



# 福建希恩凯电子有限公司

## FUJIAN CNK ELECTRONICS CO.,LTD.

### Product Specification For OLED Module

Model NO. : CNKO01540-21446A3

CUSTOMER NO. :

REVISION : V00

- APPROVAL FOR SPECIFICATIONS ONLY
- APPROVAL FOR SPECIFICATIONS AND SAMPLE

CUSTOMER APPROVAL	APPROVED BY	DATE

CNK R&D CENTER		
APPROVED BY	REVIEWED BY	PREPARED BY



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Version	Date	Description
V00	2022-5-17	First issue



## 1. Display Characteristics

Item	Specification
Module Size	42.5(W )×36.3(H)×2.45(T)mm
Display View Area	37.04(W)×19.51(H) mm
Display Mode	Passive Matrix
View Angle	ALL
Driver IC	CH1116G
Backlight type	LED/WHITE
Weight	TBD

## 2. Pin Assignments

Pin No.	Symbol	Function
1	VCC	+3.3V
2	GND	GND
3	SCL	the serial clock input pad (SCL)
4	SDA	Tthe serial data input pad (SDA)

## 3. ABSOLUTE MAXIMUM RATINGS

Unless otherwise specified,(Voltage Referenced to VSS) ( Ta = 25°C )

Items	Symbol	Min	Typ.	max	unit
Supply Voltage	Logic	VDD	-0.3	+4.0	V
	Logic	VDDDB	-	-	V
	Driving	VCC	-	-	V
Operating Temperature	TOP	-40		-70	°C
Storage Temperature	TST	-40		-85	°C
Humidity	-	-		90	%RH

### NOTE:

Permanent device damage may occur if ABSOLUTE MAXIMUM RATINGS are exceeded.

Functional operation should be restricted to the conditions as detailed in the operational sections of this data sheet. Exposure to absolute maximum rating conditions for extended periods may affect reliability.

## 4. ELECTRICAL CHARACTERISTICS

### DC Characteristics

Items	Symbol	Min	Typ	Max	unit
-------	--------	-----	-----	-----	------



Supply voltage	Logic	VDD	1.65	3.3	3.5	V
	Logic	VBAT	-	-	-	V
	Driving	VCC	-	-	-	V
Input voltage	High voltage	VIH	0.8*VDD	-	VDD	V
	Low voltage	VIL	VSS	-	0.2*VDD	V
output voltage	High voltage	VOH	0.9*VDD	-	VDD	V
	Low voltage	VOL	VSS	-	0.1*VDD	V

## 5.ELECTRO-OPTICAL CHARACTERISTICS

All data in below based the condition (Ta = 22±3℃,60±10%RH)

Items	Symbol	Min	Typ	Max	unit	Remark	
Operating Luminance	L	80	100	-	cd/m <sup>2</sup>	ALL pixels on	
Power Consumption	P	-	40	50	mW	30%pixels on	
Frame Frequency	Fr	-	100	-	Hz		
Color Coordinate	WHITE	CIE X	0.25	0.29	0.33	CIE1931	Darkroom
		CIE Y	0.27	0.31	0.35		
Response Time	Rise	Tr	-	-	0.02	ms	-
	Decay	Td	-	-	0.02	ms	-
Contrast Ratio	Cr	10000:1	-	-	-	Darkroom	
Viewing Angle Uniformity	θ	160	-	-	Degree	-	
Operating Life Time	top	40000	-	-	H	L=80cd/m <sup>2</sup>	

Note:

1. 85cd/m<sup>2</sup> is base on VDD=3.0V, VCC=9.0V, contrast command setting 0x80;

2. Contrast ratio is defined as follows:

Contrast ratio = Photo - detector output with OLED being “white”

Photo - detector output with OLED being “black”

3. Life Time is defined when the Luminance has decayed to less than 50% of the initial Luminance specification. (Odd and even chess board alternately displayed)

(The initial value should be closed to the typical value after adjusting.)

## 6.Initial code

External setting

```
{
RES=1;
  delay(1000);
  RES=0;
  delay(1000);
  RES=1;
  delay(1000);

  write_i(0xAE); /*display off*/

  write_i(0x00); /*set lower column address*/
  write_i(0x10); /*set higher column address*/
```



```
write_i(0x40);    /*set display start line*/

write_i(0xB0);    /*set page address*/

write_i(0x81);    /*contract control */
write_i(0x65);    /*128*/

write_i(0xA1);    /*set segment remap  0XA0*/

write_i(0xA6);    /*normal / reverse*/

write_i(0xA8);    /*multiplex ratio*/
write_i(0x3F);    /*duty = 1/64*/

write_i(0xad);    /*set charge pump enable*/
write_i(0x8a);    /*  外供VCC  */

write_i(0xC8);    /*Com scan direction  0XC8 */

write_i(0xD3);    /* set display offset */
write_i(0x00);

write_i(0xD5);    /* set osc division */
write_i(0x80);

write_i(0xD9);    /*set pre-charge period*/
write_i(0x22);    /*0x22*/

write_i(0xDA);    /*set COM pins*/
write_i(0x12);

write_i(0xdb);    /*set vcomh*/
write_i(0x40);

write_i(0xAF);    /*display ON*/
}

void write_i(unsigned char ins)
{
    DC=0;
    CS=0;
    WR=1;
    P1=ins;        /*inst*/
    WR=0;
    WR=1;
    CS=1;
}
```



```
void write_d(unsigned char dat)
{
    DC=1;
    CS=0;
    WR=1;
    P1=dat;    /*data*/
    WR=0;
    WR=1;
    CS=1;
}
```

```
void delay(unsigned int i)
{
    while(i>0)
    {
        i--;
    }
}
```

## 7.AC Characteristics

Refer to IC datasheet

## 8.Power sequence

Refer to IC datasheet

## 9.Reliability Test Conditions

Test item	Test condition	Inspection after test
High temperature storage	85±2°C/96 hours	Note 1,2
Low temperature storage	-40±2°C/96 hours	
High temperature operating	70±2°C/96 hours	
Low temperature operating	-40±2°C/96 hours	
Temperature Shock	-20±2°C~25°C~70±2°C*10cycles (30min.) (5min.) (30min.)	
High Temperature Humidity Operation	50°C*90% RH/96 hours	
Vibration test	Frequency : 10Hz~55Hz~10Hz Amplitude : 1.5mm , X , Y , Z direction for total 2hours(Packing condition)	



Dropping test	Drop to the ground from 1m height, one time, every side of carton. (Packing condition)	
ESD test	Voltage : $\pm 4\text{KV}$ , R:330 $\Omega$ /C:150pF Air discharge, 10 time	

## 10. Handling Precautions

### 10.1. Safety

10.1.1. The liquid crystal in the LCD is poisonous. do not put it in your mouth. If the liquid crystal touches your skin or clothes, wash it off immediately using soap and water.

### 10.2. Handling

10.2.1. The LCD and touch panel is made of plate glass. do not subject the panel to mechanical shock or to excessive force on its surface.

10.2.2. do not handle the product by holding the flexible pattern portion in order to assure the reliability

10.2.3. Transparency is an important factor for the touch panel. Please wear clear finger sacks, gloves and mask to protect the touch panel from finger print or stain and also hold the portion outside the view area when handling the touch panel.

10.2.4. Provide a space so that the panel does not come into contact with other components.

10.2.5. To protect the product from external force, put a covering lens (acrylic board or similar board) and keep an appropriate gap between them.

10.2.6. Transparent electrodes may be disconnected if the panel is used under environmental conditions where dew condensation occurs.

10.2.7. Property of semiconductor devices may be affected when they are exposed to light, possibly resulting in IC malfunctions.

10.2.8. To prevent such IC malfunctions, your design and mounting layout shall be done in the way that the IC is not exposed to light in actual use.

### 10.3. Static Electricity

10.3.1. Ground soldering iron tips, tools and testers when they are in operation.

10.3.2. Ground your body when handling the products.

10.3.3. Power on the LCD module before applying the voltage to the input terminals.

10.3.4. do not apply voltage which exceeds the absolute maximum rating.

10.3.5. Store the products in an anti-electrostatic bag or container.

### 10.4. Storage

10.4.1. Store the products in a dark place at  $+25^{\circ}\text{C} \pm 5^{\circ}\text{C}$  with low humidity (65%RH or less).

10.4.2. do not store the products in an atmosphere containing organic solvents or corrosive gas.

### 10.5. Cleaning

10.5.1. do not wipe the touch panel with dry cloth, as it may cause scratch.

10.5.2. Wipe off the stain on the product by using soft cloth moistened with ethanol. do not allow ethanol to get in between the upper film and the bottom glass. It may cause peeling



issue or defective operation.do not use any organic solvent or detergent other than ethanol.

## 11. LCM Test Criteria

11.1.1 Based on GB/T 2828.1--2003/ISO2859-1:1999:

Inspection items	Sampling Rate	AQL Assessment
Appearance	Normally checking the sampling plan one time and performing general inspection level II	MA=0.4 MI=1.0
Function	Normally checking the sampling plan one time and performing general inspection level II	MA=0.4 MI=1.0
Size	N=3	C=0

11.1.2 GB/T 2828.1--2003/ISO2859-1:1999 checking the counting sampling procedure and sampling table.

11.1.3 GB/T 1619.96: Test methods for TN LCD parts.

11.1.4 GB/T 12848.91: General Specification for STN LCD parts

11.1.5 GB2421-89: Basic Environmental Test Procedures for Electrical and Electronic Products

11.1.6 IPC-A-610C: The acceptance condition for electrician assembled.

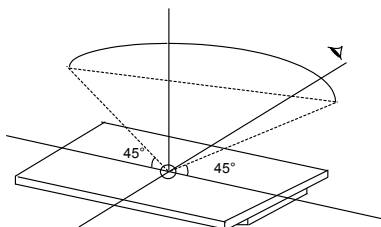
### 11.2. Inspection Conditions and Inspection Reference

11.2.1 Cosmetic inspection: shall be done normally at  $25\pm 5^{\circ}\text{C}$  of the ambient temperature and  $45\pm 20\%\text{RH}$  of relative humidity, under the ambient luminance greater than 300lux and at the distance of 30cm apart between the inspector's eyes and the LCD panel and normally in reflected light. For back-lit LCMs, cosmetic inspection shall be done under the ambient luminance less than 100lux with the backlight on.

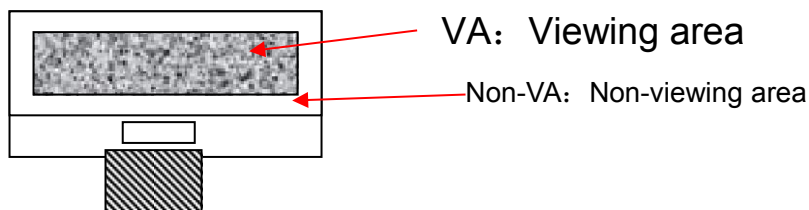




11.2.2 The LCM shall be tested at the angle of 45° both left side and right side, and 0-45° both top side and bottom side (for STN LCM, at 20°~55°):



11.2.3 Definition of VA



11.2.4 Inspection with naked eyes ( exclusive of the inspection of the physical dimensions of defects carried out with magnifiers ) .

11.2.5 Electrical properties: Inspection with the self-made/special LCM test jigs against the product documents or drawings; display contents and parameters shall conform to their documents requirements and the display effect to the drawing.

11.2.5.1 Test voltage (V) : (Determined) according to the operating instruction of test jigs assuming the external circuit can be adjusted unless the customer otherwise specifies driving voltage(s). (Display) effects are controlled within the specified range of voltage variation (If no specific requirements, display effects are controlled at  $V_{op} = 9V$  or  $V_{op} \pm 0.3V$  when  $V_{op}$  is below 9V; if  $V_{op}$  is above 9V, display effects are controlled at  $V_{op} \pm 3\%$  at least).For display products with the customer-specified fixed  $V_{op}$ , display effects are controlled by adjusting the internal circuit; if necessary, acceptable limit samples shall be built.


11.2.5.2 Current Consumption (I) : Refer to approved product specifications or drawings.

11.2.5.3 Size: for the outline dimension and the position which maybe affect customer assembled all should conform to the technical drawing requirements.



### 11.3. Defects and Acceptance Standards

#### 11.3.1 Electrical properties test




No.	Defects	Description	Accepted standard	MAJ	MIN
11.3.1.1	Missing segmet	SEG/COM dot and character missing segment caused by its wire broken/poor contact(s) and internal open circuit. 	Reject	√	
11.3.1.2	No display/ reaction	The products no picture display under normally connected situation.	Reject	√	
11.3.1.3	Mis-dispaly/ abnormally display	Displaying pattern and sequence not conform to the requirement or abnormally display when scanning as per the correct procedure.	Reject	√	
11.3.1.4	Wrong viewing angle	When powered on, the clearest viewing direction of display pattern is not conform to the requested one(or not conform the direction of the customer approved samples)	Reject	√	
11.3.1.5	Dim or dark display	Overall contrast is either too dark or too dim under normal operation	Beyond the voltage tolerance, reject	√	
11.3.1.6	Responesd slowly	When power on or off some parts response time is different from others.	Reject	√	
11.3.1.7	Exceed segment	As misalignment and insufficient etching caused abnormally display, display with exceed pattern or display with abnormally symbol, row or columns when power on.	Refer to the dot/line standard		√
11.3.1.8	Dim segment	Under the normal voltage, the contrast of vertical and horizontal segments is uneven and the depth of display segments with different contrast ratio.	Reject or refer to its samples		√
11.3.1.9	PI black/ white spot	Partial black and white spots visible when changing display contents due to defective PI layer in the inner of LCD.	Refer to the spot/line criteria for the visible spots when display image remains still;		√



			others OK		
11.3.1.10	Pinhole /white spot	<p>Fragmental patterns appearing when it powered on caused by missing ITO.</p>  <p><math>d = (X+Y)/2</math></p>	Refer to the dot/line standard		√
11.3.1.11	Partten distortion	<p>The pattern displayed width is either wider, narrower or deformed than the specified, caused by its misalignment and resulting in unwanted heave(s) or missing:<math> a-lb  \leq 1/4W</math> (W is the normal width)</p> 	$ a-lb  > 1/4W$ , Reject		√
11.3.1.12	High current	The current of LCD is higher than the standard one.	Reject		√
11.3.1.13	Cross talk	The degree of cross talk should not beyond the limited samples.	Refer to its limited samples	√	

### 3.2 LCD appearance defect:

#### 3.2.1 Dot and line defects (defined within VA, spots out of VA do not account)

No.	Defects	Average diameter (d)	Acceptable quantity	MAJ	MIN
11.3.2.1.1	Spot defects (black spot, foreign material, nick, scratches, including LC with wrong orientation)	$d \leq 0.20$	3		√
		$0.20 < d \leq 0.25$	2		
		$0.25 < d \leq 0.30$	1		
		$0.30 < d$	0		
11.3.2.1.2	Line defects (scratches and line with foreign materials)  Line length=L	$W \leq 0.01$	Not counted		√
		$L \leq 3.0, W \leq 0.02$	3		
		$L \leq 3.0, W \leq 0.03$	3		
		$L \leq 3.0, W \leq 0.05$	1		
		Note: when $W > 0.1\text{mm}$ it can regard as spot defect one.			



	Line width = W			
11.3.2.1.3	<p><math>d=(w+l)/2</math></p>	$d \leq 0.3$	3	√
		$0.3 < d \leq 0.5$	2	
		$0.5 < d \leq 0.8$	0	

Note: each of the same product should not exceed with 4 spot and line defects and the distance between each two spot should  $\geq 5\text{mm}$ .

3.2.2 Glass Damages (for LCMs without bezels and whose LCD edges exposed and for LCMs with bezels, including COG, H/S and directly assembled with BL LCMs)

No.	Defects	Acceptance Standard (unit : mm)		MAJ	MIN
11.3.2.2.1		X	$\leq 3.0$		√
		Y	$\leq 1/3W$		
		Z	$\leq 1/2t$		
		Acceptable quantity	2		
		When $Y \leq 0.2\text{mm}$ , the length of X doesn't count; for chip neither on lead nor through, when $X \leq 1/10L$ , $Y \leq 1/2W$ max, it doesn't count.			
11.3.2.2.2		X	$\leq 1/10L$		√
		Y	$\leq 2/3W$		
		Z	$\leq t$		
		Acceptable quantity	2		
		For chips on the end sealing corners, refer to 6.2.2.3 and they must be out of the frame epoxy. For chips on lead, refer to 6.2.2.1			
11.3.2.2.3		X	$\leq 1/8L$		√
		Y	$\leq 1/2H$		
		Z	$\leq 1/2t$		
		Acceptable quantity	2		
		The standard for inner chip on sealed area is the same as the standard for outer. For chip on			



		the reverse of ITO contact pad ledge, refer to 6.2.2.1 for chip on the reverse of ITO contact pad ledge for the value of Y.		
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Note: X means the length of chip; Y means the width of the chip; Z means the thickness of the chip; W means the width of the stage of the two glasses; L means the length of the glass; H means the distance between the glass edge and the inner side of frame glue; t means the thickness of the glass.

### 11.3.2.3 Others

No.	Defects	Description	Acceptance standard	MAJ	MIN
11.3.2.3.1	Rain ball/ bottom color	There is two different color in the same one product or the same batch products with two different colors	Reject or refer to the limited samples		√
11.3.2.3.2	Leaking ink (LC)	/	Reject	√	
11.3.2.3.3	Without protect film	/	Reject		√
11.3.2.3.4	Splay mark	Inspecting whether the surface of polarizer with splay marks against the light	Refer to the limited samples		√

### 11.3.3 Backlight components:

No.	Defects	Description	Acceptance standard	MAJ	MIN
11.3.3.1	Backlight not working, wrong color	/	Reject	√	
11.3.3.2	Color deviation	When powered on, the LCD color differs from its sample and found that the color not conforming to the drawing after testing.	Refer to sample and drawing		√
11.3.3.3	Brightness deviation	When powered on, the LCD brightness differs from its sample and is found after testing not conforming to the drawing; or if it conforms to the drawing but the brightness over $\pm 30\%$ than its sample.	Refer to sample and drawing		√
11.3.3.4	Uneven brightness	When powered on, the LCD brightness is uneven on the same LCD and out of	Refer to sample and		√



		the specification of the drawing. The no specification evenness= (the max value-the min value)/ mean value< 70%.	drawing		
11.3.3.5	Spot/line scratch	When power on, it with dirty spot, scratches and so on spot and line defects	Refer to 6.2.1		√
11.3.3.6	BL wrapped	The BL should paste tightly on the PCB.	The BL can be allowed within 1mm wrapped parts, if them not affect its appearance and outline dimension.		√
11.3.3.7	Flicker and with LED shade	When power on, each bright source should not with flicker and the brightness should evenness and without LED shades.	Reject	√	

11.3.4 Metal frame (Metal Bezel)

No.	Defects	Description	Acceptance standard	MAJ	MIN
11.3.4.1	Material/surface treatment	Metal frame/surface treatment do not conform to the specifications.	Reject	√	
11.3.4.2	Tab twist inconformity/ Tab not twisted	Wrong twist method or direction and twist tabs are not twisted as required.	Reject	√	
11.3.4.3	Oxidization	Oxidation on the surface of the metal bezel	Reject		√
11.3.4.4	Painting peel off, discoloration, dents, and scratches	1) the front surface with painting peel off and scratched can be see the bottom: Dot : D≤0.5mm, exceeds 3; Line: length ≤3.0mm, width ≤0.05mm , exceeds 2; 2) front dent, air bubble and side with painting peel off which scratched can be see the bottom: Dot: D≤1.0mm, exceeds 3; Line: length ≤3.0mm, width ≤0.05mm, exceeds 2.	Reject		√



11.3.4.5	Burr	Burr(s) on metal bezel is so long as to get into viewing area.	Reject		√
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11.3.5 PCB/COB

No.	Defects	Description	Acceptance standard	MAJ	MIN
11.3.5.1	Improper Epoxy Cover	<ol style="list-style-type: none"> <li>1) Contacts exposure within the white circle for COB chip bonding.</li> <li>2) The height of epoxy cover is out of the product specifications and drawing.</li> <li>3) The epoxy cover over the COB chip exceeds the circle by more than 2mm in diameter, which is the maximum distance the epoxy cover is allowed to exceed the circle.</li> <li>4) Existence of obvious linear mark(s) or chip-exposing pinhole on the epoxy cover.</li> <li>5) The pinhole diameter on the epoxy over exceeds 0.25mm and there is foreign matter in the pinhole.</li> </ol>	Reject		√
11.3.5.2	PCB appearance defect	<ol style="list-style-type: none"> <li>1) Oxidized or contaminated gold fingers on PCB.</li> <li>2) Bubbles on PCB after reflow-soldering.</li> <li>3) Exposure of conductive copper foil caused by peeled off or scratched solder-resist coating.</li> </ol> <p>For the conductive area of PCB repaired with the solder resist coating material, the diameter <math>\psi</math> of the repaired area on the circuit must not exceed 1.3mm while for the non-conductive area of PCB repaired with the solder resist coating material, the diameter <math>\psi</math> must not exceed 2.6mm; the total number of repaired areas on PCB must be less than 10; otherwise, the PCB must be rejected.</p>	Reject		√



11.3.5.3	Wrong or missing Components on PCB	<p>1) Components on PCB are not the same as defined by drawing such as wrong, excessive, missing, or mis-polarized components. (The bias circuit of LCD voltage or the backlight current limiting resistance is not adjusted unless specified by the customer.)</p> <p>2) The JUMP short on PCB shall conform to the mechanical drawing. If excessive or missing soldering occurs, the PCB shall be rejected.</p> <p>3) For components particularly required by the customer and specified in the mechanical drawing and/or component specifications, their specifications must conform to those of the suppliers; otherwise they shall be rejected.</p>	Reject	√	
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### 11.3.6 Connector and other components

No.	Defects	Description	Acceptance standard	MAJ	MIN
11.3.6.1	Out of Specification	The specification of connector and other components do not conform to the drawing.	Reject		√
11.3.6.2	Position and order	Solder position and Pin# 1 should be in the positions specified by the drawing.	Reject		√
11.3.6.3	Appearance	<p>1) Flux on PCB components and pins.</p> <p>2) The pin width of a PIN connector exceeds ½ of the specified pin width.</p>	Reject		√
11.3.6.4	Glue amount	Flat cable connector: as the conducted wire fixed with glue, if the glue not fully covered the exposed wire and the copper part around holes will be rejected.	Reject		√
11.3.6.5	Through holes blocked	Socket connector: the components can not plug-in units as the through holes blocked and deformation; the locks which with lock catch can not make the external connector to be	Reject		√





		locked.			
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11.3.7 SMT (Refer to IPC-A-610E the second standard if not specified)

No.	Defects	Description	Acceptance standard	MAJ	MIN
11.3.7.1	Soldering solder defects	Cold, false and missing soldering, solder crack and insufficient solder dissolution.	Reject		√
3.7.2	Solder ball/splash	Solder ball/tin dross causing short circuit at the solder point. There are active solder ball and splash.	Reject		√
11.3.7.3	DIP parts	Floated or tilted DIP parts, keypad, and connectors.	Reject		√
11.3.7.4	Solder shape	The welded spot should be concave and excessive or insufficient solder or solder burr on the welded spot must be rejected.	Reject		√
11.3.7.5	Component pin exposure	For the DIP type components, 0.5~2mm component pin must be remained after cutting the soldered pin and the solder surface neither should not be damaged nor should the component pin is fully covered with solder; otherwise rejected.	Reject		√
11.3.7.6	Poor Appearance	The LCMs become yellow-brown or black as the residual resin or solder oil. There is white mist residual at the solder point caused by PCB cleaning.	Reject		√

11.3.8 Hot Pressing components (including H/S, FPC, etc.)

No.	Defects	Description	Acceptance standard	MAJ	MIN
11.3.8.1	Out of its specification		Reject	√	
11.3.8.2	Size		Refer to its drawing		√
11.3.8.3	Position		1, If $f \leq 1/3w$ , $h \leq 1/3H$ , and its conform to the size and specification on		√



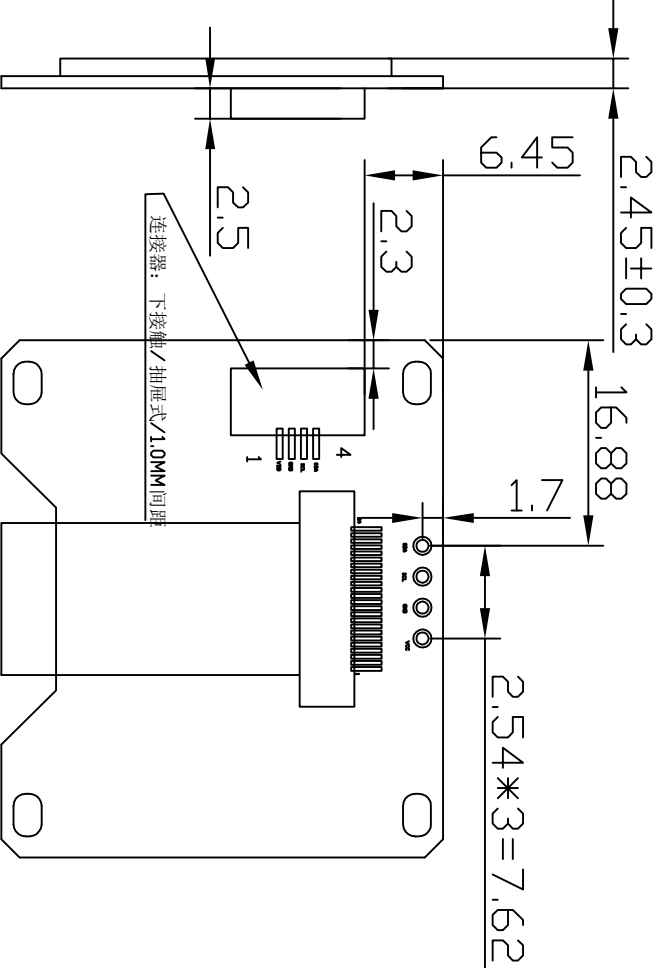
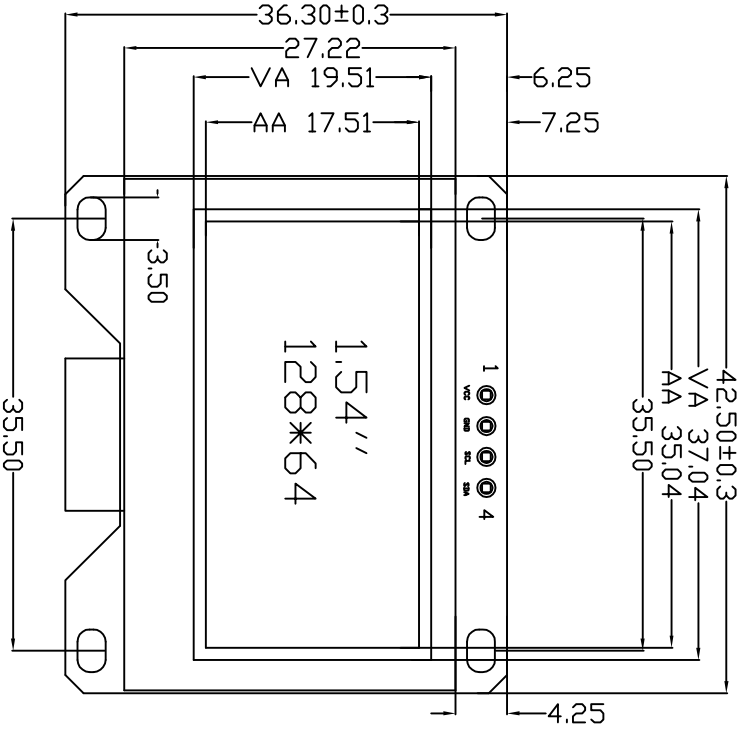
		Note: H=ITO pin length, W=ITO pin width, f= heat seal or the misplaced width of TAB.	drawing, which will be received. 2, The contact area of dielectric material conductor position and pressing material over 1/2 (controlling as per each ITO position) will be received.		
11.3.8.4	Foreign Matter in Hot pressing area	If foreign matter in non-conductive heat compression area shall not cause short, it is OK. If foreign matter in conductive heat compression area does not exceed 50% of the heat pressure area, it is OK.	Receive		√
11.3.8.5	Fold marks		Refer to the limited samples.		√

### 11.3.9 General Appearance

No.	Defects	Description	Acceptance standard	MAJ	MIN
11.3.9.1	Connection material	Damaged or contaminated FPC or H/S gold fingers or FFC contact pin side with exposed copper foil or base materials. Sharp folds on FPC, FFC, COF, H/S (unless designed for). Solder paste larger than 2/3 of pin width on the gold finger of FPC and PCB. Pierced or folded FPC/FFC exceeding limit sample.	Reject		√
11.3.9.2	Poor reinforcing band	The protect tape using for reinforce which not complete covered the needed protection circuits (such as H/S, FFC, FPC, etc.) or it not joint with its pasted material or it glued on the output side of pins.	Reject		√
11.3.9.3	Surface dirt	The surface of finished LCMs with smudge, residual glue, and finger prints,	Reject		√



		etc; solder spatters or solder balls on non-soldered area of PCB/COB. Non-removed defect mark or label on LCMs.			
11.3.9.4	Assembly black spot	Smears or black spots found on LCMs after backlight or diffusion barrier are assembled.	Refer to 6.2.1		√
11.3.9.5	Product mark	Missing, unclear, incorrect, or misplaced part numbers and/or batch marks.	Reject		√
11.3.9.6	Inner packing	Packing being inconsistent with quantity and part number on packing label, specifications or the customer order - either short-packed or over-packed.	Reject		√



1	VDD
2	GND
3	SCL
4	SDA

- NOTES:  
ALL DIMENSIONS ARE IN mm WITH  $\pm 0.20$   
TOLERANCE UNLESS OTHERWISE SPECIFIED.
- 1. DISPLAY TYPE: OLED/WHITE
  - 2. LCD OPERATING VOLTAGE: 3.3V
  - 3. OPERATING TEMPERATURE:  $-40^{\circ}\text{C} \sim 70^{\circ}\text{C}$
  - 4. STORAGE TEMPERATURE:  $-40^{\circ}\text{C} \sim 80^{\circ}\text{C}$
  - 5. VIEWING DIRECTION: ALL
  - 6. POLARIZER TYPE: REFLECTIVE
  - 7. CONNECTOR: FPC
  - 8. Rols requirement

REV.	SYM	DESCRIPTION
V00	A	FIRST ISSUE

NAME	DATE	CUSTOMER NO.	RHS COMPLIANT	YES
	2021-12-10	CNK001540-21446A3	UNMARKED TOLERANCE	$\pm 0.3$
			SCALE	UNIT
			SHEET 1 OF 4	REV. V00
			TITLE	OLED
			PART NO.	
			MODULE NO.	CNK001540-21446A3



DRAWN	LYM	DATE	2021-12-10
CHECKED	LYQ	CHECKED	2021-12-10
APPROVED			

1	2	3	4	5	6
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