



SPECIFICATIONS

CUSTOMER	:	
SAMPLE CODE	:	SH102768T001-ZAA
MASS PRODUCTION CODE	:	PH102768T001-ZAA
SAMPLE VERSION	:	01
SPECIFICATIONS EDITION	:	003
DRAWING NO. (Ver.)	:	LMD- PH102768T001-ZAA (Ver.002)
PACKAGING NO. (Ver.)	:	PKG- PH102768T001-ZAA (Ver.001)

Customer Approved

Date:

Approved	Checked	Designer
黃秋源 Oliver Huang	黃秋源 Oliver Huang	李健弘 Lambert Lee

Preliminary specification for design input

Specification for sample approval

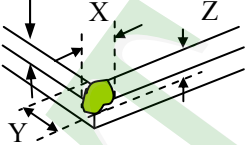
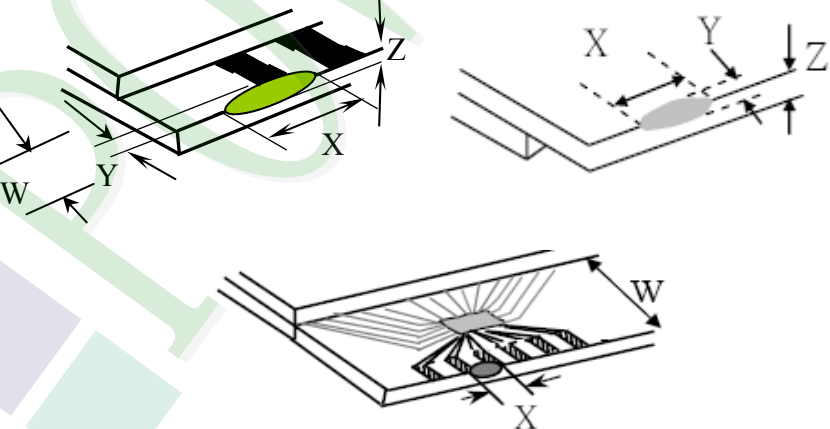
POWER TIP TECH. CORP.

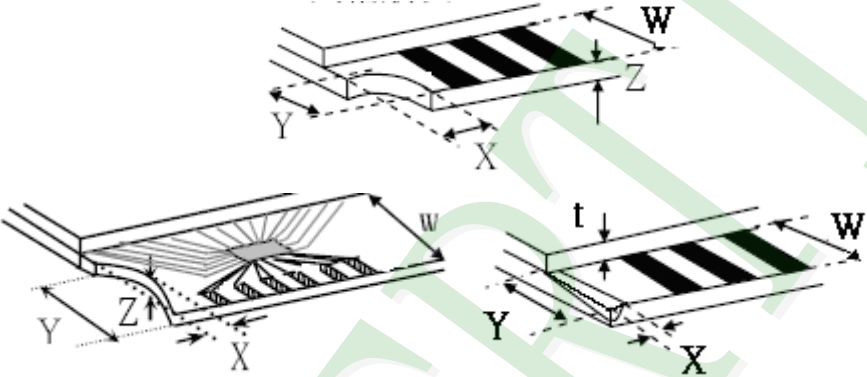
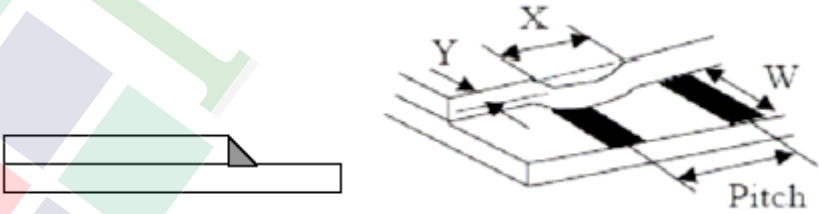
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NO	Item	Criterion	Level										
08	The crack of glass	<p>Symbols :</p> <p>X : The length of crack Z : The thickness of crack t : The thickness of glass</p> <p>Y : The width of crack. W : terminal length a : LCD side length</p> <hr/> <p>8.1.2 Corner crack :</p>  <table border="1" data-bbox="520 779 1337 1070"> <thead> <tr> <th>X</th> <th>Y</th> <th>Z</th> </tr> </thead> <tbody> <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> </tbody> </table>	X	Y	Z	1/5 a	Crack can't enter viewing area	Z 1/2 t	1/5 a	Crack can't exceed the half of SP width.	1/2 t < Z 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 1711 1347 1883"> <thead> <tr> <th></th> <th>X</th> <th>Y</th> <th>Z</th> </tr> </thead> <tbody> <tr> <td>Front</td> <td>a</td> <td>1/2 W</td> <td>t</td> </tr> <tr> <td>Back</td> <td>a</td> <td>W</td> <td>1/2 t</td> </tr> </tbody> </table>		X	Y	Z	Front	a	1/2 W	t	Back	a	W	1/2 t	Minor
	X	Y	Z										
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08	The crack of glass	<p>Symbols :</p> <p>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</p> <hr/> <p>8.2.2 Non-conductive portion :</p>  <table border="1" data-bbox="625 976 1257 1133"> <thead> <tr> <th>X</th> <th>Y</th> <th>Z</th> </tr> </thead> <tbody> <tr> <td>1/3 a</td> <td>W</td> <td>t</td> </tr> </tbody> </table> <p>If the chipped area touches the ITO terminal, over 2/3 of 1. 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="545 1756 1240 1899"> <thead> <tr> <th>X</th> <th>Y</th> <th>Z</th> </tr> </thead> <tbody> <tr> <td>a</td> <td>1/3 W</td> <td>t</td> </tr> </tbody> </table>	X	Y	Z	1/3 a	W	t	X	Y	Z	a	1/3 W	t	Minor
		X	Y	Z											
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Specification For TFT-LCD Module 3.5" ~12.1" :

(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 1.5 mm.	Minor

4. RELIABILITY TEST

4.1 Reliability Test Condition

(Ver.B01)

NO.	TEST ITEM	TEST CONDITION																
1	High Temperature Storage Test	Keep in +80 ±2 96 hrs Surrounding temperature, then storage at normal condition 4hrs.																
2	Low Temperature Storage Test	Keep in -30 ±2 96 hrs Surrounding temperature, then storage at normal condition 4hrs.																
3	High Temperature / High Humidity Storage Test	Keep in +60 / 90% R.H duration for 96 hrs Surrounding temperature, then storage at normal condition 4hrs. (Excluding the polarizer)																
4	Temperature Cycling Storage Test	<table style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <tr> <td style="text-align: center;">-30</td> <td style="text-align: center;">+25</td> <td style="text-align: center;">+80</td> <td style="text-align: center;">+25</td> </tr> <tr> <td style="text-align: center;">(30mins)</td> <td style="text-align: center;">(5mins)</td> <td style="text-align: center;">(30mins)</td> <td style="text-align: center;">(5mins)</td> </tr> <tr> <td colspan="2" style="text-align: center;">←</td> <td colspan="2" style="text-align: center;">→</td> </tr> <tr> <td colspan="4" style="text-align: center;">10 Cycle</td> </tr> </table> <p>Surrounding temperature, then storage at normal condition 4hrs.</p>	-30	+25	+80	+25	(30mins)	(5mins)	(30mins)	(5mins)	←		→		10 Cycle			
-30	+25	+80	+25															
(30mins)	(5mins)	(30mins)	(5mins)															
←		→																
10 Cycle																		
5	ESD Test	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; border-right: 1px solid black; padding: 5px;"> Air Discharge: Apply 2 KV with 5 times Discharge for each polarity +/- </td> <td style="width: 50%; padding: 5px;"> Contact Discharge: Apply 250 V with 5 times discharge for each polarity +/- </td> </tr> </table>	Air Discharge: Apply 2 KV with 5 times Discharge for each polarity +/-	Contact Discharge: Apply 250 V with 5 times discharge for each polarity +/-														
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<ol style="list-style-type: none"> 1. Temperature ambience : 15 35 2. Humidity relative : 30% 60% 3. Energy Storage Capacitance(Cs+Cd) : 150pF±10% 4. Discharge Resistance(Rd) : 330 ±10% 5. Discharge, mode of operation : Single Discharge (time between successive discharges at least 1 sec) (Tolerance if the output voltage indication : ±5%) 																		
6	Vibration Test (Packaged)	<ol style="list-style-type: none"> 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 																
7	Drop Test (Packaged)	<table border="1" style="margin-left: auto; margin-right: auto; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="padding: 5px;">Packing Weight (Kg)</th> <th style="padding: 5px;">Drop Height (cm)</th> </tr> </thead> <tbody> <tr> <td style="padding: 5px;">0 ~ 45.4</td> <td style="padding: 5px;">122</td> </tr> <tr> <td style="padding: 5px;">45.4 ~ 90.8</td> <td style="padding: 5px;">76</td> </tr> <tr> <td style="padding: 5px;">90.8 ~ 454</td> <td style="padding: 5px;">61</td> </tr> <tr> <td style="padding: 5px;">Over 454</td> <td style="padding: 5px;">46</td> </tr> </tbody> </table>	Packing Weight (Kg)	Drop Height (cm)	0 ~ 45.4	122	45.4 ~ 90.8	76	90.8 ~ 454	61	Over 454	46						
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Over 454	46																	
Drop Direction : 1 corner / 3 edges / 6 sides each 1time																		

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.