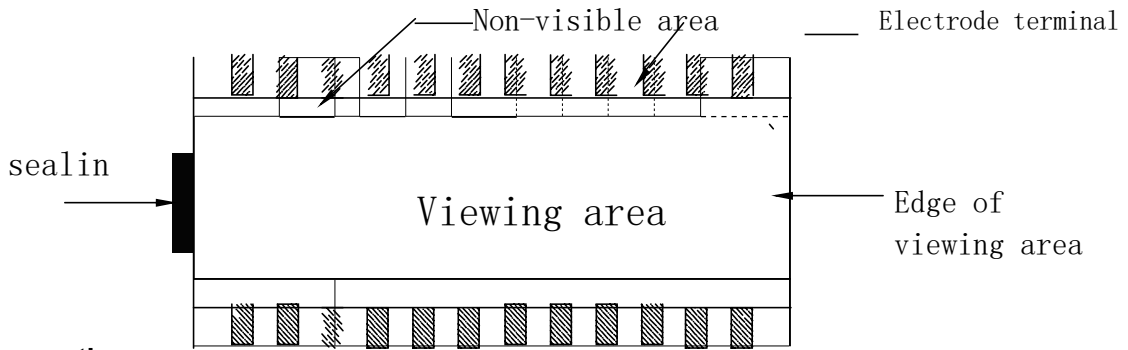
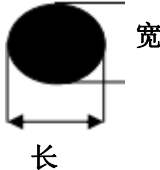
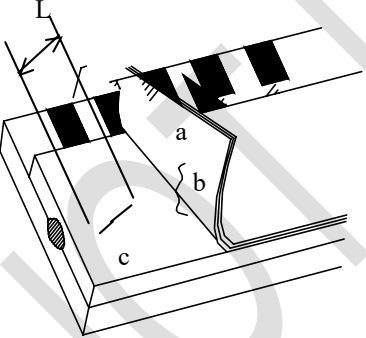


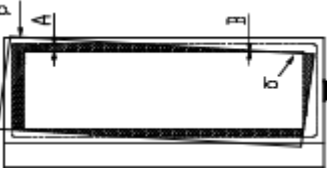
## LCD defect detection details (Class C)



### 1. Appearance inspection

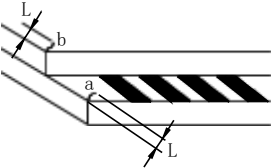



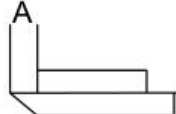
Defective item	Legend	Testing standards		
Point defects 1. Internal contamination 2. Impurities 3. Light leakage and other point defects (except for the intersection points of normal design)	 <p style="text-align: center;"><math>\Phi = (L+W) / 2</math></p>	$\Phi$ ( mm ) (diameter)	judgement	
		$\Phi \leq 0.2$	Excluding	
		$0.3 < \Phi \leq 0.4$	Acceptable 5	
		$0.4 < \Phi \leq 0.5$	Acceptable 3	
		$\Phi > 1.0$	NG	
		1. When two appear, the distance must be more than 5.0mm. 2. Those outside the visible area are not counted.		
Linear defects 1. Wool 2. Fiber 3. Glass scratches and other linear defects		Lenth(mm)	Width(mm)	Judgement
		Excluding	$\leq 0.1$	Excluding
		$\leq 5.0$	$\leq 0.2$	3 pieces allowed
		$\leq 3.0$	$\leq 0.3$	Accept 2
		-	$> 0.5$	<b>NG</b>
		1. Accept only when both length and width meet the requirements. 2. When the line is 3/4 of a circle, it is judged as a round object and judged as internal pollution. 3. When the length>5 or the width>0.04, it is inspected as internal pollution; when both appear at the same time, the distance must be greater than 5.0mm. 4. Outside the visual area is not counted		
1.Polarizer impurities 2. Bubbles 3. Concave and convex spots 4. Puncture wounds 5.Water pattern	There is 1. Dirt between the polarizer and the glass. 2. Concave or convex caused by air	1. The visible area is inspected according to the point defect standard, and the area outside the visible area is not counted. 2. The bubble caused by the object must be at least 0.5mm away from the visible area.		

### LCD defect detection details (Class C)

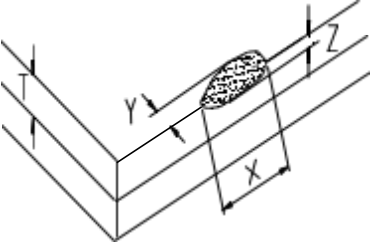
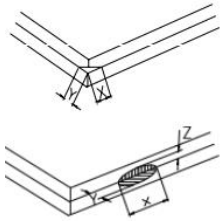
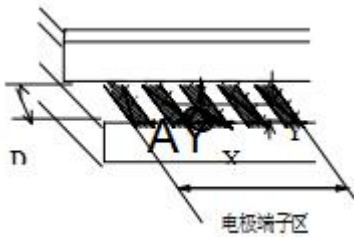
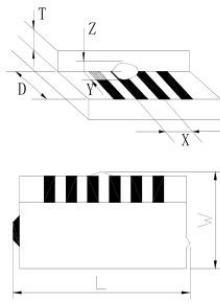
Polarizer is crooked		<ol style="list-style-type: none"> <li>1. Polarizers are not allowed to extend beyond the edge of the glass.</li> <li>2. The distance between the polarizer and the edge of the glass should not exceed 1.5mm and at least 0.2mm should not enter the visible area.</li> </ol>
External silk screen bubble	-	The width of the bubble should not exceed 0.5mm, and there should be no obvious black shadow.
Powder (lump)	-	Inspect by point or line defects.

HOT DISPLAY

## LCD defect detection details (Level C)

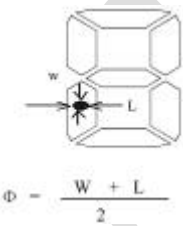
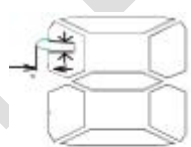
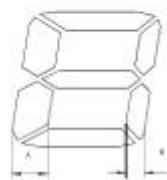
Defective item	Legend	Testing standards
Crack		Not allowed, the crack can be removed and tested for damage
Background	Some or all of the background color of the LCD product is different from the background color of the sample.	The base color of the product and the base color of the sample confirmed by the customer are not allowed to have obvious color difference, otherwise the plate will be signed for inspection and packaged separately. (Confirmation by the customer is required if necessary)
rainbow	There is obvious color difference on the same piece of glass	Not allowed, limit plate can be made for inspection. (Customer confirmation is required if necessary)
1. The sealing glue is too long 2. Too high 3. Off position		1. The height or length shall be subject to the dimension tolerance of the engineering drawing. 2. The deviation is not allowed.
Poor sealing glue penetration		The minimum penetration of the sealing glue is 1/3 of the distance from the glass edge to the retaining line, and the maximum penetration does not enter the visible area.
Sealing glue falls off	-	Not Allowed
The crystal is not full	-	Not Allowed
Uneven frame lines		1. $\geq 3/2$ of the average frame width or $\leq 1/2$ of the average frame width, rejected. 2. Rejected if entering the visible area.
Uneven edges		1. $A \leq 0.5\text{mm}$ , accepted  2. $A > 0.6\text{mm}$ , rejected

## 2. Damage inspection

Defective item	Legend	Testing Standard
<p>Note: "X" indicates the damaged length and "D" indicates the PIN width</p> <p>"Y" indicates the crack width "Z" indicates the crack thickness "T" indicates the thickness of a single piece of glass</p> <p>General damage</p> <p>1. Non-electrode area Glass surface</p> <p>2. Surface bonding area Damage</p>		<p>1. X direction is not limited.</p> <p>2. Y direction does not enter the visible area, it is acceptable.</p> <p>3. Z does not cause <math>\leq 1/3</math> frame line leakage, it is acceptable.</p> <p>Note: X, Y, Z must be considered at the same time during inspection, and if one of them fails, it will be judged as NG.</p>
<p>LCD defect detection details (Level B)</p>		<p>1. No limit in X direction.</p> <p>2. Acceptable if <math>1/3</math> of the frame line is not entered in Y and Z directions or <math>1/3</math> of the silver point is leaking outside.</p> <p>Note: X, Y and Z must be considered at the same time during inspection. If one of them fails, it will be judged as NG.</p>
<p>LCD defect detection details (Level B)</p>		<p>1. X direction is not limited</p> <p>2. Y direction <math>\leq 1/3D</math></p> <p>Note: X, Y, and Z must be considered at the same time during inspection. If one of them fails, it will be judged as NG.</p>
<p>LCD defect detection details (Level B)</p>		<p>1. Non-pressed paper model: Y direction <math>\leq 1/3D</math>, length not included.</p> <p>2. Pressed paper model, Y direction <math>\leq 1/4D</math></p> <p>3. W and L are subject to the dimensional tolerance of the engineering drawing, and the deviation should be <math>\leq \pm 0.5\text{mm}</math></p>

## LCD defect detection details (Level C)

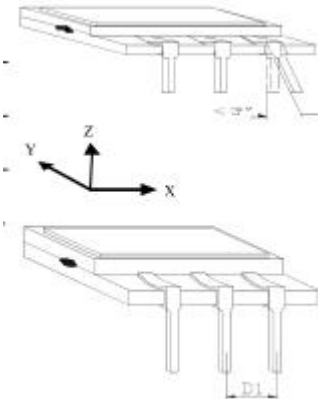
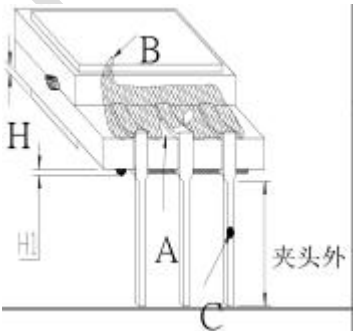
### 3. Telecommunications performance test

Defective item	Legend	Testing standard
Legend	After power on, the displayed pen segment is not displayed	Not allowed
High current	After passing normal voltage, the product current consumption reaches or exceeds the set value	1. Not allowed 2. If necessary, the current limit needs to be agreed with the customer
Short circuit	-	Not allowed
Font diffusion	During normal electrical testing, part or all of the pen segments become thicker.	Not allowed
1. White 2. Pinhole	 $\Phi = \frac{W + L}{2}$	Controlled as point defects and $\Phi$ is less than 1/3 of the width of the pen segment. (Limited sample inspection can be performed if necessary).
1. Concave and convex points 2. Multiple strokes		Controlled as point defects and W is less than 1/2 of the width of the pen segment. If necessary, a limit sample test can be performed.
Combination		1. $(A-B) \leq 0.5\text{mm}$ is acceptable. 2. $B/A \geq 3/4$ is acceptable. Multiple scratches caused by combined deflection are inspected according to the point and line standard If necessary, a limit plate can be used for inspection
Light and dark strokes	The pen segments are unstable, dark or missing	Not allowed

	due to poor contact of the conductive points.	
Light words	Part or all of the sample is blurred compared to the one confirmed by the customer.	It is not allowed. If necessary, a limit template can be established for control.
Threshold voltage	-	<p>1. <math>\leq 1/4</math>Duty is controlled by <math>\pm 0.04V</math> according to the sample confirmed by the customer.</p> <p>2. <math>&gt; 1/4</math>Duty is controlled by <math>\pm 0.03V</math>.</p>

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#### 4. Installation pin inspection

Defective item	Legend	Testing standard
Pins are crooked	The clamp and the electrode terminal are not on the same line (at an angle of $\phi$ )	1.. $\phi > 5^\circ$ is not allowed 2.Does not meet the requirements of the engineering drawing is not allowed
PIN skew		The skew of the PIN foot in the X or Y direction does not exceed $9^\circ$ . There should be no distortion within 9mm of the PIN end.
Chuck bias		The chuck deviation must be $\leq$ the conductive wire width $\pm 0.5\text{mm}$ .
Glue bubbles		Not allowed to connect to PIN
Glue Cutting		Not Allowed
There is glue outside the chuck		Not Allowed
Glue seeps into polarizer		Not Allowed
Glue height		1. Exceeding the height of the upper polarizer: Not allowed (B in the figure) Lower polarizer 2. 1.0mm ( $H_1 - H > 1.0\text{mm}$ ): Not allowed
No glue around the chuck		Not allowed (A in the figure)
Glue shape		Wrap each chuck, fill the gap, make the surface smooth without depression, and no glue clumps on the back.
Glue not cured	-	The glue is not allowed to be completely cured (if the glue does not stick to your fingers when pressed, it is

		OK, otherwise it is NG).
The pin is not installed to the bottom	-	Not Allowed
Conductive adhesive offset	-	The PIN chuck should not exceed 0.2mm
PIN bevel cutting	-	Control according to engineering drawing requirements.
PIN shape	-	After PIN cutting, there should be no hooks, no obvious bending or deformation, and no obvious damage to the coating.

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## LCD defect detection details (Level C)

### 5. Product internal and external silk screen inspection

Defective items	Legend	Testing Standard
Pattern color	-	Subject to the sample confirmed by the customer
Wrong ink	-	Not allowed
Position offset	-	Controlled by the requirements of the engineering drawing (screen printing film can be checked)
Tilted pattern	-	Controlled by the requirements of the engineering drawing (screen printing film can be checked)), the maximum tilt angle is $\pm 1^\circ$ .
Broken silk screen	-	Inspected according to the linear defect standard
Missing pattern	-	Not allowed (screen printing film can be checked)
Blurred pattern	-	Inspected according to the sample confirmed by the customer
1. Hairy lines 2. Wiredrawing	-	Meet the requirements of engineering drawings, visual lines are smooth, and the width of burrs or the length of wire drawing does not exceed 0.5mm
Scratched pattern	-	Inspect according to the appearance linear defect standard
Line width	-	Control according to the requirements of the engineering drawing (can be checked by silk screen film matching).
1. Dirty spots 2. Bubbles on the pattern	-	Inspection according to point defect standards
Uneven line thickness	-	Meet the requirements of engineering drawings, visual lines are smooth, and line thickness changes within $\pm 0.5\text{mm}$