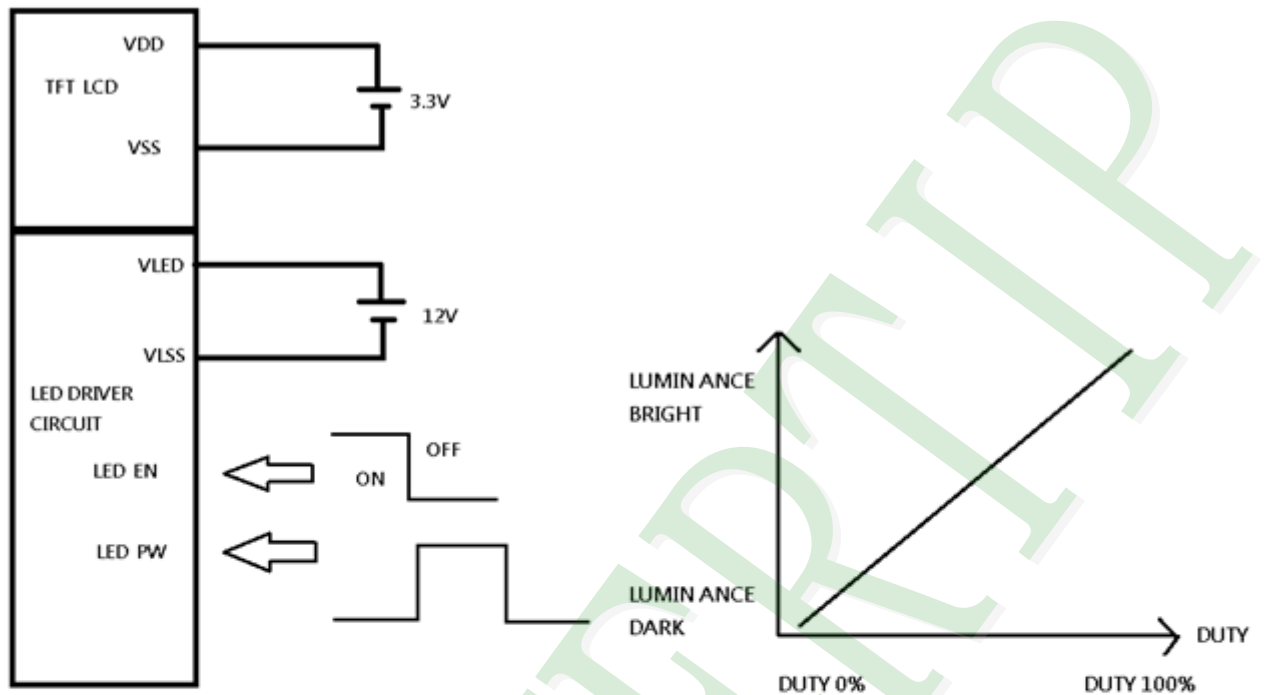
## 2.2 Interface Pin Description

<u>Pin No.</u>	<u>Symbol</u>	<u>Description</u>
1	NC	No Connection.
2	VDD	Power Supply.
3	VDD	Power Supply.
4	NC	No Connection.
5	NC	No Connection.
6	NC	No Connection.
7	NC	No Connection.
8	LV0N	-LVDS Differential Data Input.
9	LV0P	+LVDS Differential Data Input.
10	GND	Ground.
11	LV1N	-LVDS Differential Data Input.
12	LV1P	+LVDS Differential Data Input.
13	GND	Ground.
14	LV2N	-LVDS Differential Data Input.
15	LV2P	+LVDS Differential Data Input.
16	GND	Ground.
17	LVCLKN	-LVDS Differential Clock Input.
18	LVCLKP	+LVDS Differential Clock Input.
19	GND	Ground.
20	LV3N	-LVDS Differential Data Input.
21	LV3P	+LVDS Differential Data Input.
22	GND	Ground.
23	LED_GND	Ground for LED Driving
24	LED_GND	Ground for LED Driving
25	LED_GND	Ground for LED Driving
26	NC	No Connection.
27	LED_PWN	LED Backlight PWM control signal for dimming.

<u>Pin No.</u>	<u>Symbol</u>	<u>Description</u>
28	LED_EN	LED Backlight Enable Input.
29	NC	No Connection.
30	NC	No Connection.
31	LED_VCC	Power Supply for LED Backlight driving.
32	LED_VCC	Power Supply for LED Backlight driving.
33	LED_VCC	Power Supply for LED Backlight driving.
34	NC	No Connection.
35	NC	No Connection.
36	NC	No Connection.
37	NC	No Connection.
38	NC	No Connection.
39	NC	No Connection.
40	NC	No Connection.

## 2.3 Power Supply Characteristics

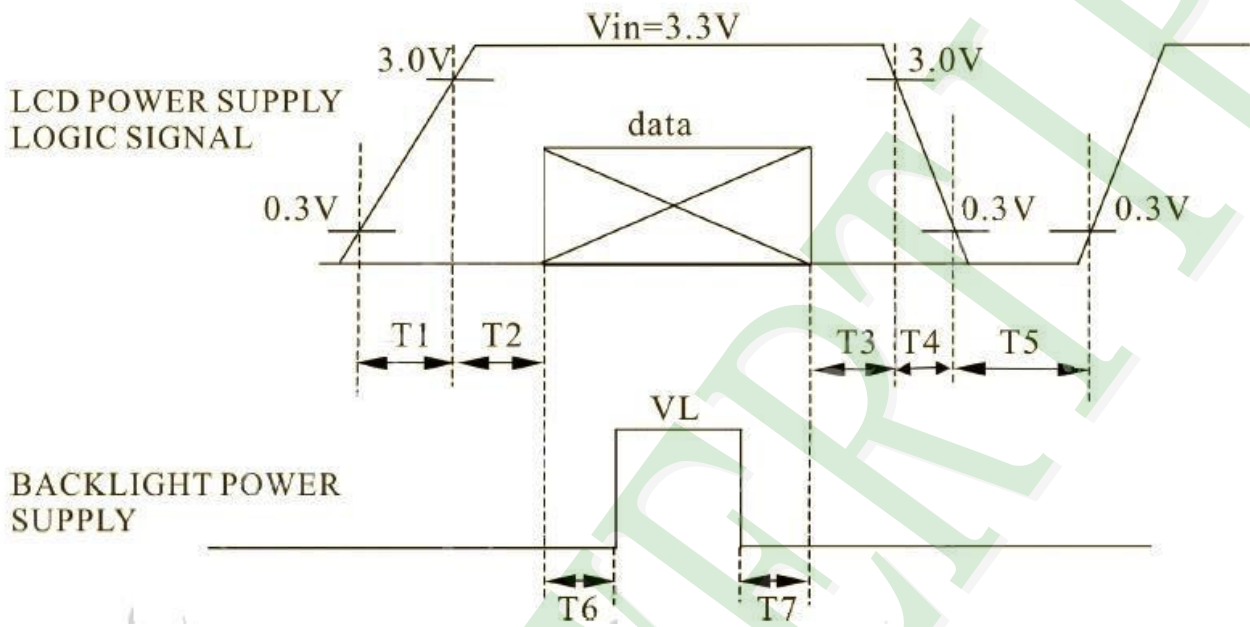
### 2.3.1 POWER SUPPLY FOR LCM





### 2.3.2 POWER ,SIGNAL SEQUENCE

- $0.5 < t_1 \leq 10\text{ms}$      $200\text{ms} \leq t_5$
- $0 < t_2 \leq 50\text{ms}$      $200\text{ms} \leq t_6$
- $0 < t_3 \leq 50\text{ms}$      $200\text{ms} \leq t_7$
- $0 < t_4 \leq 10\text{ms}$

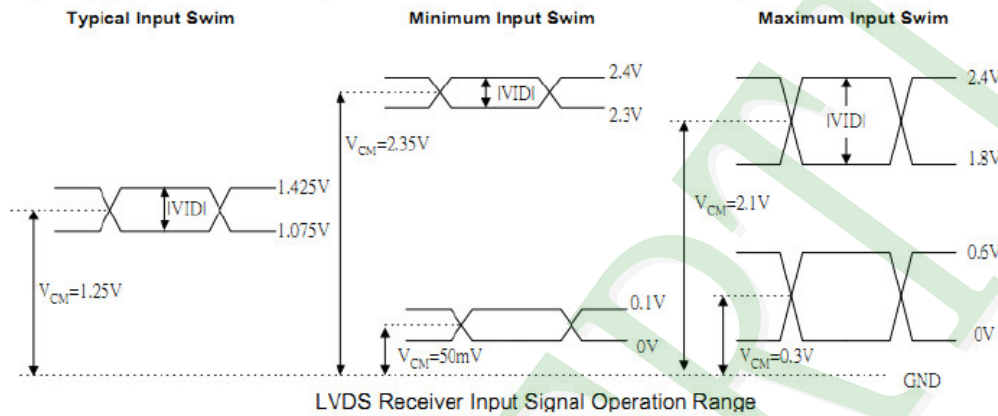


## 2.4 Timing Characteristics

### 2.4.1 LVDS Signal Timing Characteristics

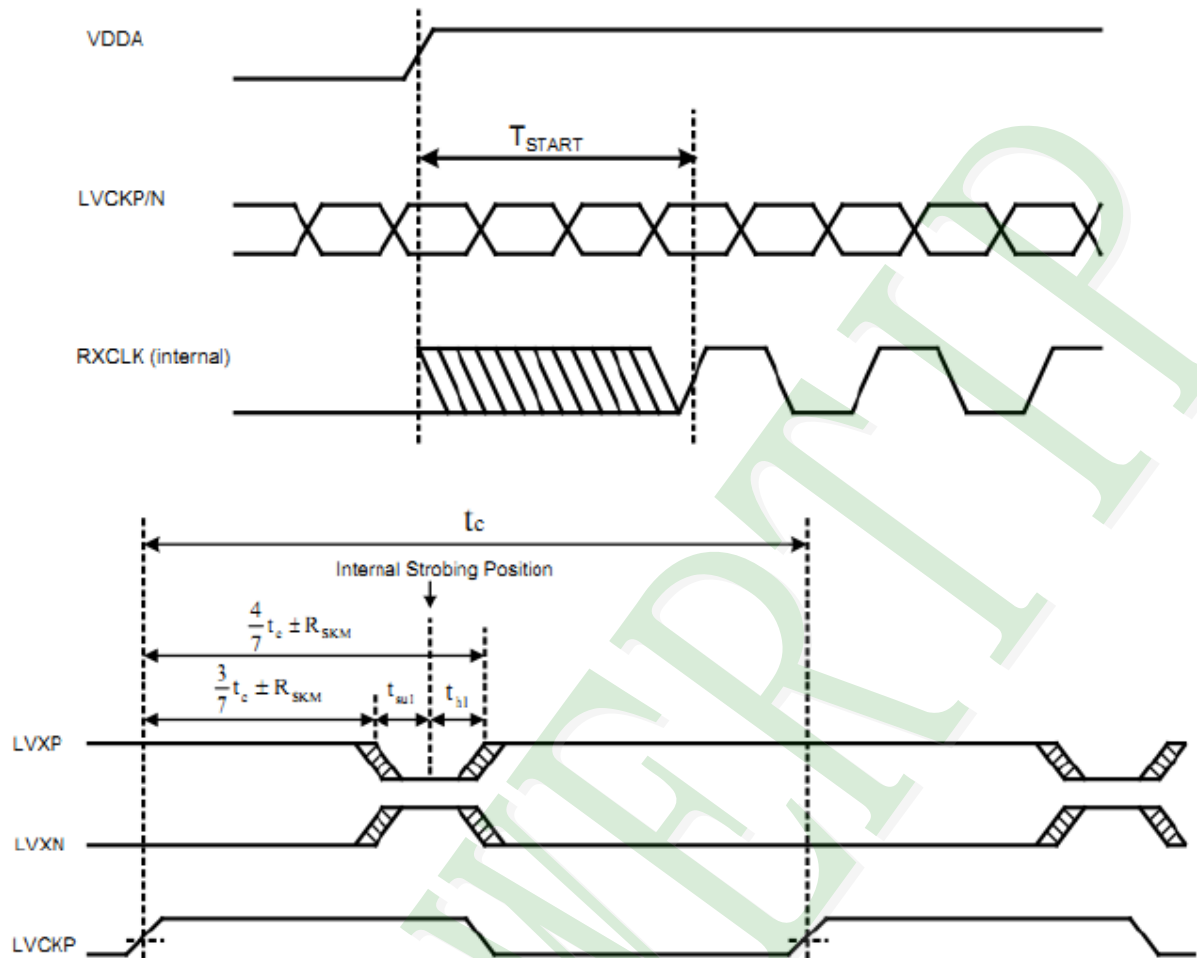
#### DC Characteristics

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
$V_{TH}$	Differential Input High Threshold	$V_{CM} = +1.2V$	-	-	100	mV
$V_{TL}$	Differential Input Low Threshold		-100	-	-	mV
$I_{CC}$	Average Supply Current		-	TBD	-	mA



#### AC Characteristics

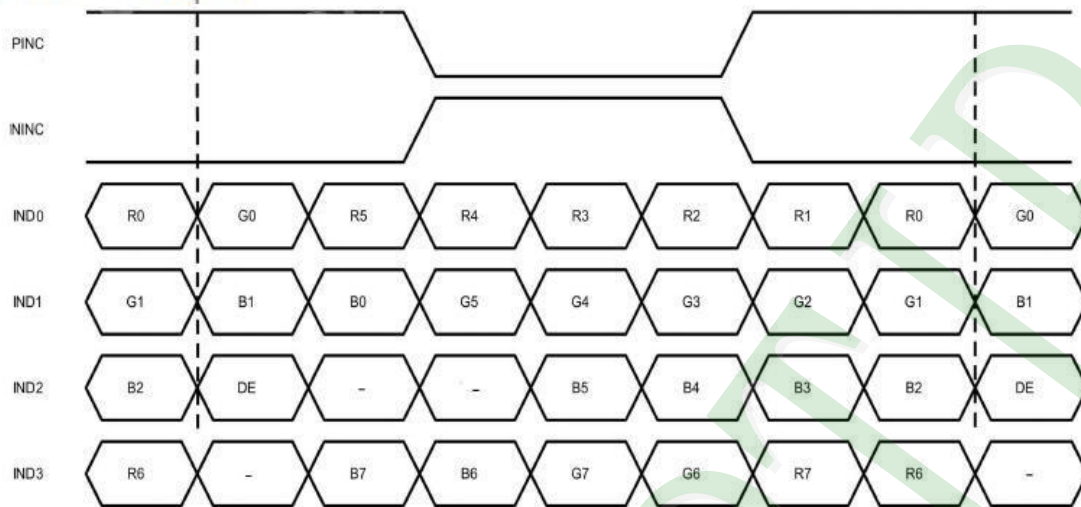
Symbol	Parameter	Conditions	Min	Typ	Max	Unit
$F_{OP}$	Input Operating Frequency range	RX_HF=0	25	-	100	MHz
		RX_HF=1	100	-	170	MHz
$R_{SKM}$	Receiver Skew Margin	85MHz, $ VID =400mV$ , $V_{CM}=1.2V$	450	-	-	pS
		150MHz, $ VID =400mV$ , $V_{CM}=1.2V$	267	-	-	pS
$T_{STRAT}$	Receiver startup time (after a valid LVDS clock is applied)		-	-	10	mS



NOTE: LVCK is advanced or delayed with respect to data until errors are observed at the receiver outputs. The advance or delay is then reduced until there are no data errors observed. The magnitude of the advance or delay is RSKM.

## 2.4.2 LVDS Data Input Format

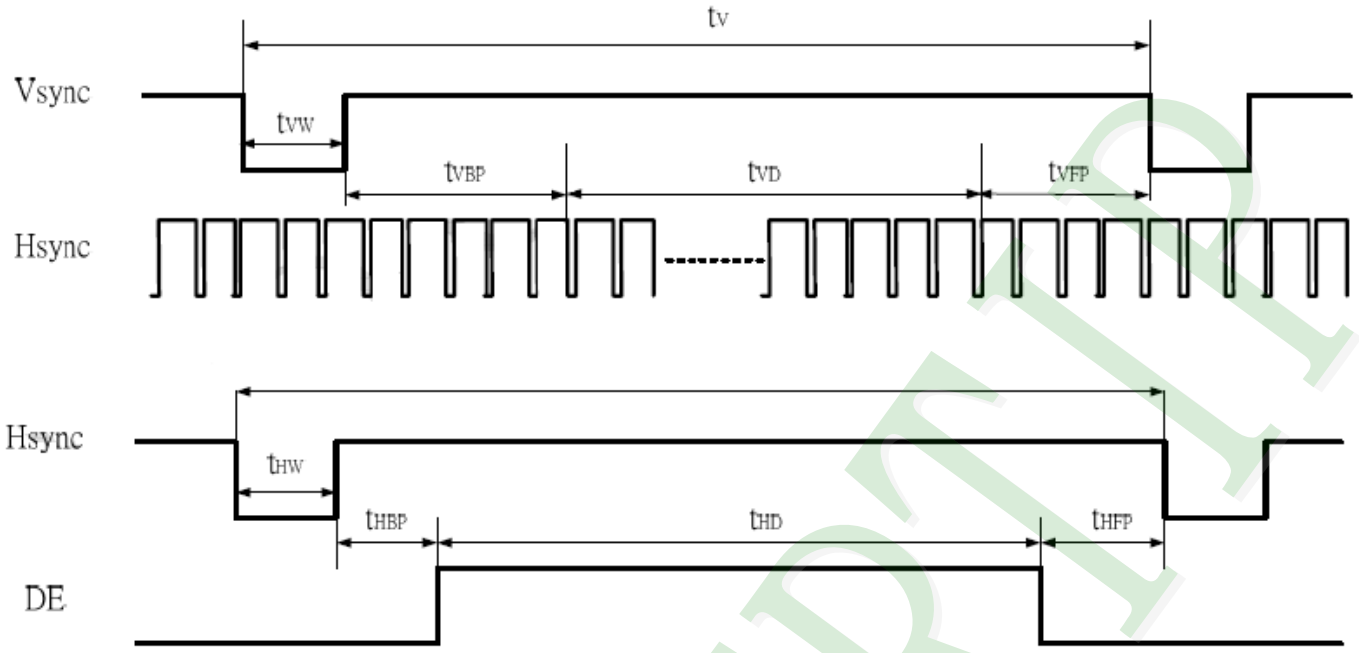
### 8-BIT LVDS INPUT



## 2.4.3 Interface Timings

Parameter	Symbol	Unit	Min.	Typ.	Max.
Frame Rate	--	Hz	-	60	-
Frame Period	$t_V$	line	(815)	(823)	(1023)
Vertical Display Time	$t_{VD}$	line	800		
Vertical Blanking Time	$t_{VW}+t_{VBP}+t_{VFP}$	line	(15)	(23)	(33)
1 Line Scanning Time	$t_H$	clock	(1410)	(1440)	(1470)
Horizontal Display Time	$t_{HD}$	clock	1280		
Horizontal Blanking Time	$t_{HW}+t_{HBP}+t_{HFP}$	clock	(60)	(160)	(190)
Clock Rate	$1/T_C$	MHz	(68.9)	(71.1)	(73.4)

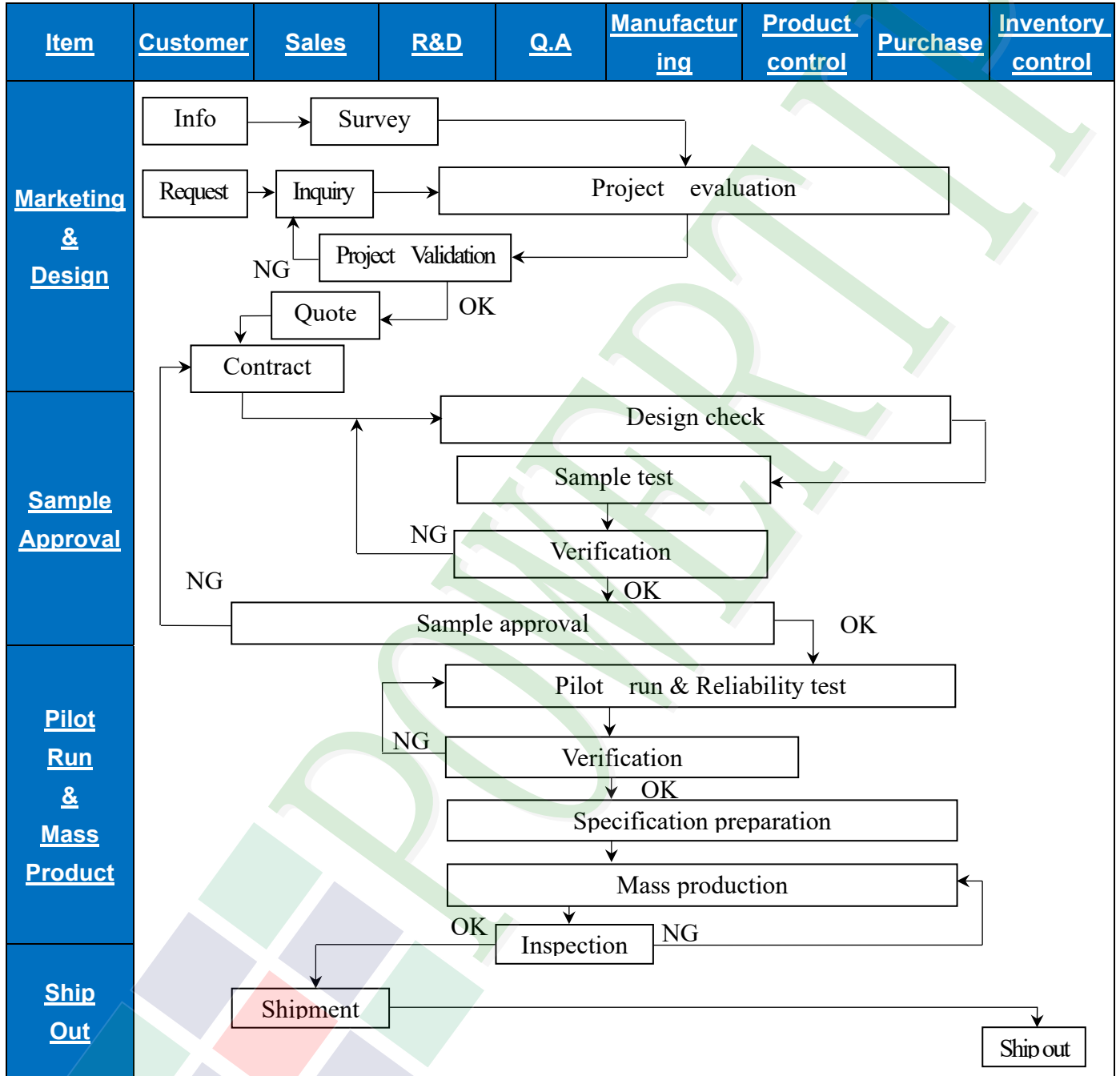
### 2.4.4 Timing Diagram of Interface Signal (DE mode)

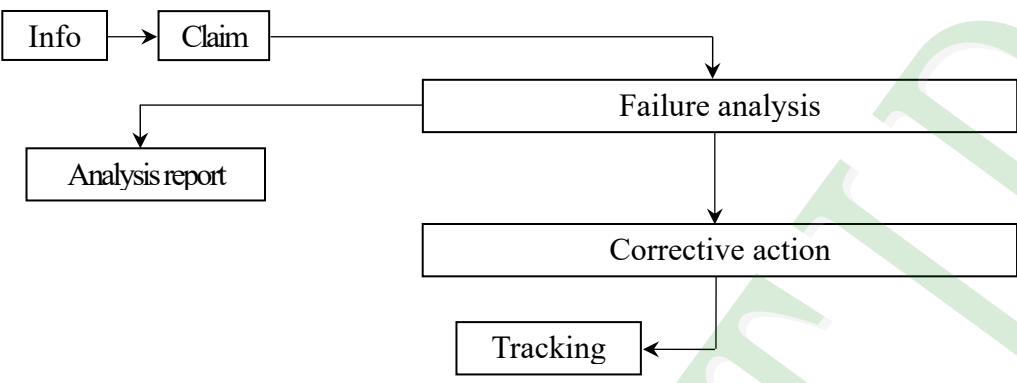




### 3. QUALITY ASSURANCE SYSTEM

#### 3.1 Quality Assurance Flow Chart



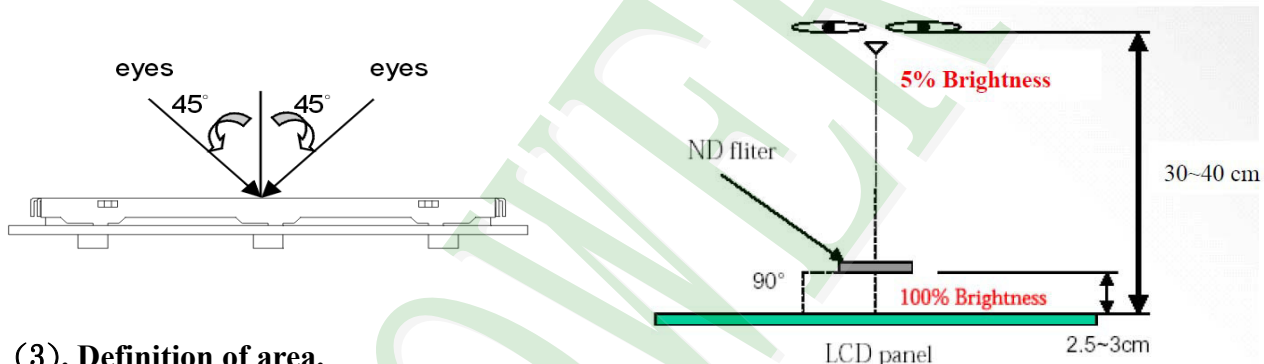
<u>Item</u>	<u>Customer</u>	<u>Sales</u>	<u>R&amp;D</u>	<u>Q.A</u>	<u>Manufactur ing</u>	<u>Product control</u>	<u>Purchase</u>	<u>Inventory control</u>
<b>Sales Service</b>	 <pre> graph TD     Info[Info] --&gt; Claim[Claim]     Claim --&gt; Failure[Failure analysis]     Claim --&gt; Report[Analysis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

### 3.2. Inspection Specification

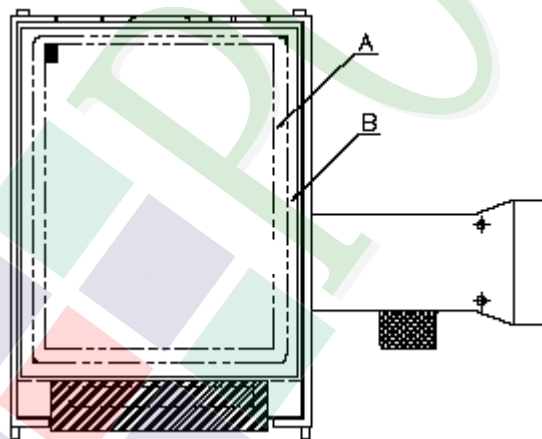
- ◆Scope: The document shall be applied to TFT-LCD Module for 3.5" ~15" (Ver.B01).
- ◆Inspection Standard: MIL-STD-105E Table Normal Inspection Single Sampling Level II.
- ◆Equipment: Gauge, MIL-STD, Powertip Tester, Sample
- ◆Defect Level: Major Defect AQL: 0.4; Minor Defect AQL: 1.5
- ◆OUT Going Defect Level: Sampling.
- ◆Standard of the product appearance test:

#### a. Manner of appearance test:

- (1). The test best be under 20W×2 fluorescent light(about 300lux ~500lux)  
, and distance of view must be at 30~40 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**

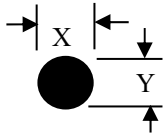
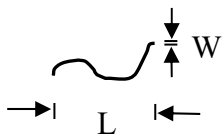
#### (4). Standard of inspection : (Unit : mm)

**◆Specification For TFT-LCD Module 3.5" ~15" :**
**(Ver.B01)**

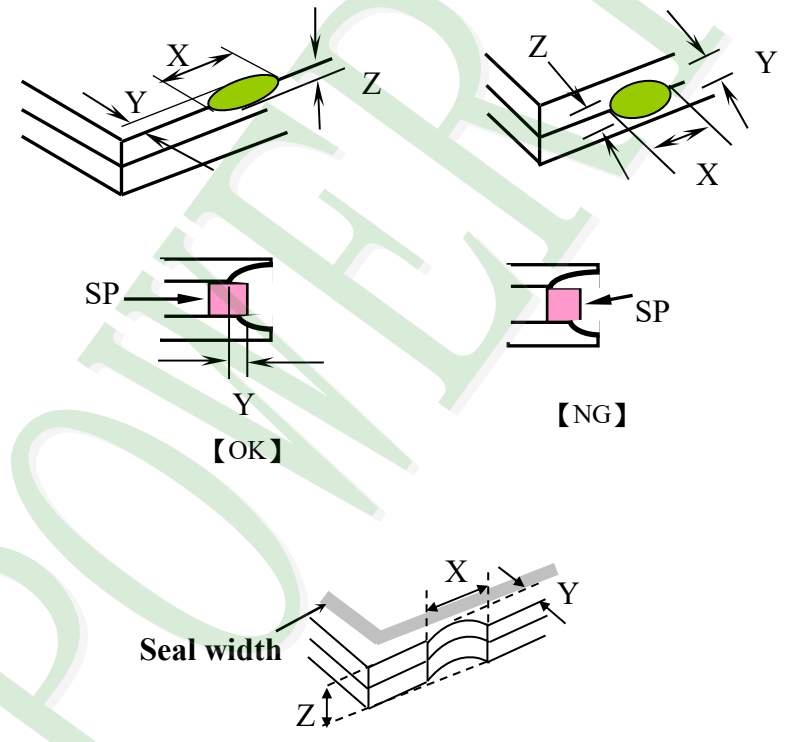
<u>NO</u>	<u>Item</u>	<u>Criterion</u>	<u>Level</u>										
01	Product condition	1. 1The part number is inconsistent with work order of production.	Major										
		1. 2 Mixed product types.	Major										
		1. 3 Assembled in inverse direction.	Major										
02	Quantity	2. 1The quantity is inconsistent with work order of production.	Major										
03	Outline dimension	3. 1Product 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										
		4. 6Mura cannot be seen through 5% ND filter at 50% Gray , should be judged by the viewing angle of 90 degree.	Minor										
05	Dot defect (Bright dot, Dark dot)  On -display	<table border="1" data-bbox="561 1160 1273 1438"> <thead> <tr> <th><u>Item</u></th> <th><u>Acceptance (Q'ty)</u></th> </tr> </thead> <tbody> <tr> <td>Bright Dot</td> <td><math>\leq 4</math></td> </tr> <tr> <td>Dark Dot</td> <td><math>\leq 5</math></td> </tr> <tr> <td>Joint Dot</td> <td><math>\leq 3</math></td> </tr> <tr> <td>Total</td> <td><math>\leq 7</math></td> </tr> </tbody> </table>	<u>Item</u>	<u>Acceptance (Q'ty)</u>	Bright Dot	$\leq 4$	Dark Dot	$\leq 5$	Joint Dot	$\leq 3$	Total	$\leq 7$	Minor
		<u>Item</u>	<u>Acceptance (Q'ty)</u>										
Bright Dot	$\leq 4$												
Dark Dot	$\leq 5$												
Joint Dot	$\leq 3$												
Total	$\leq 7$												
5.1 Inspection pattern: full white, full black, Red, Green and blue screens. 5.2 It is defined as dot defect if defect area $> 1/2$ dot. 5.3 The distance between two dot defect $\geq 5$ mm. 5.4 Bright dot : Dots appear bright and unchanged in visible with 5% ND filter is defined. 5.5 Tiny bright dot: bright dot area $\leq 1/2$ dot. a. Dots appear bright and unchanged in visible with 5% ND filter is defined defect and is judged in accordance with 6.1 b. Dots invisible with 5% ND Filter is Ignored.													

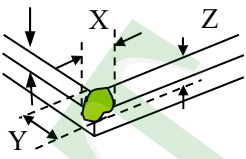
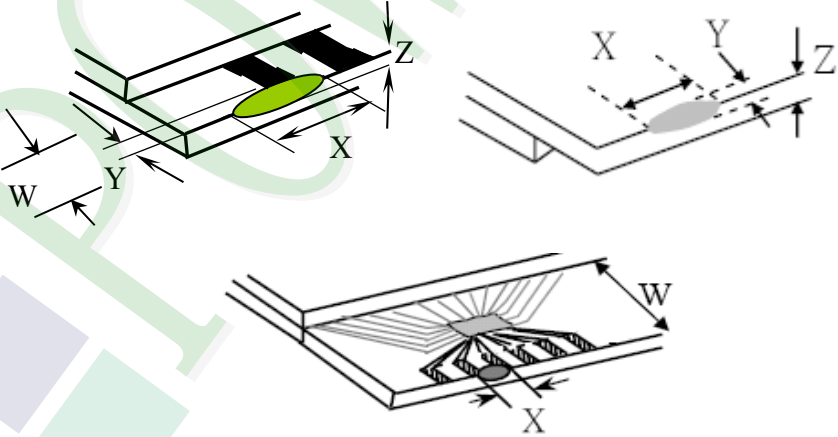
◆Specification For TFT-LCD Module 3.5" ~15" :

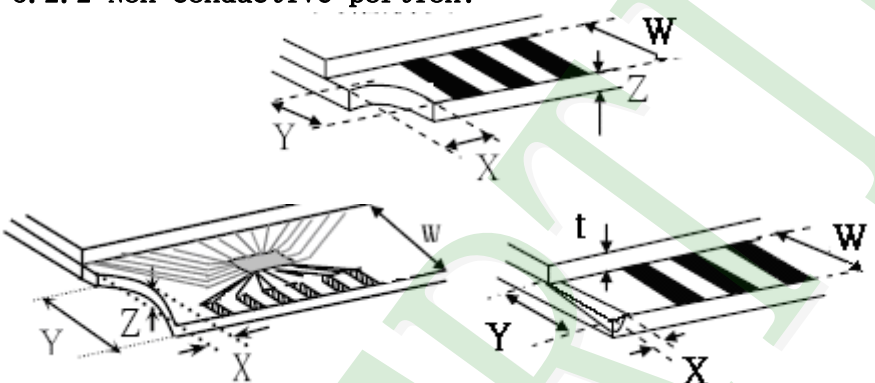
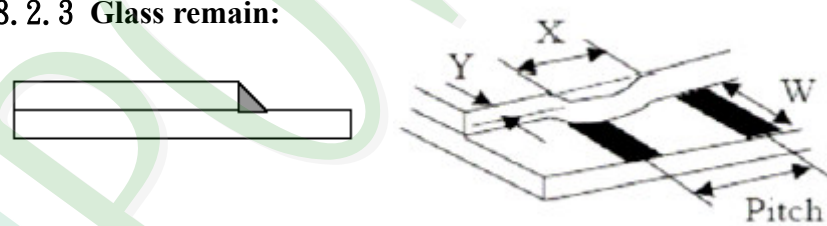
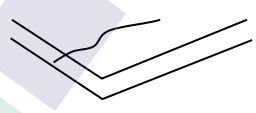
(Ver.B01)

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" data-bbox="510 414 1284 694"> <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>Ignore</td> <td rowspan="4">Ignore</td> </tr> <tr> <td><math>0.25 &lt; \Phi \leq 0.50</math></td> <td>5</td> </tr> <tr> <td><math>\Phi &gt; 0.50</math></td> <td>0</td> </tr> <tr> <td><b>Total</b></td> <td><b>5</b></td> </tr> </tbody> </table> <p>6.2 Line type(Non-display or display):</p> <table border="1" data-bbox="430 806 1364 1355"> <thead> <tr> <th rowspan="2">module size</th> <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 rowspan="4">3.5" to less 9"</td> <td>---</td> <td><math>W \leq 0.03</math></td> <td>Ignore</td> <td rowspan="4">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> </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>As round type</td> </tr> <tr> <td colspan="3"><b>Total</b></td> <td><b>5</b></td> <td></td> </tr> <tr> <td rowspan="4">9" to 15"</td> <td>---</td> <td><math>W \leq 0.05</math></td> <td>Ignore</td> <td rowspan="4">Ignore</td> </tr> <tr> <td><math>L \leq 10.0</math></td> <td><math>0.05 &lt; W \leq 0.10</math></td> <td>5</td> </tr> <tr> <td>---</td> <td><math>W &gt; 0.10</math></td> <td>As round type</td> </tr> <tr> <td colspan="3"><b>Total</b></td> <td><b>5</b></td> </tr> </tbody> </table>	Dimension (diameter : $\Phi$ )	Acceptance (Q'ty)		A area	B area	$\Phi \leq 0.25$	Ignore	Ignore	$0.25 < \Phi \leq 0.50$	5	$\Phi > 0.50$	0	<b>Total</b>	<b>5</b>	module size	Length (L)	Width (W)	Acceptance (Q'ty)		A area	B area	3.5" to less 9"	---	$W \leq 0.03$	Ignore	Ignore	$L \leq 10.0$	$0.03 < W \leq 0.05$	4	$L \leq 5.0$	$0.05 < W \leq 0.10$	2	---	$W > 0.10$	As round type	<b>Total</b>			<b>5</b>		9" to 15"	---	$W \leq 0.05$	Ignore	Ignore	$L \leq 10.0$	$0.05 < W \leq 0.10$	5	---	$W > 0.10$	As round type	<b>Total</b>			<b>5</b>	Minor
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NO	Item	Criterion	Level						
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>	Minor						
		<p>8.1 General glass chip:              8.1.1 Chip on panel surface and crack between panels:</p>  <table border="1" data-bbox="539 1574 1353 1865"> <thead> <tr> <th><math>\underline{X}</math></th> <th><math>\underline{Y}</math></th> <th><math>\underline{Z}</math></th> </tr> </thead> <tbody> <tr> <td><math>\cong a</math></td> <td>Crack can't enter viewing area</td> <td><math>\leq 1/2 t</math></td> </tr> <tr> <td><math>\cong 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>		$\underline{X}$	$\underline{Y}$	$\underline{Z}$	$\cong a$	Crack can't enter viewing area	$\leq 1/2 t$
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		<p>8.2 Protrusion over terminal:</p> <p>8.2.1 Chip on electrode pad:</p>  <table border="1" data-bbox="560 1697 1347 1868"> <thead> <tr> <th></th> <th>X</th> <th>Y</th> <th>Z</th> </tr> </thead> <tbody> <tr> <td>Front</td> <td><math>\leq a</math></td> <td><math>\leq 1/2 W</math></td> <td><math>\leq t</math></td> </tr> <tr> <td>Back</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	Front	$\leq a$	$\leq 1/2 W$	$\leq t$	Back	$\leq a$	$\leq W$	$\leq 1/2 t$	Minor
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**◆Specification For TFT-LCD Module 3.5" ~15" :**
**(Ver.B01)**

<u>NO</u>	<u>Item</u>	<u>Criterion</u>	<u>Level</u>
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: 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
- 5.2.10 Caution!( LCM products with Capacitive Touch Panel)  
Strong EMI-sources such as switch-mode power supplies (SMPS) can lead to touch malfunction (e.g. ghost-touches).  
Therefore, the touch needs to be thoroughly tested inside the target application.
- 5.2.11 CAUTION: Continuously displaying same static image will result in high possibility of image sticking/image burn-in effect due to TFT panel characteristic.
- 5.2.12 Double-sided tape designed to be attach with the customer's mechanical device, please follow up the rules and regulations published by the original manufacturer of double-sided tape for the attachment operation.

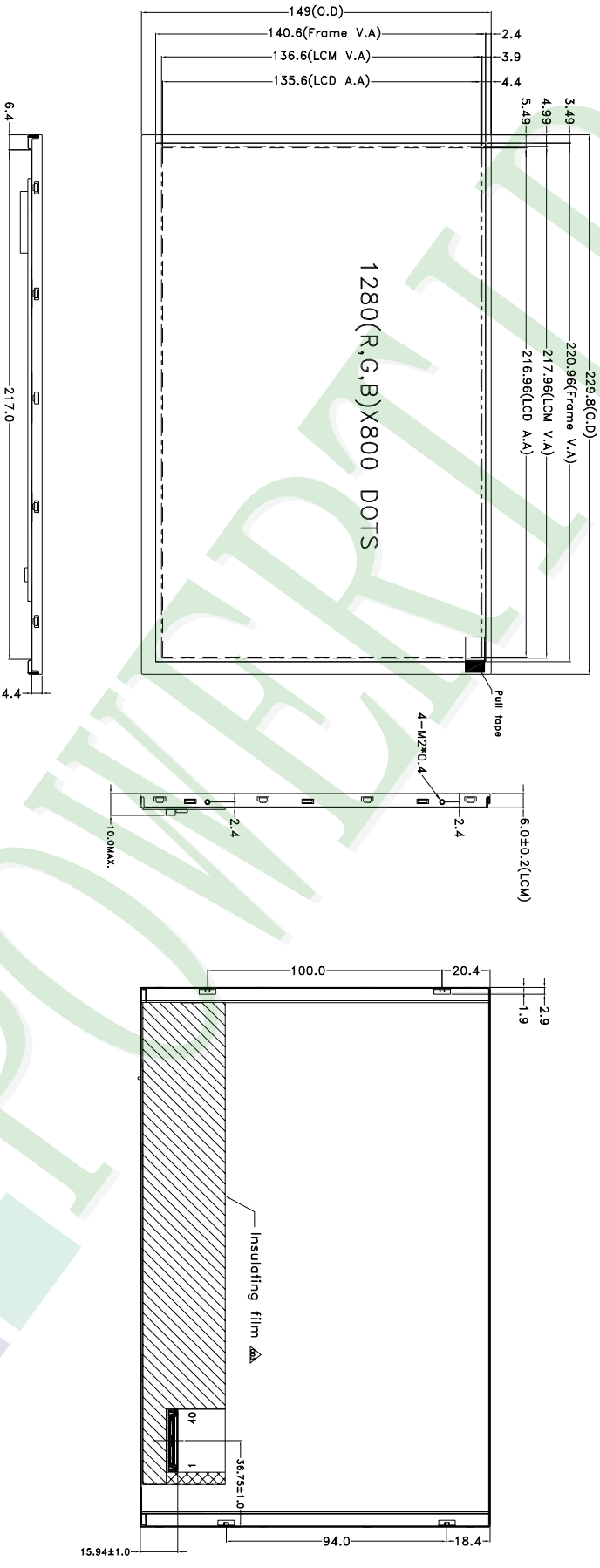
### 5.3 STORAGE

- 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 LCD
  - 2.LCD DISPLAY: POSITIVE/TRANSMISSIVE
  - 3.The tolerance unless classified ±0.3mm
  - 4.Manufacturer/Type :Saronn/300E40-0010RA-G3
  - 5.Mating Receptacle/Type (Reference) :11B40-1211TA-G3 or Compatible

007				PART NO:	PH128800T004-ZNA01	 久正光電股份有限公司 POWERIP TECHNOLOGY CORPORATION	Design Check Approve	Sally Air Lutujin	 (3)	Surface Material Thickness Quantity	Tolerances (mm) (Mkn)	Precision Level						
006																		
005																		
004																		
003	Add TAPE	Sally	2021/08/10	DRAWING NAME :	JLMD-PH128800T004-ZNA01													
002	Add TAPE	Sally	2021/08/02	TITLE:	LCD MODULE DRAWING													
001	NEW DRAWING	Pierre	2019/12/03															
REV		REV BY	REVISER	DATE														

Ver.001

## LCM包裝規格書

Approve

Check

Contact

Documents NO. JPKG-PH128800T004-ZNA01

LCM Packaging Specifications  
(For Tray)

Terry

Air

Bob

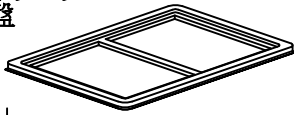
## 1. 包裝材料規格表 (Packaging Material) : (per carton)

No.	Item	Model	Dimensions (mm)	1Pcs Weight	Quantity	Total Weight
1	成品 (LCD)	PH128800T004-ZNA01	229.8 X 149 X 6.0	0.2271	18	4.0878
2	多層薄膜(1)POF	OTFILM0BA03ABA	—————	—————	3	—————
3	TRAY 盤 (2)Tray	TYSG000000067	517 X 377 X 18.8	0.2	12	2.4
4	內盒(3)Product Box	BX00000000071	558 X 393 X 68	0.6	3	1.8
5	保利龍板(4)Polylon board	OTPLB00PL08ABA	550 X 393 X 20	0.0284	2	0.0568
6	外紙箱(5)Carton	BX57041027CCBA	570 X 410 X 265	1.0	1	1.0
7	舒美墊(6)EPE	OTFOAMEP0001BA	333X 218 X 2.0	0.0032	14	0.0448
8						
9						

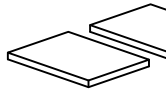
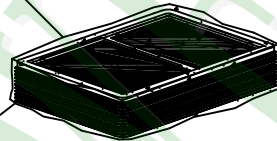
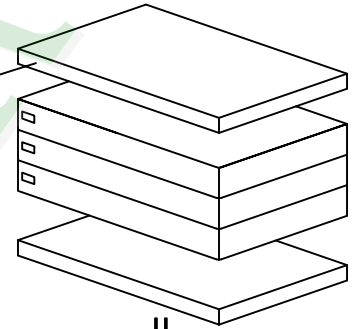
2. 一整箱總重量 (Total LCD Weight in carton) : 9.39 Kg±10%

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

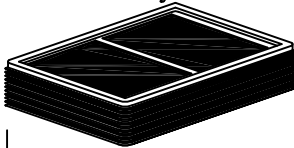
(1)LCD quantity per box : no per tray	2	x no of tray	3	=	6
(2)Total LCD quantity in carton : quantity per box	6	x no of boxes	3	=	18

Use empty tray  
空盤

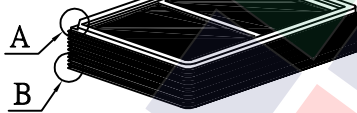
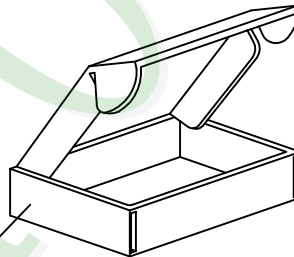
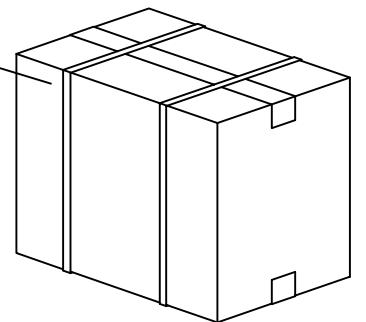
+

(1)多層薄膜  
POF(6)舒美墊  
EPE(2)TRAY 盤  
Tray(4)保利龍板  
Polylon board

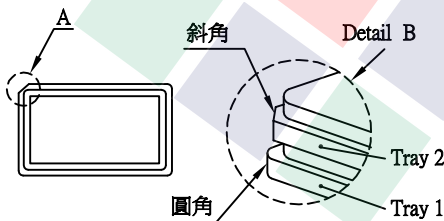
Put products into the tray



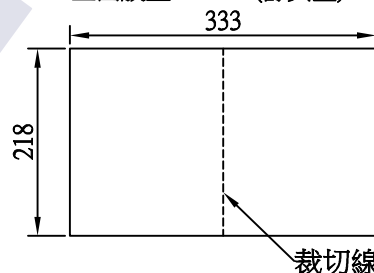
Tray stacking

(3)內盒  
Product Box(5)外紙箱  
Carton

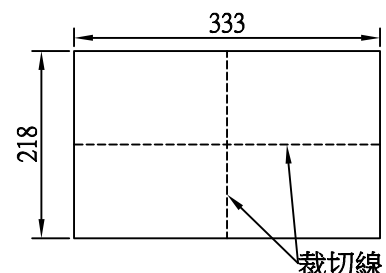
## 特 記 事 項 (REMARK)

4. TRAY盤相疊時,需旋轉180度,請詳見B視圖  
Rotate tray 180 degrees and place on top of stack.  
Check the tray stack using Fig. B.

5. LCM上面放置2.0t EPE(舒美墊)



裁切線

6. LCM下方放置1pcs, 2.0t EPE(舒美墊)  
1pcs(裁切後尺寸109x166.5)

裁切線



ALL TECHNOLOGIES. ALL COMPETENCIES. ONE  
SPECIALIST.



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be found at

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