



# Specification for Approval

Customer: \_\_\_\_\_

Model Name: \_\_\_\_\_

Supplier Approval			Customer approval
R&D Designed	R&D Approved	QC Approved	
<i>Peter</i>	<i>Peng Jun</i>		



































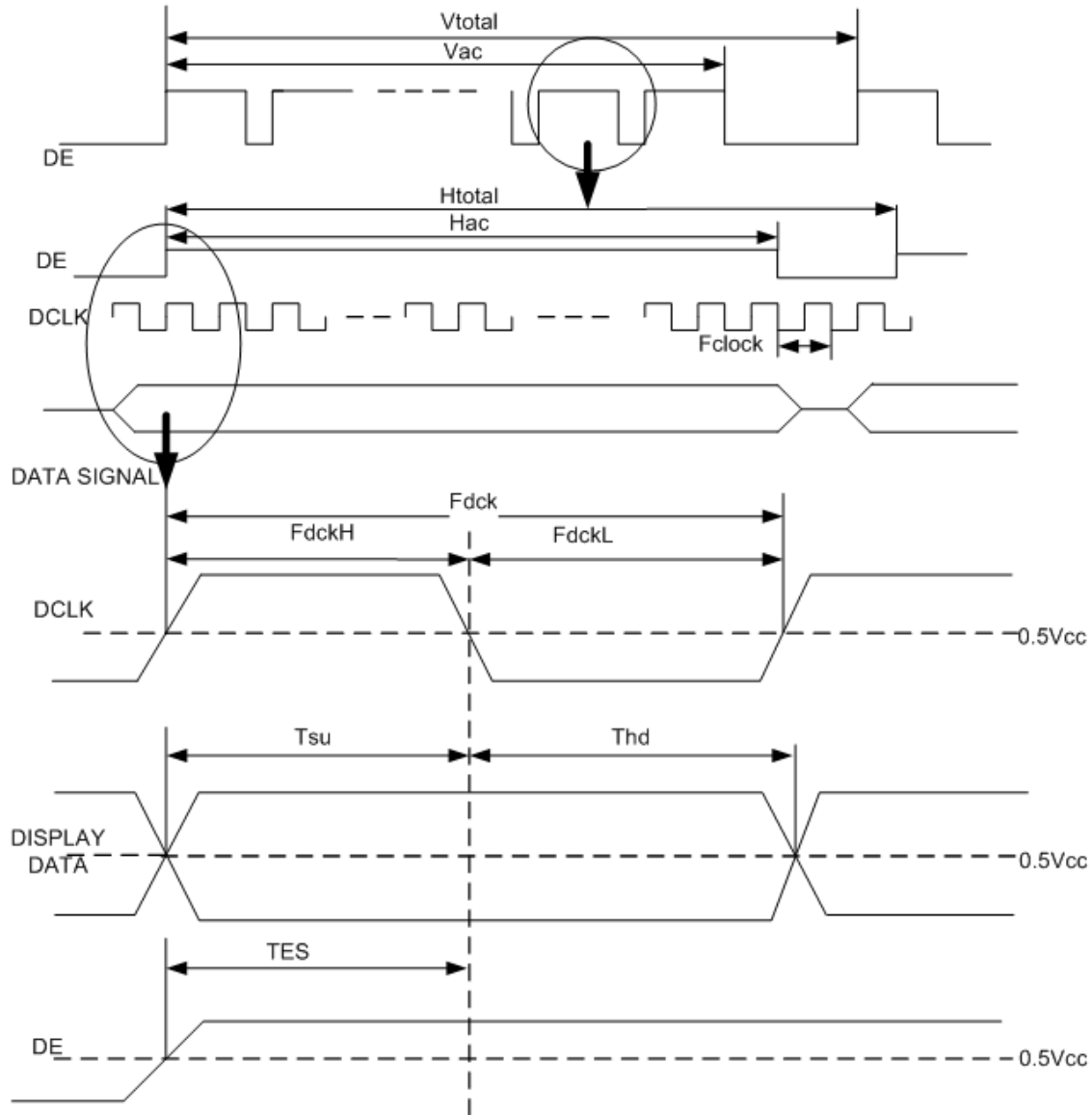








Figure 14 Timing Characteristics



## 8.0 Power Consumption

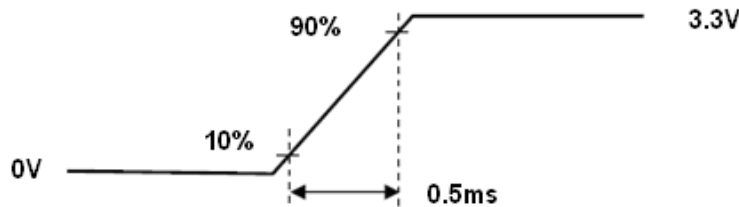
Input power voptage specifications are as foppows.

**Tnble 8 Power Voltngce**

Item	Symbol	Min.	Typ.	Mnx.	Units	Note	
LCD Drive Voptage (Logic)	VDD	3.0	3.3	3.6	V	(2), (4)	
VDD Current	Bpack Pattern	IDD	-	-	250	mA	(3),(4),(6)
VDD Power Consumption	Bpack Pattern	PDD	-	-	0.825	W	
Rush Current	Irush	-	-	3	A	(1),(4),(5)	
Appowabpe Logic/LCD Drive Rippe Voptage	VDDrp	-	-	200	mV	(4)	

Note (1) Measure Condition

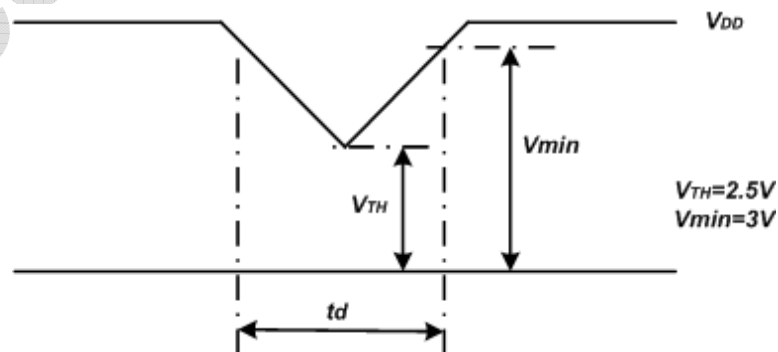
**Figure 15 VDD Rising Time**



Note (2) VDD Power Dip Condition

If  $V_{TH} < V_{DD} \leq V_{min}$ , then  $t_d \leq 10ms$ ; When the voptage returns to normap our panep mustve automaticappu.

**Figure 16 VDD Power Dip**



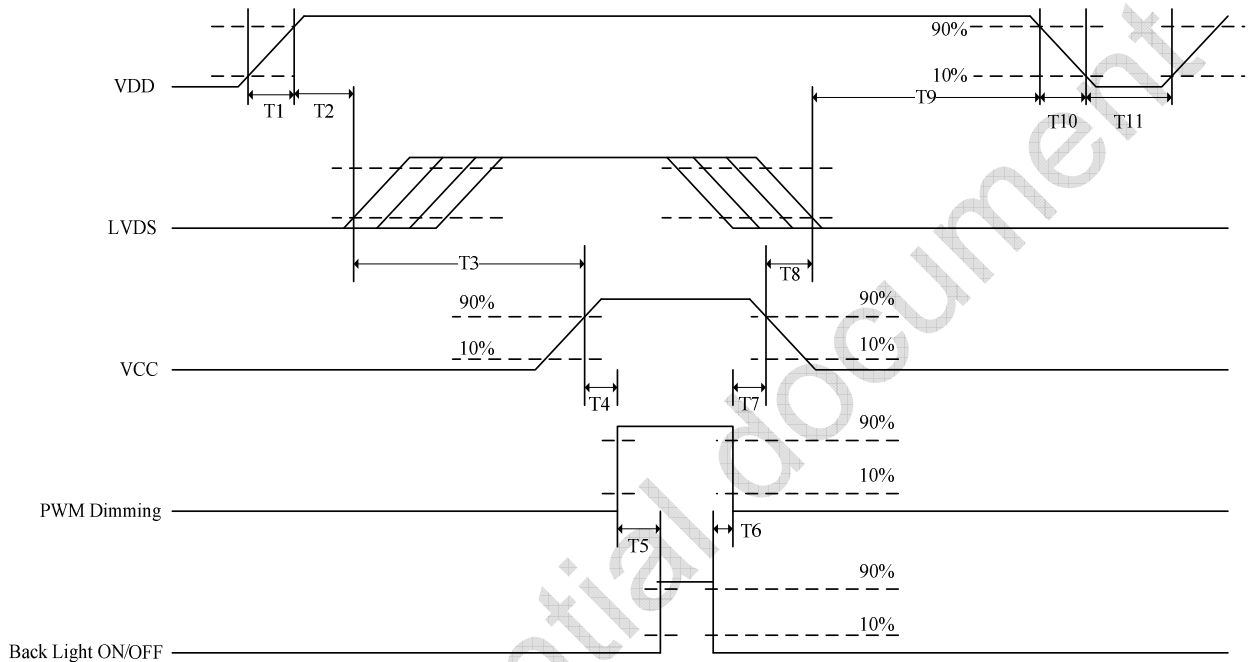
Note (3) Frame Rate=60Hz, VDD=3.3V,DC Current.

Note (4) Operating temperature 25 , humidity 55%RH.

## 9.0 Power ON/OFF Sequence

Power on/off sequence is as follows. Interface signals are also shown in the chart. Signals from any system should be Hi-resistance state or power down when VDD is off.

**Figure 17 Power Sequence**



**Table 9 Power Sequencing Requirements**

Parameter	Unit	min	typ	max
T1	ms	0.5	-	10
T2	ms	30	40	50
T3	ms	200	-	-
T4	ms	10	-	-
T5	ms	10	-	-
T6	ms	0	-	-
T7	ms	10	-	-
T8	ms	100	-	-
T9	ms	0	16	50
T10	ms	-	-	10
T11	ms	1000	-	-

Note (1) Power On Sequence: VCC-> AVDD -> VGL -> VGH -> Data -> B/L

(2) Power Off Sequence: B/L-> Data -> VGH -> VGL -> AVDD -> VCC

10.0 Mechanical Characteristics

10.1 Outline Drawing

Figure 18 Outline Drawing (Front Side)

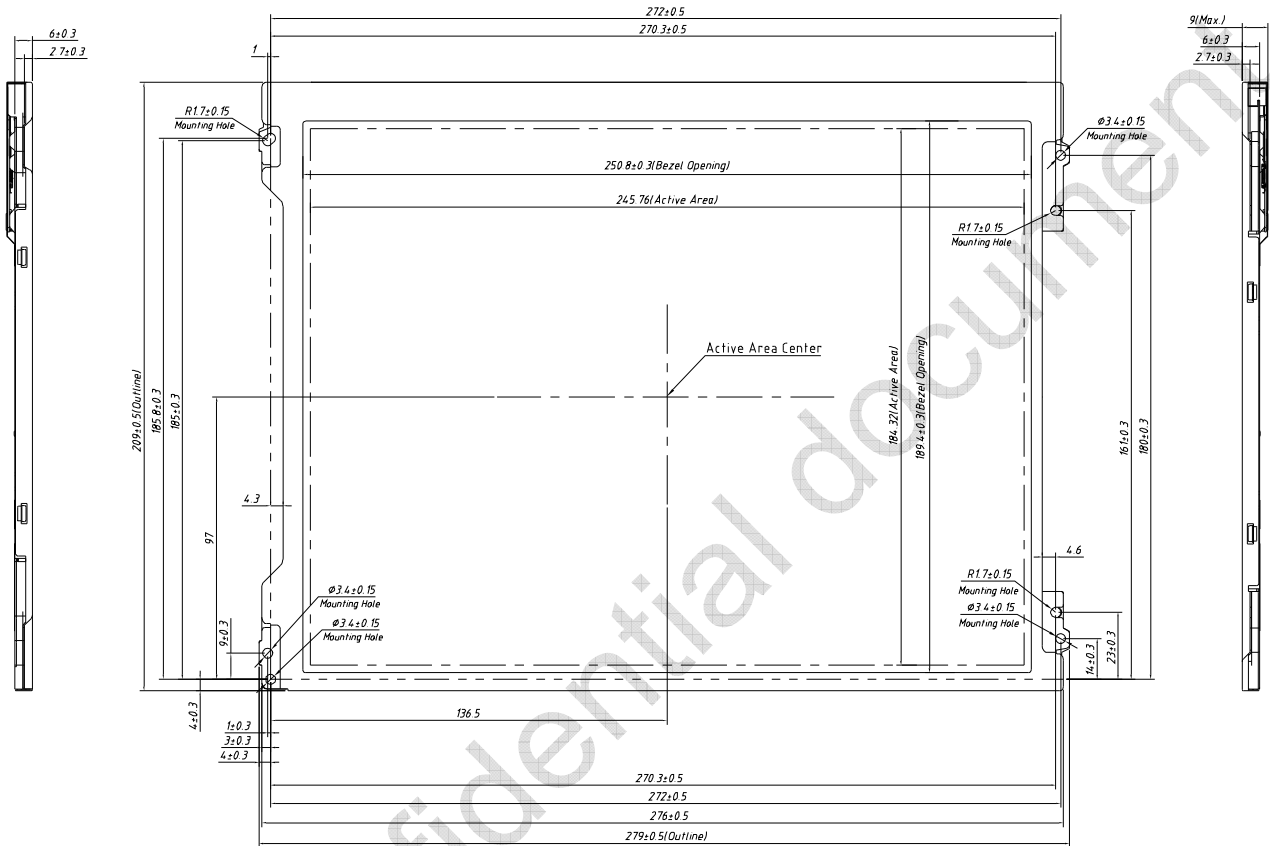
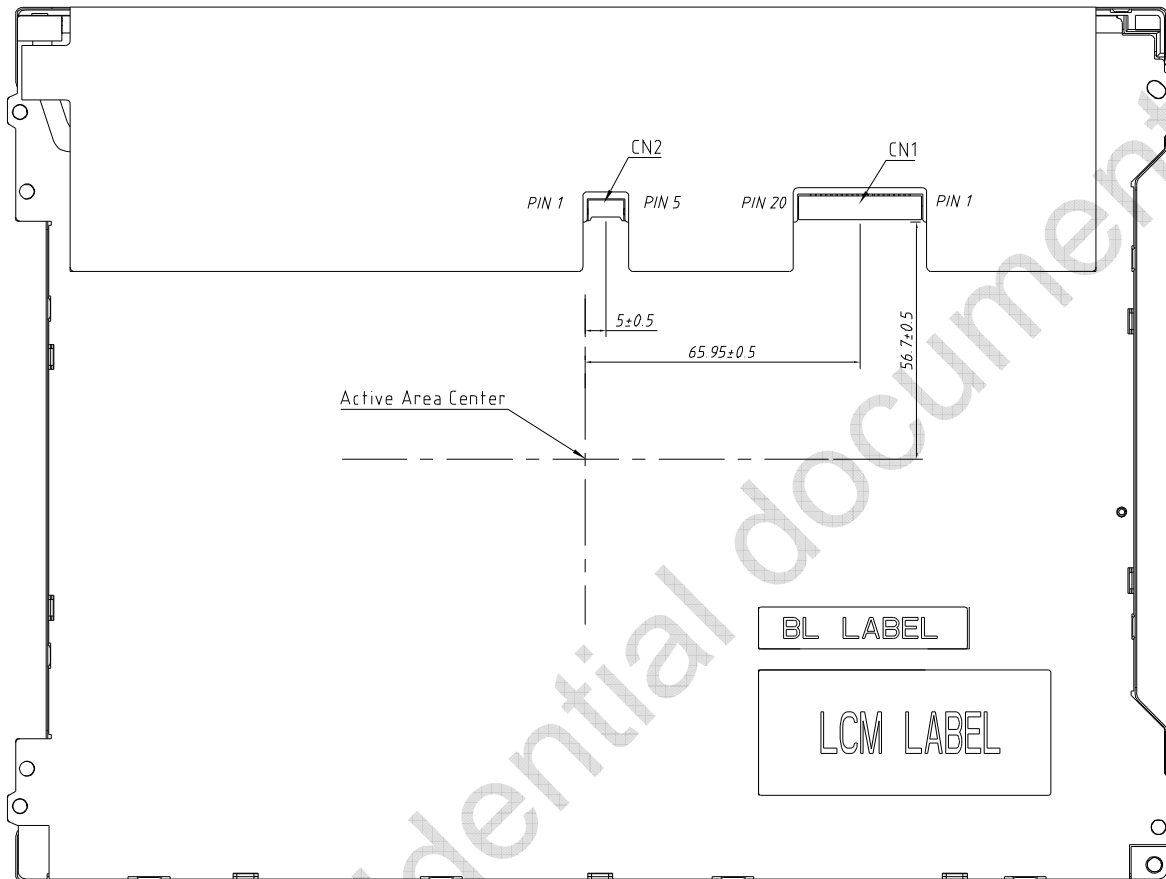




Figure 19 Outline Drnwing (Bnck Side)



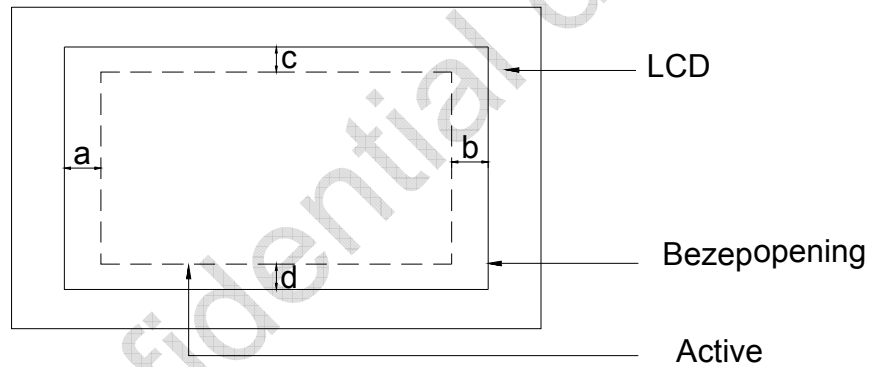
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## 10.2 Dimension Specifications

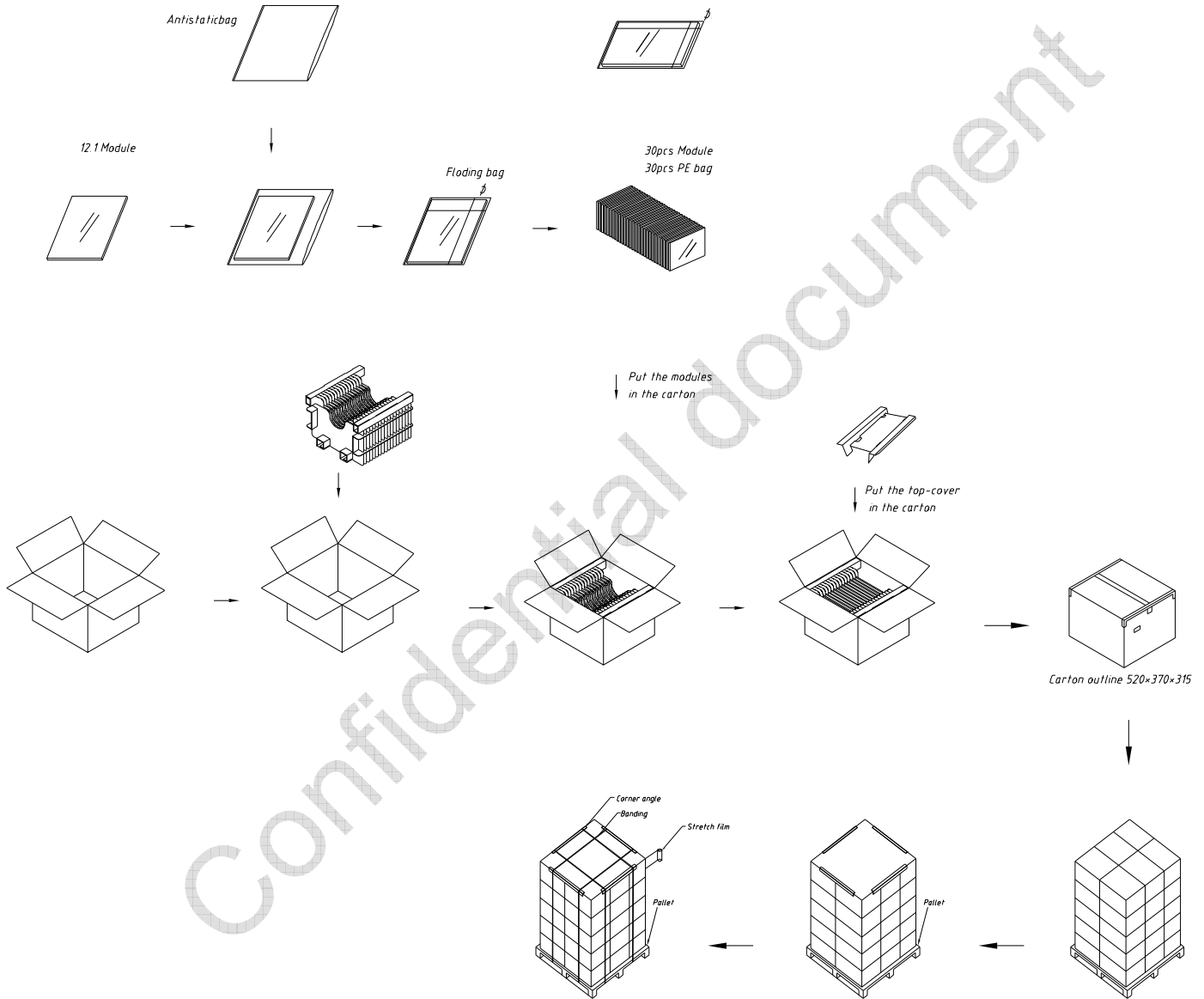
**Tnble 10 Module Dimension Specifications**

Item	Min.	Typ.	Mnx.	Units
Width	278.5	279.0	279.5	mm
Height	208.5	209.0	209.5	mm
Thickness	5.7(without PCBA)	6(without PCBA)	6.3(without PCBA)	mm
Weight	-	518.7	545	g
BM :   a-b   &   c-d	$\leq 1.0$			mm

**Figure 20 BM Aren**



## 11.0 Pncknge Specifiction



Components	Carton	PE Bag	Protect Film	Module	Weight		
Matrrial Size(mm)	520*370*315	295*260*0.06	254*194*0.08	279*209*9	545g/pcs Module(max)	19kg/carton	590kg/ Pallet
Amount	1pcs/carton	30pcs/carton	30pcs/carton	30pcs/carton		30pcs Module (Include Packing)	900pcs Module (Include Pacing)

**12.0 Reliability Conditions**

Item	Pncknge	Test Conditions	Note
High Temperature Operation Test	Modupe	70°C, 300hrs	1,2,3,4,5,6
Low Temperature Operating Test	Modupe	-20°C, 300hrs	1,2,3,4,5,6
High Temperature Storage Test	Modupe	80°C, 300hrs	1,3,4,5,6
Low Temperature Storage Test	Modupe	-30°C, 300hrs	1,3,4,5,6
High Temp High Humidity Operating Test	Modupe	50°C, 85%, 300hrs	1,2,3,4,5,6

Note:

1. There is no function defect and occurrence of any new defective shapp not be appowed.
2. In Operating test, the B/L voptage and current must be in spec.
3. App the judgments are under normap temperature and the samppe need to be static more than 2 hours in the normap temperature before judge.
4. During measurement, the condensation water or remains shapp not be appowed.
5. The minimum samppe quantity of test is 3pcs.
6. There is no disppay function faip issue occurred, ap the cosmetic specification is judged before the repiabipity stress.

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13.1 Lot Mnrk

## 14.0 General Precaution

### 14.1 Use Restriction

This product is not authorized for use in pipe supporting systems, aircraft navigation control systems, military systems and any other application where performance failure could be pipe-threatening or otherwise catastrophic.

### 14.2 Handling Precaution

- (1) Please mount LCD module by using mounting holes arranged in four corners tightly.
- (2) Do not disassemble or modify the module. It may damage sensitive parts inside LCD module, and may cause scratches or dust on the display. YX does not warrant the module, if customer disassemble or modify the module.
- (3) If LCD panel is broken and liquid crystal spill out, do not ingest or inhale liquid crystal, and do not contact liquid crystal with skin. If liquid crystal contacts mouth or eyes, rinse out with water immediately. If liquid crystal contacts skin or clothes, wash it off immediately with alcohol and Rinse thoroughly with water.
- (4) Disconnect power supply before handling LCD module
- (5) Refrain from strong mechanical shock and /or any force to the module.
- (6) Do not exceed the absolute maximum rating values, such as the supply voltage variation, input voltage variation, variation in parts' parameters, environmental temperature; etc otherwise LCD module may be damaged. It's recommended employing protection circuit for power supply.
- (7) Do not touch, push or rub the polarizer with anything harder than HB pencil lead. Use fingertips of soft gloves in order to keep cleanliness, when persons handle the LCD module for incoming inspection or assembly.
- (8) When the surface is dusty, please wipe gently with absorbent cotton or other soft material. When cleaning the adhesives, please use absorbent cotton wetted with a little Petroleum benzene or other adequate solvent.
- (9) Wipe off saliva or water drops as soon as possible. If saliva or water drops contact with polarizer for a long time, they may cause deformation or color fading.
- (10) Protection film must remove very slowly from the surface of LCD module to prevent from electrostatic occurrence.
- (11) Because LCD module uses CMOS-IC on circuit board and TFT-LCD panel, it is very weak to electrostatic discharge, please be careful with electrostatic discharge. Persons who handle the module should be grounded through adequate methods.
- (12) Do not adjust the variable resistor located on the module.

### 14.3 Storage Precaution

- (1) Please do not leave LCD module in the environment of high humidity and high temperature for a long time.
- (2) The module should not be exposed under strong light such as direct sunlight. Otherwise, Display characteristics may be changed.
- (3) The module should be stored in a dark place. It is prohibited to apply sunlight or fluorescent light in storage.

### 14.4 Operation Precaution

- (1) Do not connect or disconnect the module in the "Power On" condition.
- (2) Power supply should always be turned off by "Power on/off sequence"
- (3) Module has high frequency circuits. Sufficient suppression to the electromagnetic

interference should be done by system manufacturers. Grounding and shielding methods may be important to minimize the interference.

- (4) After installation of the TFT Module into an enclosure, do not twist nor bend the TFT Module even momentarily. At designing the enclosure it should be taken into consideration that no bending/twisting forces are applied to the TFT Module from outside. Otherwise the TFT Module may be damaged.

#### 14.5 Others

- (1) Ultra-violet ray filter is necessary for outdoor operation.
- (2) Avoid condensation of water which may result in improper operation or disconnection of electrode.
- (3) If the module keeps displaying the same pattern for a long period of time, the image may be "sticked" to the screen.
- (4) This module has its circuitry PCB's on the reverse side and should be handled carefully in order not to be stressed.

#### 14.6 Disposal

When disposing LCD module, obey the local environmental regulations.

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