LCD MODULE

SPECIFICATION

Model:	UEED030WV-RB40-L001C
Version:	V1.0
Date:	2025.10.10

Customer Confirmation

Approved by	Notes

Please return one of the copies of the specification with your signature to us within two weeks after you receive this document. If it is not returned, we will assume that you agree to the entire contents of this specification document.

VIEWE Confirmation

Prepared by	Reviewed by	Approved by

SHENZHEN VIEWE TECHNOLOGY CO., LTD

REVISION HISTORY

Revision	Date	Contents of Revision Change	Remarks
V1.0	2025.10.10	Preliminary release	All

SHEN ZHEN VIEWE TECHNOLOGY CO., LTD

TABLE of CONTENTS

1.GENERAL INFORMATION **4**
1.1 Features 4
1.2 Mechanical Specification 4
2. ABSOLUTE MAXIMUM RATINGS **5**
3. MECHANICAL DRAWING **6**
4. I/O CONNECTION **7**
5. ELECTRICAL CHARACTERISTICS **8**
5.1 TFT-LCD Panel Driving Section 8
5.2 Back Light Driving Section 8
5.3 Power On/Off Sequence 9
5.4 Timing Characteristics 10
5.4.1 AC CHARACTERISTICS 10
5.4.2 DC CHARACTERISTICS 11
6. OPTICAL CHARCTERISTICS **12**
7.RELIABILITY **16**
8.SPECIFICATION OF QUALITY ASSURANCE: **17**
9. HANDLING PRECAUTION : **25**
10.PACKAGE DRAWING **26**

SHEN ZHEN VIEWE TECHNOLOGY CO., LTD

1.GENERAL INFORMATION

1.1 Features

1) Pixel Arrangement： RGB Vertical Stripe
2) Interface Mode：3SPI+18bit RGB
3) Driver IC：ST7701S
4) Operation Temperature：-20~70℃
5) Storage Temperature：-30~80℃
6) Backlight Type：White LED
7)Display mode： Normally black
8) LED life time：30,000 Hours

1.2 Mechanical Specification

Item 项目	Specification 规格	Unit 单位	Remark 备注
Pixel Driving element	TFT	-	-
Screen Size	3.0	Inch	Diagonal
Resolution	360(W)*3(RGB)*640(H)	Dots	-
Active Area	65.28(W)*36.72(H)	mm	-
Module Size (W*H*D)	41.04(W)*73.57(H)*2.02(D)	mm	-
Interface Mode	3SPI+18bit RGB	-	-
Luminance	300	cd/m^2	Typ.
Viewing Direction	ALL	O'clock	-
Display Color	16.7M	Colors	24bits

SHENZHEN VIEWE TECHNOLOGY CO., LTD

2. ABSOLUTE MAXIMUM RATINGS

Item 项目	Symbol 符号	Min. 最小值.	Max. 最大值	Unit 单位	Remark 备注
Power supply voltage	VCC	-0.3	4.6	V	Note1
LED forward current	I_F	-0.001	30	mA	For each led,Note1
LED Reverse Voltage	V_R	-	5	V	For each led,Note1
Operating temperature	T_{op}	-20	70	°C	Note1,2
Storage temperature	T_{st}	-30	80	°C	Note1,2
Humidity	H_{st}	10	90	%RH	Note1,3

(Ta=+25°C,GND=0V)

Note1:If the module exceeds the absolute maximum ratings, it may be damaged permanently. Also if the module operates with the absolute maximum ratings for a long time, the reliability may drop.

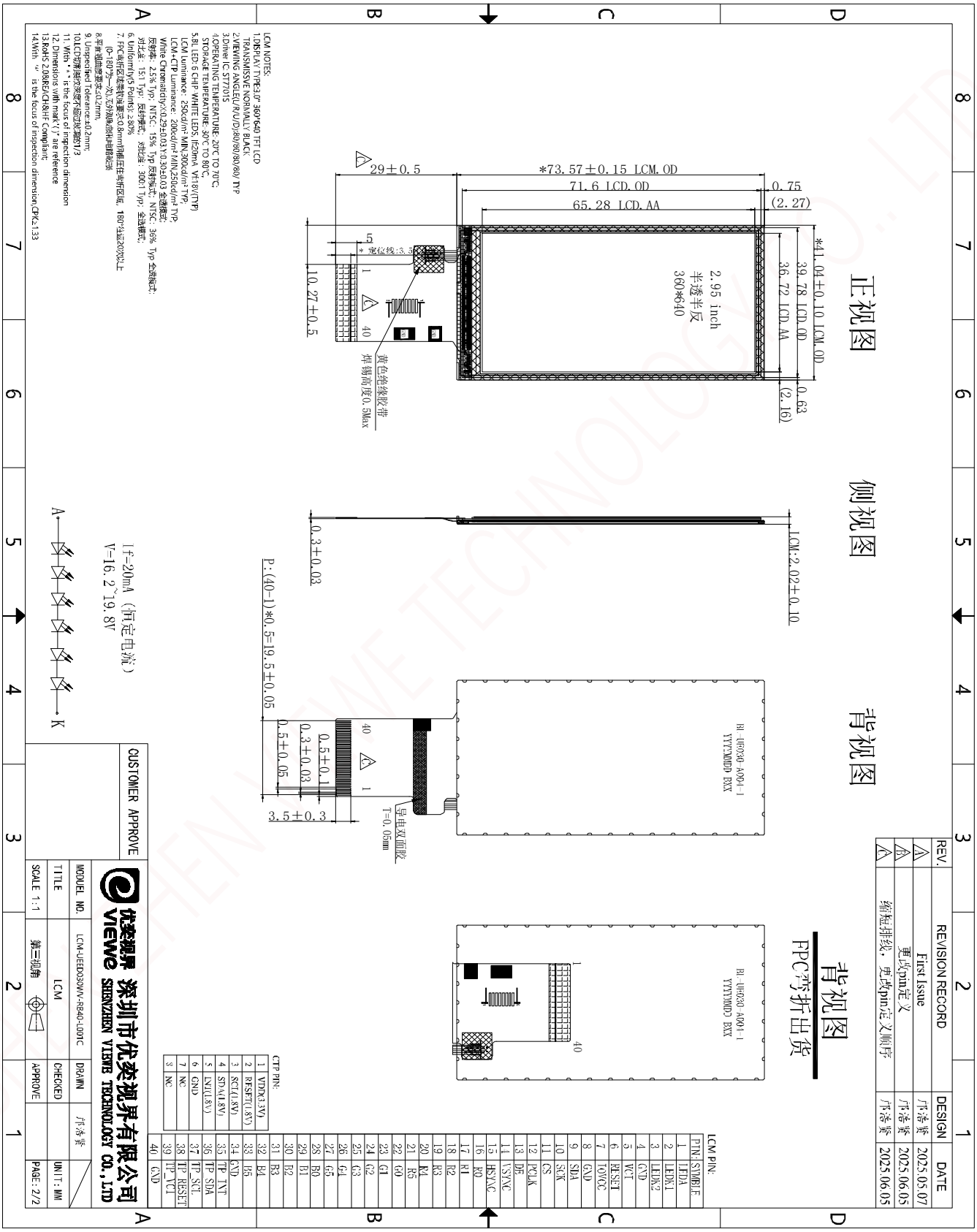
Note2: In case of temperature below 0℃,the response time of liquid crystal (LC) becomes slower and the color of panel darker than normal one.

Note3: Temp. ≤ 60℃ , 90% RH MAX.

Temp. ＞60℃ , Absolute humidity shall be less than 90% RH.

SHEN ZHEN VIEWE TECHNOLOGY CO.,LTD

3. MECHANICAL DRAWING



4. I/O CONNECTION

PinNo.序号	Symbol符号	I/O	Description描述
1	LEDA	P	Power supply for backlight cathode
2-3	LEDK	P	Power supply for backlight anode
4	GND	P	Power Ground
5	VC1	P	Power supply to the internal logic power regulator(3.3V)
6	RESET	I	The signal will reset the LCM,Signal is active low
7	IOVCC	P	Power supply to the internal logic power regulator(1.8V)
8	GND	P	Power Ground
9	SDA	I	Serial communication data input and output.
10	SCK	I/O	Serial communication clock input.
11	CS	I	DISP sets the display mode
12	PCLK	I	Pixel clock input pin, Negative polarity
13	DE	I	Data input enable. Display access is enabled when DE is “H”
14	VSYNC	I	Vertical sync signal, Negative polarity
15	HSYNC	I	The signal will reset the LCM, Signal is active low
16-21	R0-R5	I	Red data input.
22-27	G0-G5	I	Green data input.
28-33	B0-B5	I	Blue data input.
34	GND	P	Power Ground
35	TP_INT	I/O	Interrupt signals for TP
36	TP_SDA	I/O	I2C data signal for TP
37	TP_SCL	I	I2C clock signals for TP
38	TP_RESET	I	The signal will reset the TP,Signal is active low
39	TP_VCI	P	Power supply for TP(3.3V)
40	GND	P	Power Ground

I：Input；O：Output；P：Power

5. ELECTRICAL CHARACTERISTICS

5.1 TFT-LCD Panel Driving Section

Item 项目	Symbol 符号	Min. 最小值	Typ. 典型值	Max. 最大值	Unit 单位	Remark 备注
Power Supply Voltage	VCC	1.65	2.8	3.3	V	-
Power Supply Current	I_{VCC}	-	28.7	-	mA	Note1
Logic Input High Voltage	V_{IH}	0.7VCC	-	VCC	V	-
Logic Input Low Voltage	V_{IL}	0	-	0.3VCC	V	-
Panel Power Consumption	P_{VDD}	-	0.08036	-	Watt	Note1
Module Power Consumption	P_{LCM}	-	0.44236	-	Watt	Note1,2

(Ta=+25°C,GND=0V)

Note1:Measurement Conditions (Video Mode): Full Screen Red Pattern,VDD=3.3V,60Hz Refresh.

Note2: P_{LCM}= P_{VDD}+ P_{BL}， About P_{BL} information, inference to 5.2 Back Light Driving Section.

5.2 Back Light Driving Section

Item	Symbol	Min.	Typ.	Max.	Unit	Remark
Forward Voltage	V_F	-	18.1	-	V	Note1
Forward Current	I_F	-	20	-	mA	Note1
Backlight Power consumption	P_{BL}	-	0.362	-	Watt	Note1
LED Quantity		6			PCS	

(Ta=+25°C,GND=0V)

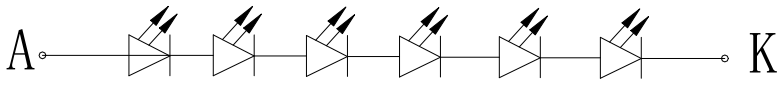
Note1: The LED driving condition is defined for each LED module。

For each LED ： IF=20mA,VF=3V(Typ.)/3.3V(Max.),Ta=25℃。

Note2:The “LED life time” is defined as the module brightness decrease to 50% of original brightness at I_{LED}=20mA(Per Led). The LED life time could be decreased if operating I_{LED} is larger than 20mA.

If=20mA（恒定电流）

V=16.2~19.8V



5.3 Power On/Off Sequence

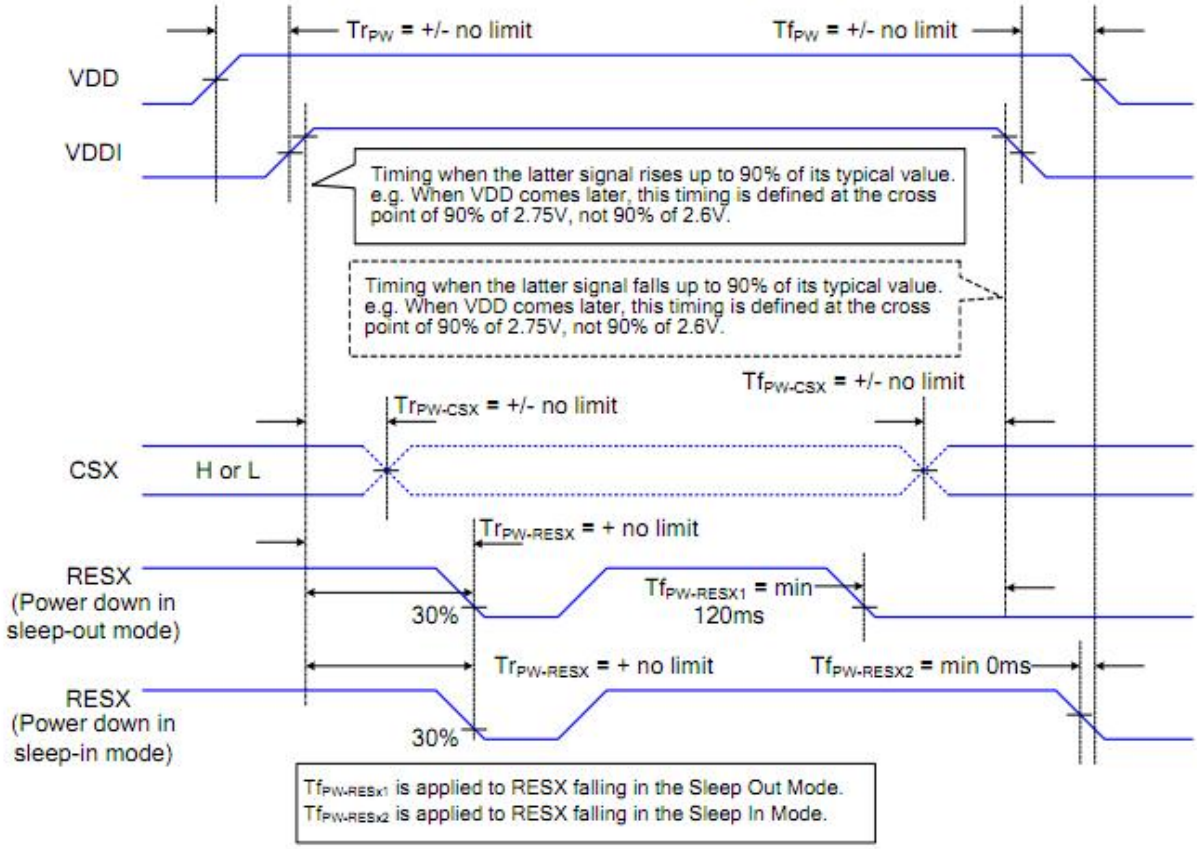
VDDI and VDDA can be applied or powered down in any order. During the Power Off sequence, if the LCD is in the Sleep Out mode, VDDA and VDDI must be powered down with minimum 120msec. If the LCD is in the Sleep In mode, VDDA and VDDI can be powered down with minimum 0msec after the RESX is released.

CSX can be applied at any timing or can be permanently grounded. RESX has high priority over CSX.

Notes:

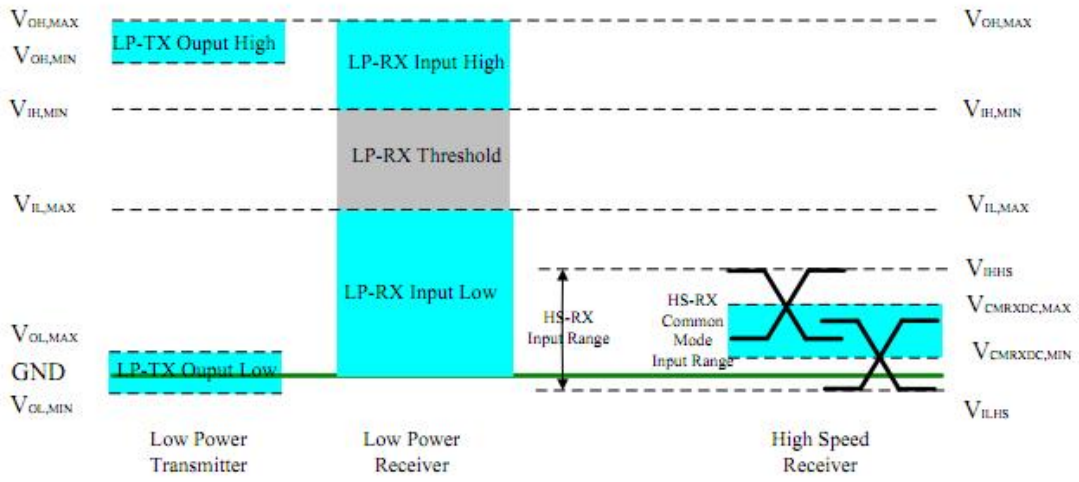
1. There will be no damage to the ST7701S if the power sequences are not met.
2. There will be no abnormal visible effects on the display panel during the Power On/Off Sequences.
3. There will be no abnormal visible effects on the display between the end of Power On Sequence and before receiving the Sleep Out command, and also between receiving the Sleep In command and the Power Off Sequence.
4. If the RESX line is not steadily held by the host during the Power On Sequence as defined in Sections 9.1 and 9.2, then it will be necessary to apply the Hardware Reset (RESX) after the completion of the Host Power On Sequence to ensure correct operations. Otherwise, all the functions are not guaranteed.

The power on/off sequence is illustrated below



5.4 Timing Characteristics

5.4.1 AC CHARACTERISTICS



VDDI=1.8,VDD=2.8, AGND=DGND=0V, Ta=25 ℃

Parameter	Symbol	Specification			Unit
		MIN	TYP	MAX	
Operation Voltage for MIPI Receiver					
Low power mode operating voltage	V_{LPH}	1.1	1.2	1.3	V
MIPI Characteristics for High Speed Receiver					
Single-ended input low voltage	V_{ILHS}	-40	-	-	mV
Single-ended input high voltage	V_{IHHS}	-	-	460	mV
Common-mode voltage	V_{CMRXDC}	70	-	330	mV
Differential input impedance	Z_{ID}	80	100	125	ohm
MIPI Characteristics for Low Power Mode					
Pad signal voltage range	V_I	-50	-	1350	mV
Logic 0 input threshold	V_{IL}	0-	-	550	mV
Logic 1 input threshold	V_{IH}	880	-	1350	mV
Output low level	V_{OL}	-50	-	50	mV
Output high level	V_{OH}	1.1	1.2	1.3	V

5.4.2 DC CHARACTERISTICS

Parameter	Symbol	Condition	Specification			Unit	Related Pins
			MIN.	TYP.	MAX.		
Power & Operation Voltage							
System Voltage	VDD	Operating voltage	2.5	2.8	3.6	V	
Interface Operation Voltage	VDDI	I/O Supply Voltage	1.65	1.8	3.3	V	
Gate Driver High Voltage	VGH		11.5		17	V	
Gate Driver Low Voltage	VGL		-7.6		-12	V	
Gate Driver Supply Voltage		| VGH-VGL |	-		30	V	
Input / Output							
Logic-High Input Voltage	VIH		0.7VDDI		VDDI	V	Note 1
Logic-Low Input Voltage	VIL		VSS		0.3VDDI	V	Note 1
Logic-High Output Voltage	VOH	IOH = -1.0mA	0.8VDDI		VDDI	V	Note 1
Differential Input High Threshold Voltage	VIT+			0	50	mV	MIPI_CLK MIPI_Data
Differential Input Low Threshold Voltage	VIT-		-50	0		mV	
Single-ended Receiver Input Operation Voltage Range	VIR		0.5		1.2	V	
Logic-Low Output Voltage	VOL	IOL = +1.0mA	VSS		0.2VDDI	V	Note 1
Logic-High Input Current	IIH	VIN = VDDI			1	uA	Note 1
Logic-Low Input Current	IIL	VIN = VSS	-1			uA	Note 1
Input Leakage Current	IIL	IOH = -1.0mA	-0.1		0.1	uA	Note 1
VCOM Voltage							
VCOM amplitude	VCOM			VSS		V	
Source Driver							
Gamma Reference Voltage(Positive)	VAP		4.4		6.4	V	
Gamma Reference Voltage(Negative)	VAN		-2.6		-4.6	V	
Source Output Settling Time	Tr	Below with 99% precision			10	us	Note 2

Table 2 Basic DC Characteristics

6. OPTICAL CHARCTERISTICS

6.1 Optical Specification (Reflective mode)

Parameter 参数	Symbol 符号	Condition 条件	Min. 最小值	Typ. 典型值	Max. 最大值	Unit 单位	Remark 备注
White Reflectance (with Polarizer)	Rw (%)	θ = 0	2	2.5	-	%	
Contrast Ratio	C/R	θ = 0°	12	15	-	-	
NTSC Ratio	S	θ =0°	-	15	-	%	
Response Time	T_R+ T_F	25 °C	-	25	35	ms	设备：DMS Tr+Tf W90%/B10%
Viewing Angle	θ L	C/R>2	-	80	-	Degree	设备：DMS Source pad Down CR>2
	θ R		-	80	-		
	θ U		-	80	-		
	θ D		-	80	-		

SHEN ZHEN VIEWE TECHNOLOGY CO

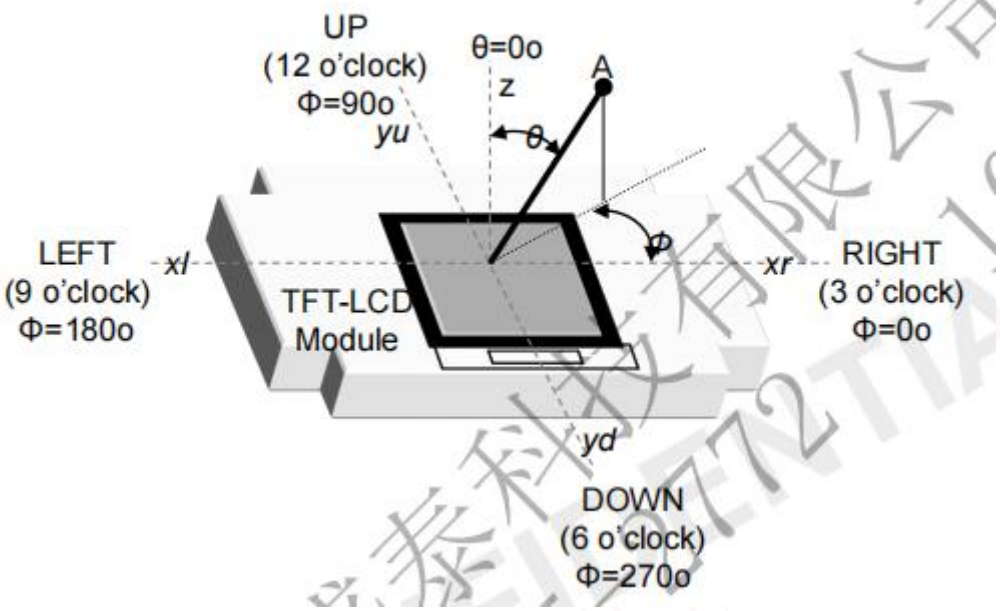
6.2 Optical Specification (Transmittance mode)

Parameter 参数	Symbol 符号	Condition 条件	Min. 最小值	Typ. 典型值	Max. 最大值	Unit 单位	Remark 备注
Contrast Ratio	C/R	θ = 0°	250	300	-	-	SR-UL1R
Color Gamut （NTSC）	S	θ =0°	-	36		%	
Luminance	L	θ =0°	250	300	-	cd/m2	
Luminance uniformity	U_W	θ =0°	80	-	-	%	Note(1)
Response Time	T_R+ T_F	25 ◦C	-	25	35	ms	Note(2)
White Color Coordination	W_X	θ =0°	±0.03	0.290	±0.03	(x,y)	Note(3)
	W_Y			0.300			
Viewing Angle CR>2	θ L	-	-	80	-	Degree	设备：DMS source pad down
	θ R		-	80	-		
	θ U		-	80	-		
	θ D		-	80	-		

Test Conditions:
VDD=3.3V, I_F=20mA (Backlight current), the ambient temperature is+25℃.

Note 1: Viewing angle is the angle at which the contrast ratio is greater than 10. The viewing angles are determined for the horizontal or 3, 9 o'clock direction and the vertical or 6, 12 o'clock direction with respect to the optical axis which is normal to the LCD surface (see Figure 8).

<Figure 8. Viewing Angle Range Is Defined As Follows>



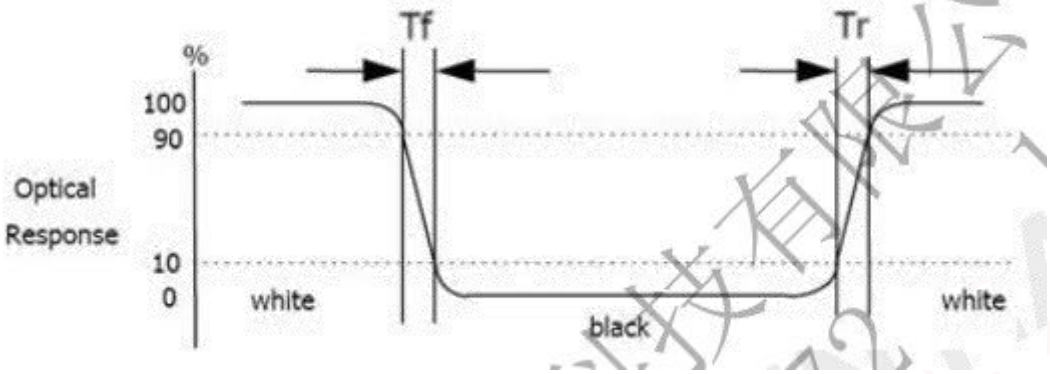
Note 2: Contrast measurements shall be made at viewing angle of Θ=0° and at the center of the LCD surface. Luminance shall be measured with all pixels in the view field set first to white, then to the dark (black) state. Luminance Contrast Ratio (CR) is defined mathematically.

$$CR = \frac{\text{Luminance when displaying a white raster}}{\text{Luminance when displaying a black raster}}$$

Note 3: Transmittance is the Value with Polarizer.

Note 4: The color chromaticity coordinates specified in Table 16 shall be calculated from the spectral data measured with all pixels first in red, green, blue and white. Measurements shall be made at the center of the panel.

Note 5: The electro-optical response time measurements shall be made as Figure 9 by switching the "data" input signal ON and OFF. The times needed for the luminance to change from 10% to 90% is Tr, and 90% to 10% is Tf.



SHENZHEN VIEWE TECHNOLOGY CO., LTD

7.RELIABILITY

Item 项目	Test Condition 测试条件	Remark 备注
High Temperature Storage	Ta =+80°C / 240Hours	Note1
Low Temperature Storage	Ta =-30°C / 240Hours	
High Temperature Operating	Ta =+70°C / 240Hours	
Low Temperature Operating	Ta =-20°C / 240Hours	
Temperature Cycle storage Test	-30-80'C,100cycles, 1hr/cycle.Non-operational	
Thermal humidity storage Test	60°C x 90%RH / 240Hours	
Package Vibration Test	Frequency: 10Hz~55Hz,Amplitude:1.5mm, 1 hrs for each direction of X, Y, Z	Note2
Packing shock test	Drop to the ground from 60cm height, 1 corner, 3 edges, 6 surfaces.	Note2

Inspection after Test :

Note1:The test result shall be evaluated after the sample has been left at room temperature and humidity for 1 hours.

These defects can't be accepted:1.Air bubble 2.Seal leak 3.Non-display 4.Missing segments 5.Glass crack. 6. The reliability test result is based on XXXX, XXXX, XXXX, XXXX IC

Note 2: In the standard condition, there shall be no practical problem that may affect the display function. After the reliability test, the product only guarantees operation, but doesn't guarantee all the cosmetic specification.

8.Specification of Quality Assurance:

8-1. Purpose

This standard for Quality Assurance should affirm the quality of LCD module products to supply to purchaser by VIEWE.

8-2. Standard for Quality Test

a. Inspection:

Before delivering, the supplier should take the following tests, and affirm the quality of product.

b. Electro-Optical Characteristics:

According to the individual specification to test the product.

c. Test of Appearance Characteristics:

According to the individual specification to test the product.

d. Test of Reliability Characteristics:

According to the definition of reliability on the specification for testing products.

e. Delivery Test :

Before delivering, the supplier should take the delivery test.

(i) Test method: According to ISO2859-1. General Inspection Level Ⅱ take a single time.

(ii) The defects classify of AQL as following :

Major defect: AQL = 0.65

Minor defect: AQL = 2.5

Total defects: AQL = 2.5

8-3. Non- conforming Analysis & Deal With Manners

a. Non- conforming Analysis :

(i) Purchaser should supply the detail data of non- conforming sample and the non- conforming.

(ii) After accepting the detail data from purchaser, the analysis of non- conforming should be finished in two weeks.

(iii) If supplier can not finish analysis on time, must announce purchaser before 3 days.

b. Disposition of non- conforming:

(i) If find any product defect of supplier during assembly time, supplier must change the good product for every defect after recognition.

(ii) Both supplier and customer should analyze the reason and discuss the disposition of non- conforming when the reason of nonconforming is not sure.

8-4. Agreement items

Both sides should discuss together when the following problems happen.

a. There is any problem of standard of quality assurance, and both sides should think that must be modified.

b. There is any argument item which does not record in the standard of quality assurance.

c. Any other special problem.

8-5. Standard of The Product Appearance Test

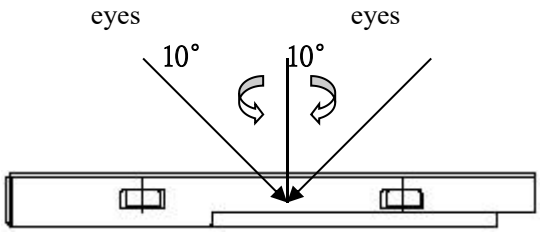
a. Manner of appearance test:

(i) The test must be under 20W × 2 or 40W fluorescent light, and the distance of view must be at 30±5cm.

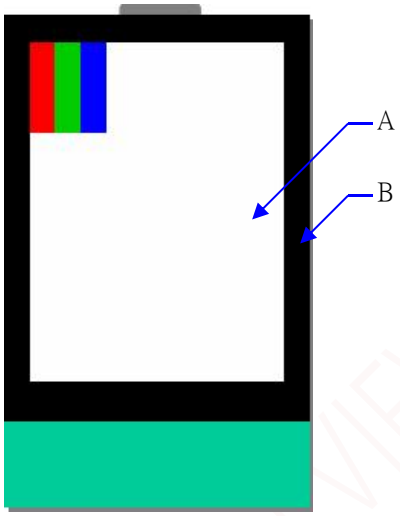
(ii) When test the model of transmissive product must add the reflective plate.

(iii)The test direction is base on around 10° of vertical line.

(iiii)Temperature: 25±5℃ Humidity: 60±10%RH



(iv) Definition of area :



A. Area: Viewing area.

B. Area: Out of viewing area.
(Outside viewing area)

b. Basic principle::

(i) It will accord to the AQL when the standard can not be described.

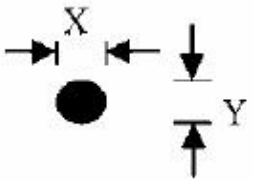
(ii) The sample of the lowest acceptable quality level must be discussed by both supplier and customer when any dispute happened.

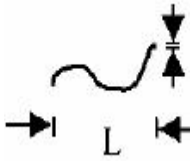
(iii) Must add new item on time when it is necessary.

c. Standard of inspection : (Unit: mm)

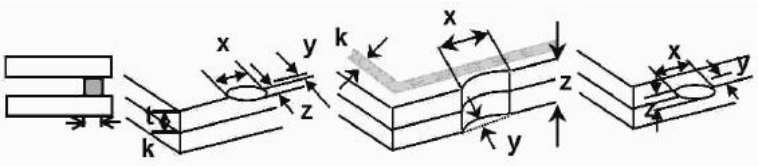
8-6. Inspection specification

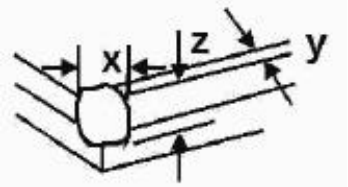
Defect out of viewing area can be neglected

<table>
<tr><th>NO</th><th>Item</th><th>Criterion</th><th>AQL</th></tr>
<tr><td>01</td><td>Electrical Testing</td><td>1.1 Missing vertical, horizontal segment, segment contrast defect.
1.2 Missing character, dot or icon.
1.3 Display malfunction.
1.4 No function or no display.
1.5 Current consumption exceeds product specifications.
1.6 LCD viewing angle defect.
1.7 Mixed product types.
1.8 Flicker</td><td>0.65</td></tr>
<tr><td>02</td><td>Black or White spots or Bright spots or Color spots on LCD (Display only)</td><td>2.1 White and black or color spots on display ≦ 0.25mm, no more than Five spots.
2.2 Densely spaced: No more than three spots within 3mm.</td><td>2.5</td></tr>
<tr><td rowspan="2">03</td><td rowspan="2">LCD and Touch Panel black spots, white spots, contamination (non – display)</td><td>3.1 Round type: As following drawing
Φ = (X+Y) / 2
 

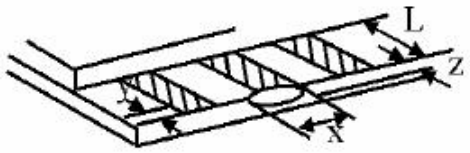
<table><tr><th>Size(mm)</th><th>Acceptable Q'ty</th></tr><tr><td>Φ≦0.10</td><td>Accept no dense</td></tr><tr><td>0.10< Φ≦0.20</td><td>3</td></tr><tr><td>0.20< Φ≦0.25</td><td>2</td></tr><tr><td>0.25< Φ≦0.30</td><td>1</td></tr><tr><td>0.30< Φ</td><td>0</td></tr></table>* Densely spaced: No more than two spots within 3mm.</td><td>2.5</td></tr>
<tr><td>3.2 Line type: (As following drawing)
 

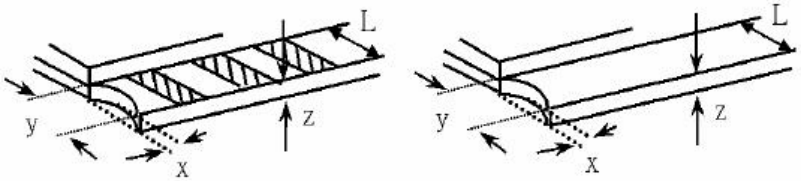
<table><tr><th>Length(mm)</th><th>Width(mm)</th><th>Acceptable Q'ty</th></tr><tr><td>---</td><td>W≦0.02</td><td>Accept no dense</td></tr><tr><td>L≦3.0</td><td>0.02<W≦0.05</td><td rowspan="2">2</td></tr><tr><td>L≦2.5</td><td>0.03<W≦0.15</td></tr><tr><td>---</td><td>0.15<W</td><td>Rejection</td></tr></table>* Densely spaced: No more than two lines within 3mm.</td><td>2.5</td></tr>
</table>

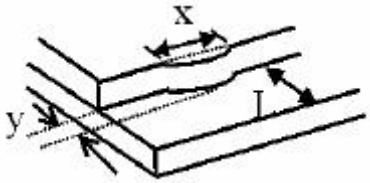
<table>
<tr><th>NO</th><th>Item</th><th>Criterion</th><th>AQL</th></tr>
<tr><td>04</td><td>Polarizer bubbles</td><td>If bubbles are visible, judge using black spot specifications, not easy to find, must check in specify direction
<table>
<tr><td>Size Φ(mm)</td><td>Acceptable Q'ty</td></tr>
<tr><td>Φ≦0.20</td><td>Accept no dense</td></tr>
<tr><td>0.20< Φ≦0.50</td><td>3</td></tr>
<tr><td>0.50< Φ≦1.00</td><td>2</td></tr>
<tr><td>1.00< Φ</td><td>0</td></tr>
<tr><td>Total Q’ty</td><td>3</td></tr>
</table></td><td>2.5</td></tr>
<tr><td>05</td><td>Scratches</td><td>Follow NO.3 -2 Line Type.</td><td></td></tr>
<tr><td>06</td><td>Chipped glass</td><td>Symbols:
x: Chip length y: Chip width z: Chip thickness
k: Seal width t: Glass thickness a: LCD side length
L: Electrode pad length
6.1 General glass chip:
6.1.1 Chip on panel surface and crack between panels :
 

<table>
<tr><td>z: Chip thickness</td><td>y: Chip width</td><td>x: Chip length</td></tr>
<tr><td>Z≦1/2t</td><td>Not over viewing are</td><td>x≦1/8a</td></tr>
<tr><td>1/2t< z≦2t</td><td>Not exceed 1/3k</td><td>x≦1/8a</td></tr>
</table>
⊙ Unit: mm
⊙ If there are 2 or more chips, x is the total length of each chip
6.1.2 Corner crack :
 

<table>
<tr><td>z: Chip thickness</td><td>y: Chip width</td><td>x: Chip length</td></tr>
<tr><td>Z≦1/2t</td><td>Not over viewing area</td><td>x≦1/8a</td></tr>
<tr><td>1/2t< z≦2t</td><td>Not exceed1/3k</td><td>x≦1/8a</td></tr>
</table>
⊙ Unit: mm
⊙ If there are 2 or more chips, x is the total length of each chip</td><td>2.5</td></tr>
</table>

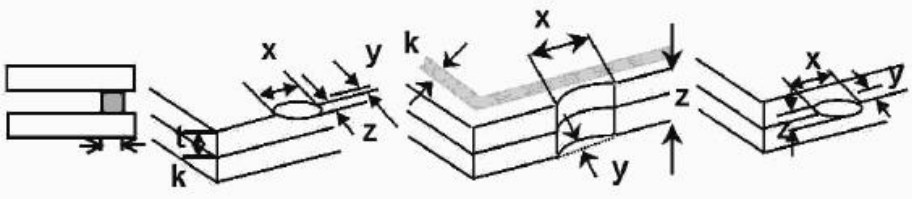
<table>
<tr><th>NO</th><th>Item</th><th>Criterion</th><th>AQL</th></tr>
<tr><td>07</td><td>Glass crack</td><td>
Symbols:
x: Chip length y: Chip width z: Chip thickness
k: Seal width t: Glass thickness a: LCD side length
L: Electrode pad length
7.2 Protrusion over terminal :
7.2.1 Chip on electrode pad :


<table>
<tr><td>y: Chip width</td><td>x: Chip length</td><td>z: Chip thickness</td></tr>
<tr><td>y≦0.5mm</td><td>x≦1/8a</td><td>0< z≦t</td></tr>
</table>
7.2.2 Non-conductive portion :


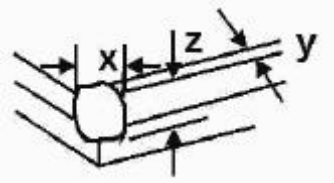
<table>
<tr><td>y: Chip width</td><td>x: Chip length</td><td>z: Chip thickness</td></tr>
<tr><td>y≦L</td><td>x≦1/8a</td><td>0< z≦t</td></tr>
</table>
⊙ If there chipped area touches the ITO terminal, over 2/3 of the ITO must remain and be inspected according to electrode terminal specifications.
⊙ If the product will be heat sealed by the customer, the alignment mark must mot be damaged.
7.2.3 Substrate protuberance and internal crack


<table>
<tr><td>y: width</td><td>x: length</td></tr>
<tr><td>y≦1/3L</td><td>X≦a</td></tr>
</table>
</td><td>2.5</td></tr>
</table>

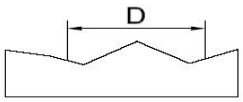
NO	Item	Criterion	AQL
08	Cracked glass	The LCD with extensive crack is not acceptable.	2.5
09	Backlight elements	9.1 Illumination source flickers when lit. 9.2 Spots or scratches that appear when lit must be judged. Using LCD spot, lines and contamination standards. 9.3 Backlight doesn't light or color is wrong.	2.5 2.5 0.65
10	Bezel	Bezel must comply with product specifications.	2.5
11	PCB、COB	11.1 COB seal may not have pinholes larger than 0.2mm or contamination. 11.2 COB seal surface may not have pinholes through to the IC. 11.3 The height of the COB should not exceed the height indicated in the assembly diagram. 11.4 There may not be more than 2mm of sealant outside the seal area on PCB. And there should be no more than three places. 11.5 Parts on PCB must be the same as on the production characteristic chart, There should be no wrong parts, missing parts or excess parts. 11.6 The jumper on the PCB should conform to the product characteristic chart.	2.5 2.5 2.5 2.5 0.65 0.65
12	FPC	12.1 FPC terminal damage ≦ 1/2 FPC terminal width and can not affect the function, we judge accept. 12.2 FPC alignment hole damage ≦ 1/2 alignment area and can not affect the function, we judge accept.	2.5 2.5
13	Soldering	13.1 No cold solder joints, missing solder connections, oxidation or icicle. 13.2 No short circuits in components on PCB or FPC.	2.5 0.65

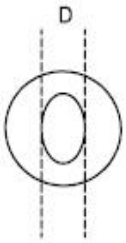
<table>
<tr><th>NO</th><th>Item</th><th>Criterion</th><th>AQL</th></tr>
<tr><td>14</td><td>Touch Panel
Chipped glass</td><td>
Symbols :
x: Chip length y: Chip width z: Chip thickness
k: Seal width t: Glass thickness a: LCD side length
L: Electrode pad length
14.1 General glass chip :
14.1.1 Chip on panel surface and crack between panels:


<table>
<tr><td>z: Chip thickness</td><td>y: Chip width</td><td>x: Chip length</td></tr>
<tr><td>Z≦t</td><td>≦1/2 k and not over viewing area</td><td>x≦1/8a</td></tr>
</table>
⊙ Unit: mm
⊙ If there are 2 or more chips, x is the total length of each chip

14.1.2 Corner crack:


<table>
<tr><td>z: Chip thickness</td><td>y: Chip width</td><td>x: Chip length</td></tr>
<tr><td>z≦t</td><td>≦1/2 k and not over viewing area</td><td>x≦1/8a</td></tr>
</table>
⊙ Unit: mm
⊙ If there are 2 or more chips, x is the total length of each chip
</td><td>2.5</td></tr>
</table>

<table>
<tr><th>NO</th><th>Item</th><th>Criterion</th><th>AQL</th></tr>
<tr><td>15</td><td>Touch Panel(Fish eye、dent and bubble on film)</td><td>
<table>
<tr><th>SIZE(mm)</th><th>Acceptable Q’ty</th></tr>
<tr><td>Φ≦0.2</td><td>Accept no dese</td></tr>
<tr><td>0.2< D ≦0.4</td><td>5</td></tr>
<tr><td>0.4< D ≦0.5</td><td>2</td></tr>
<tr><td>0.5< D</td><td>0</td></tr>
</table>




</td><td>2.5</td></tr>
<tr><td>16</td><td>Touch Panel Newton ring</td><td>Newton ring dimension ≦ 1/2 touch panel area and not affect font and line distortion (≦2.5%), it is acceptable.</td><td>2.5</td></tr>
<tr><td>17</td><td>Touch Panel Linearity</td><td>Less than 2.5% is acceptable.</td><td>2.5</td></tr>
<tr><td>18</td><td>LCD Ripple</td><td>Touch the touch panel, can not see the LCD ripple.
Pen: R 1.0mm silicon rubber.
Operation Force: 80g</td><td>2.5</td></tr>
<tr><td>19</td><td>General appearance</td><td>19.1 Pin type must match type in specification sheet.
19.2 LCD pin loose or missing pins.
19.3 Product packaging must the same as specified on packaging specification sheet.
19.4 Product dimension and structure must conform to product specification sheet.</td><td>0.65
0.65
0.65
0.65</td></tr>
</table>

9. Handling Precaution :

9-1 Handling of LCM

- Don't give external shock.
- Don't apply excessive force on the surface.
- Liquid in LCD is hazardous substance. Must not lick and swallow. when the liquid is attach to your hand, skin, cloth etc. Wash it out thoroughly and immediately.
- Don't operate it above the absolute maximum rating.
- Don't disassemble the LCM.
- The operators should be grounded whenever he/she comes into contact with the module. Never touch any of the conductive parts such as the LSI pads,the copper leads on the PCB and the interface terminals with any parts of the human body.
- The modules should be kept in antistatic bags or other containers resistant to static for storage.
- The module is coated with a film to protect the display surface. Be care when peeling off this protective film since static electricity may be generated.

9-2 Storage

- Store in an ambient temperature of 25±10℃, and in a relative humidity of 50±10%RH. Don't expose to sunlight or fluorescent light.

- Storage in a clean environment, free from dust, active gas, and solvent.
- Store in anti-static electricity container.
- Store without any physical load.

9-3 Soldering

- Use only soldering irons with proper grounding and no leakage.
- Iron: No higher than 280±10℃ and less than 3 sec during Hand soldering.
- Rewiring: no more than 2 times.

10.PACKAGE DRAWING

第一步

将产品放入吸塑盘中，LCD AA 面朝上，注意防呆方向

第二步

每一层吸塑盘与相邻层，叠放时相错 180 度，最上层不放产品，总叠加层数参考

第三步

检查无误后用胶带固定吸塑盘，将捆好的吸塑盘放入无尘带中并封口；

First step

Putting products into the tray,
LCD A.A faces Upward,
(pay attention to the

Second step

Neighbouring trays should be staggered 180° while stacking up.
on the top,there is an empty tray without product

Third step

Taping up the tray after inspection,and put them into a PE

第四步

外箱内侧底部和四周放上泡棉将包好的产品装入纸箱，合盖；

第五步

最后胶带封箱，贴外箱标签

第六步

将每箱整齐放在栈板上并包裹最高可堆叠 6 层)

Fourth step

Putting EPE foams and products with trays into the carton;
Close the carton box

fifth step

Sealing the carton with cellulose tape ;
Stick on a carton label,

sixth step

Placing the boxes together on a pallet (6 layers at most),