PRODUCT SPECIFICATION

KADI Model: **KD070WSDP01**

CUSTOMER Model: -

Description: **7’ DP Display Module**

Version: **1.0**

KADI	PREPARED BY	CHECKED BY	APPROVED BY
SIGNATURE			
DATE	2026.11.5	2026.11.5	2026.11.5

	SIGNATURE	DATE
CUSTOMER APPROVAL		

Record of Revisions

Version	Revise Date	Description	Page
1.0	2026-11-5	First Release	-

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1. General Specifications

1.1 LCM General Information

Item	Specification	Unit
LCD Size	7	inch
Number of Pixels	1024 (H) RGB x 600 (V)	pixels
Display Mode	Normally Black	-
Viewing Direction	Free	o' clock
Video Interface	DP1.1 / TYPE-C 3.1	-
Display Colors	16.7M	colors
Outline Dimension	178.50 (H) x 110.35 (V) x 19.10 (D)	mm
Active Area	154.21 (H) x 85.92 (V)	mm
Pixel Pitch	0.1505 (H) x 0.1432 (V)	mm
Operation Temperature	-10~60	℃
Storage Temperature	-20~70	℃
Power Input	5V/3A	-

1.2 Touch Panel Information

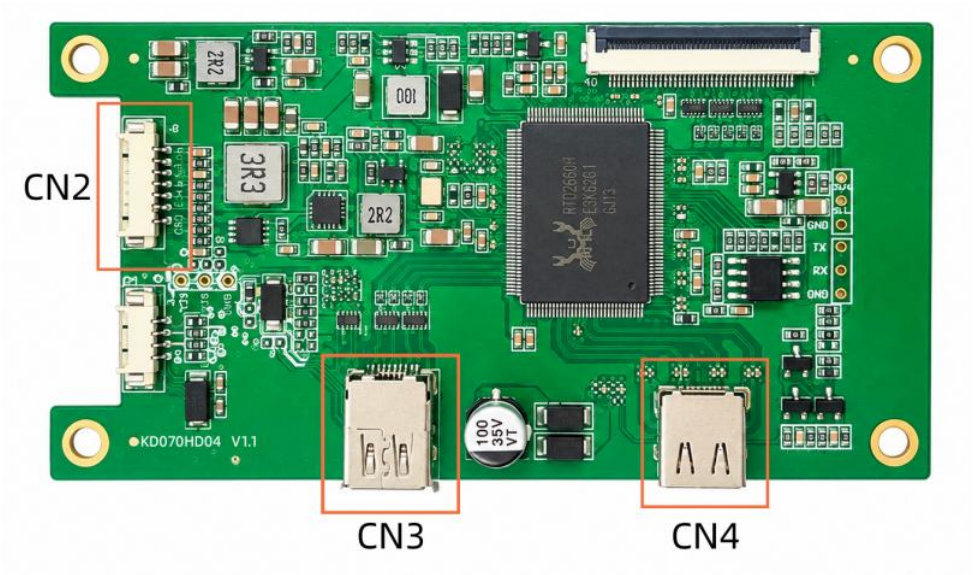
Item	Specification
Touch Structure	G+G
Bonding Type with LCM	OCA Optical Bonding
Driver IC	ILI2511
Interface	USB(Type-C)
Touch Count Max	10 Points
Surface treatment	-
Surface hardness	6H
Origin of coordinate	Top Left Corner

Note1:Requirements on environmental protection RoHS compliant.

2. Interface

2.1 PCB overview

Picture below shows the connectors exact placement and their descriptions.



2.2 Connector Description

Item	Type	Description
CN2	External OSD keyboard	Power/Menu/Exit/Down/Up（8P-1.25mm）
CN3	MINI DP	DP 1.1
CN4	Type-C	Video Signal and USB Touch and Power

2.3 CN2 (External OSD keyboard) 8PIN-1.25MM

Pin No.	Symbol	Description
1	DOWN	Page down
2	UP	Page up
3	EXIT	Exit
4	MENU	Menu
5	PWR	Power on/off
6	LED_EN	LED Enable; Output signal 3.3V
7	GND	GND
8	3.3DVCC	Keyboard VDD, Output 3.3V

2.3 CN3 (MINI DP)

Pin No.	Symbol	Description
1	GND	Ground
2	Hot Plug	Hot Plug Detect
3	ML_Lane0+	Differential signal 0+
4	CONFIG1	Ground
5	ML_Lane0-	Differential signal 0-
6	CONFIG2	Ground
7	GND	Ground
8	GND	Ground
9	ML_Lane1+	Differential signal 1+
10	ML_Lane3+	Differential signal 3+
11	ML_Lane1-	Differential signal 1-
12	ML_Lane3-	Differential signal 3-
13	GND	Ground
14	DP CABLE	DP cable detection
15	ML_Lane2+	Differential signal 2+
16	AUX CH+	Auxiliary Channel (positive)
17	ML_Lane2-	Differential signal 2-
18	AUX CH-	Auxiliary Channel (negative)
19	GND	Ground
20	GND	Ground

2.4 CN4 (Type-C)

Pin No.	Symbol	Description
A1	GND	Ground
A2	TX1+	Super Speed differential signal, positive
A3	TX1-	Super Speed differential signal, negative
A4	VBUS	VBUS Power;5V
A5	CC1	Configuration channel
A6	D+	USB differential pair, position 1, positive
A7	D-	USB differential pair, position 1, negative
A8	SBU1	Side band use
A9	VBUS	VBUS Power;5V
A10	RX2-	Super Speed differential signal, positive
A11	RX2+	Super Speed differential signal, negative
A12	GND	Ground
B1	GND	Ground
B2	TX2+	Super Speed differential signal, positive
B3	TX2-	Super Speed differential signal, negative
B4	VBUS	VBUS Power;5V
B5	CC2	Configuration channel
B6	D+	USB differential pair, position 2, positive
B7	D-	USB differential pair, position 2, negative
B8	SBU2	Side band use
B9	VBUS	VBUS Power;5V
B10	RX1-	Super Speed differential signal, positive
B11	RX1+	Super Speed differential signal, negative
B12	GND	Ground

3. Electrical Characteristics

3.1 Recommended Operating Condition for Module

Item	Symbol	Min.	Typ.	Max.	Unit	Note
Supply Voltage for Module	DC	-	5	-	V	

3.2 Recommended Driving Condition for Backlight

Item	Symbol	BL 0%	BL 50%	BL 100%	Unit	Note
Current draw from DC@5.0V	I_{DC}	0.328	0.526	0.729	A	

Note 1:LED lifetime is defined as the module brightness decay 50% of original brightness at Ta=25 degree, typical current.

3.3 Touch Panel (USB-C)

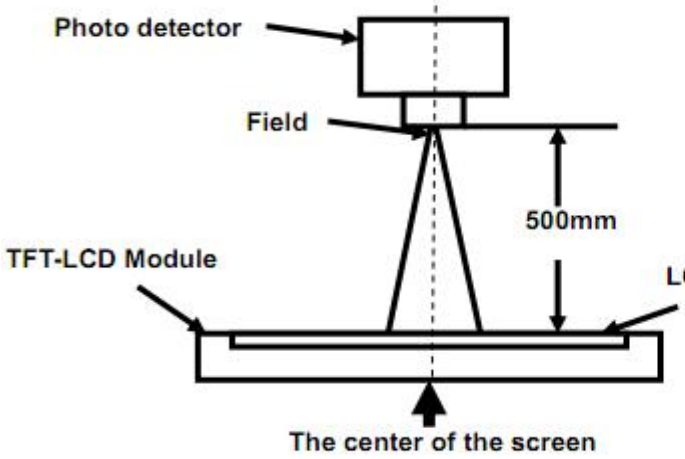
Item	Symbol	Min.	Typ.	Max.	Unit	Note
Power Supply voltage	USB_VDD (5V)	-	5.0	-	V	
Analog supply current	$I_{USB_VDD(5V)}$	-	TBD	-	mA	USB_VDD(5V) =5.0V
Input high-level voltage	VIH	0.7*USB_VDD(5V)	-	USB_VDD(5V)	V	
Input low -level voltage	VIL	GND	-	0.3*USB_VDD(5V)	V	

4. Optical Specifications

Item	Symbol	Condition	Min.	Typ.	Max.	Unit	Note
Viewing Angle (CR≥10) B/L ON	θ_T	Φ=90°(12 o'clock)	-	80	-	deg	Note2
	θ_B	Φ=270°(6 o'clock)	-	80	-	deg	Note2
	θ_L	Φ=180°(9 o'clock)	-	80	-	deg	Note2
	θ_R	Φ=0°(3 o'clock)	-	80	-	deg	Note2
Response Time	$T_{ON}+T_{OFF}$	Normal θ=Φ=0°	-	30	-	msec	Note4
Contrast Ratio	CR		-	500	-	-	Note1 Note3
Color Chromaticity	W_X		TBD	TBD	TBD	-	Note1 Note5
	W_Y		TBD	TBD	TBD	-	Note1 Note5
Luminance	L		-	350	-	cd/m²	Note1 Note7

Note 1:Definition of optical measurement system

The optical characteristics should be measured in dark room. After 5 minutes operation, the optical properties are measured at the center point of the LCD screen. All input terminals LCD panel must be ground when measuring the center area of the panel.



Item	Photo detector	Field
Contrast Ratio	SR-3A	1°
Luminance		
Chromaticity		
Lum Uniformity		
Response Time	BM-7A	2°

Fig 1

Note 2: Definition of viewing angle range and measurement system.
viewing angle is measured at the center point of the LCD by CONOSCOPE(ergo-80).

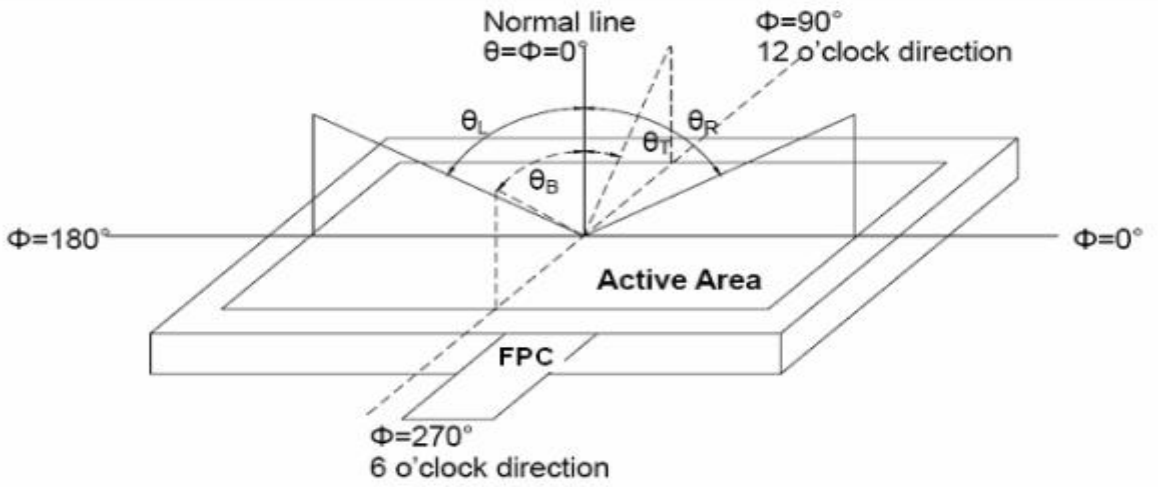


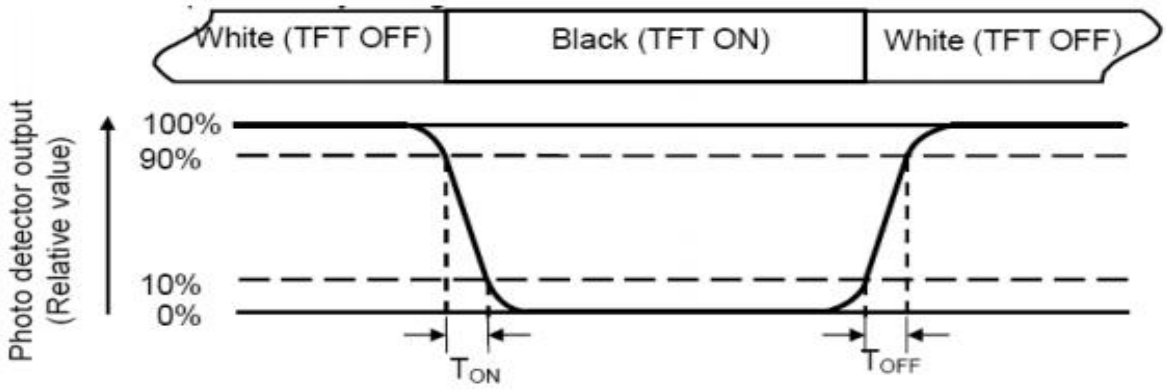
Fig 2 Definition of viewing angle

Note 3: Definition of contrast ratio

$$CR = \frac{\text{Luminance with all pixels white}}{\text{Luminance with all pixels black}}$$

Note 4: Definition of Response time

The response time is defined as the LCD optical switching time interval between “White” state and “Black” state. Rise time (TON) is the time between photo detector output intensity changed from 90% to 10%. And fall time (TOFF) is the time between photo detector output intensity changed from 10% to 90%.



Note 5: Definition of color chromaticity (CIE1931)

Color coordinates measured at center point of LCD.

Note 6: Definition of Luminance Uniformity

The luminance uniformity in surface luminance is determined by measuring luminance at each test position 1 through n, and then dividing the maximum luminance of n points luminance by minimum luminance of n points luminance.For more information see FIG.3-a/b

Note 7:Surface luminance is the luminance with all pixels displaying white.

Lv = Average Surface Luminance with all white pixels(P1,P2,P3, ...,Pn)

For more information see FIG.3-a/b

Note 8:Size : S≤5”(see Figure a) A : 5 mm B : 5 mm. H,V : Active area

Light spot size ⌀ =5mm(BM-5) or ⌀=7.7mm (BM-7)50cm distance or test spot position : see Figure a.

measurement instrument : TOPCON’s luminance meter SR-3A or BM-7 or compatible (see Figure 1).

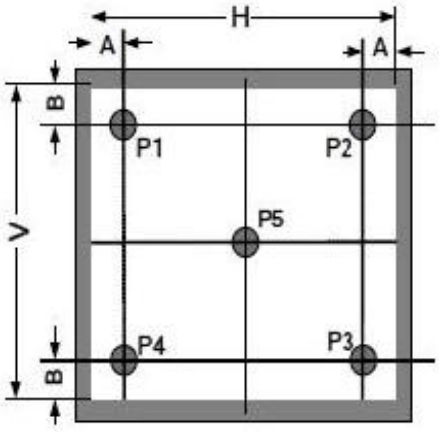


Fig. 3-a Definition of points

5”＜S≤12.3”(see Figure b) . H,V : Active area
Light spot size ∅=5mm(BM-5) or ∅=7.7mm (BM-7)50cm distance or compatible distance from the LCD surface to detector lens. test spot position : see Figure b.
measurement instrument : TOPCON’s luminance meter SR-3A or BM-7 or compatible (see Figure 1).

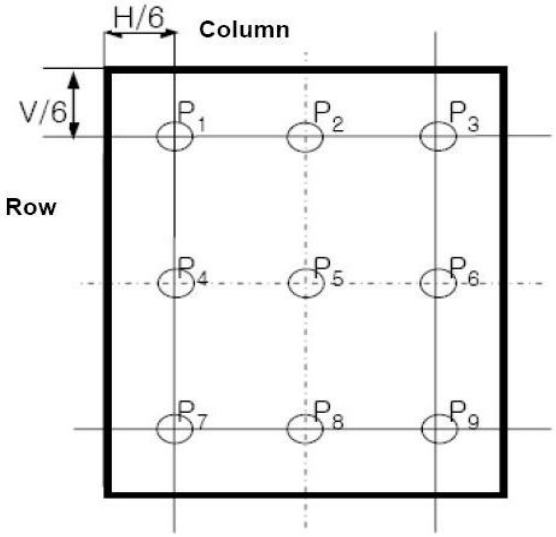


Fig. 3-b Definition of points

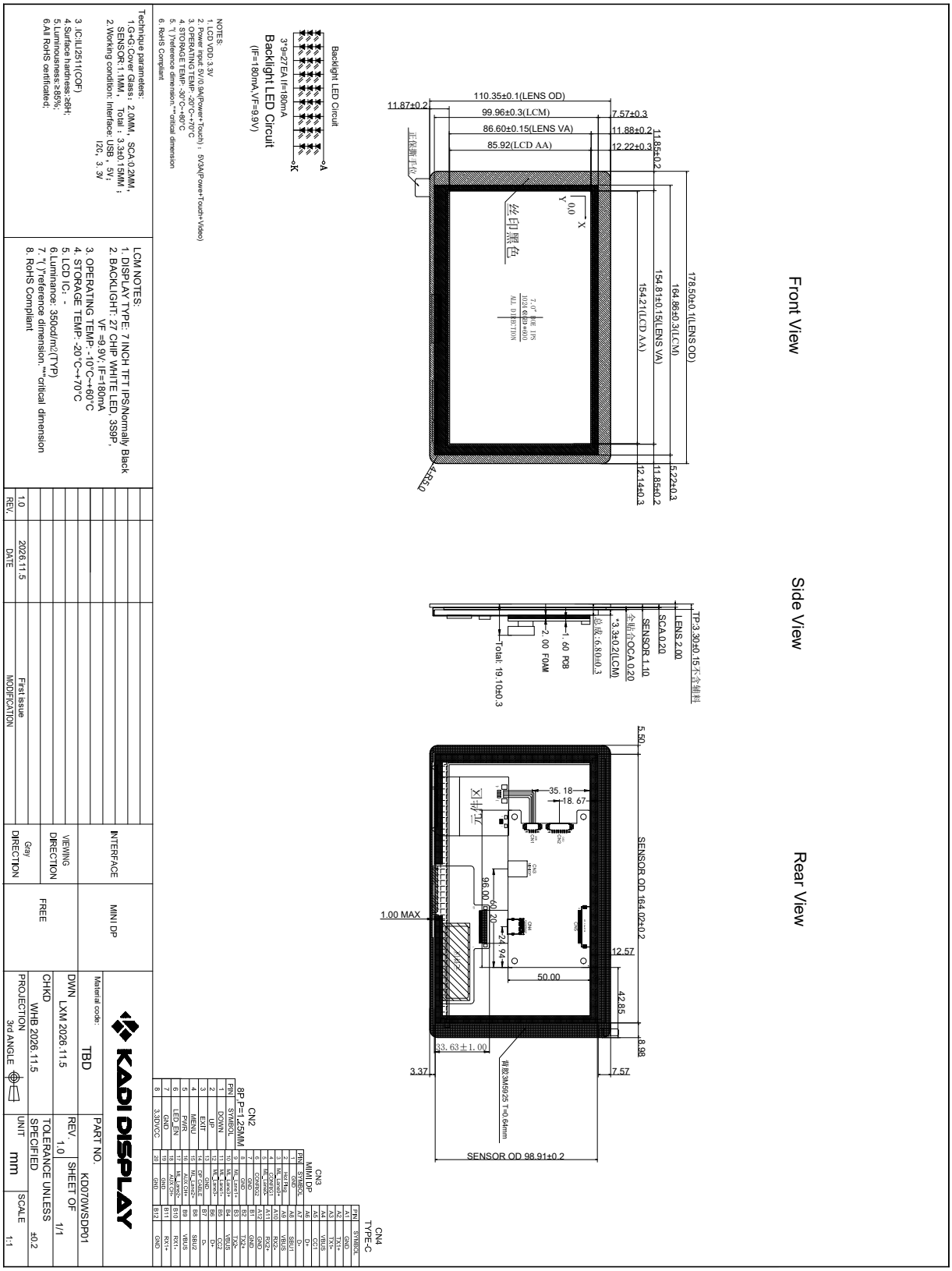
5. Reliability Test Items

Test Item	Test Conditions	
High Temperature Storage	Ta= +70℃	24hrs
Low Temperature Storage	Ta= -20℃	24hrs
High Temperature Operation	Ta= +60℃	24hrs
Low Temperature Operation	Ta= -10℃	24hrs
High Temperature and Humidity Storage	Ta= +60℃, 90% RH	24hrs
Thermal Shock (Non-operation)	-20℃/30 min ~ +70℃/30 min for 20 cycles Start with cold temperature end with high temperature	
Electro Static Discharge	Contact = ± 2 kV, class B Air = ± 8 kV, class B R=330Ω,C=150pF	
Vibration	Sweep: 10Hz~55Hz~10Hz Stroke: 1.5mm 2 hrs for each direction of X .Y. Z.	
Mechanical Shock	60G 6ms,±X,±Y,±Z 3 times for each direction	
Package Drop Test	Height: 60 cm 1 corner, 3 edges, 6 surfaces	

Notes: The test result shall be evaluated after the sample has been left at room temperature and humidity for 2 hours without load. No condensation shall be accepted. The sample will not be accepted if appear these defects:

1). Air bubble in the LCD
2). Seal leak or Glass crack
3). Non display or abnormal display
4). Brightness reduction >50%

6. Mechanical Drawing



7. Packing

TBD

8. Precautions for Use of LCD modules

8.1 Handling Precautions

8.1.1. The display panel is made of glass. Do not subject it to a mechanical shock by dropping it from a high place, etc.

8.1.2. If the display panel is damaged and the liquid crystal substance inside it leaks out, be sure not to get any in your mouth, if the substance comes into contact with your skin or clothes, promptly wash it off using soap and water.

8.1.3. Do not apply excessive force to the display surface or the adjoining areas since this may cause the color tone to vary.

8.1.4. The polarizer covering the display surface of the LCD module is soft and easily scratched. Handle this polarizer carefully.

8.1.5. If the display surface is contaminated, breathe on the surface and gently wipe it with a soft dry cloth. If still not completely clear, moisten cloth with one of the following solvents:

- Isopropyl alcohol
- Ethyl alcohol

Solvents other than those mentioned above may damage the polarizer. Especially, do not use the following:

- Water
- Ketene
- Aromatic solvents

8.1.6. Do not attempt to disassemble the LCD Module.

8.1.7. If the logic circuit power is off, do not apply the input signals.

8.1.8. To prevent destruction of the elements by static electricity, be careful to maintain an optimum work environment.

8.1.8.1. Be sure to ground the body when handling the LCD Modules.

8.1.8.2. Tools required for assembly, such as soldering irons, must be properly ground.

8.1.8.3. To reduce the amount of static electricity generated, do not conduct assembly and other work under dry conditions.

8.1.8.4. The LCD 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.

8.2 Storage Precautions

8.2.1.When storing the LCD modules,avoid exposure to direct sunlight or to the light of fluorescent lamps.

8.2.2.The LCD modules should be stored under the storage temperature range if the LCD modules will be stored for a long time,the recommend condition is :

Temperature : 0℃ ~40℃ Relatively humidity: ≤80%

8.2.3.The LCD modules should be stored in the room without acid, alkali and harmful gas.

8.3 Transportation Precautions

The LCD modules should be no falling and violent shocking during transportation, and also should avoid excessive press, water, damp and sunshine.