SPECIFICATION

OF

LIQUID CRYSTAL DISPLAY MODULE

Jun-18-2019

CUSTOMER : **URT-STD**

Model No. : **UMSH-9153MD-5T**

Model version : **0**

Document Revision : **2**

CUSTOMER APPROVED SIGNATURE			

This specification need to be signed by purchaser or customer as a specification of products production and delivery from URT. Without signature of this specification , any purchase order for this model no. will be treated and considered that this specification is automatically acknowledged and accepted by purchaser or customer.

═══ U.R.T. ═══ UNITED RADIANT TECHNOLOGY CORPORATION

Joe Wu	**Ashin Chiu**	**Jenny Wang**	**Jun-18-2019**
APPROVED	CHECKED	PREPARED	Date

This document has been signed by Digital Signature Approval System

Revision record			
Document Revision	Model No. Version No.	Description	Revision by
0	UMSH-9153MD-T Version No. 0		Peggy Ho Fong Jia Su 22-Jun-2016
1	UMSH-9153MD-T Version No. 0	Modify the packing mode.	Peggy Ho Y.C.Lin 10-Apr-2018
2	UMSH-9153MD-5T Version No. 0	1. Modify the backlight brightness. 2. Modify the module number for UMSH-9153MD-T to UMSH-9153MD-5T.	Peggy Ho Y.C.Lin 18-Jun-2019

CONTENTS:

1. BASIC SPECIFICATION

1.1 Mechanical specifications

Items	Nominal Dimension	Unit
Active screen size	4.3" diagonal	-
Dot Matrix	480 x RGB x 272	Pixel
Module Size (W x H x T)	105.4 x 67.1 x 2.8	mm.
Active Area (W x H)	95.04 x 53.856	mm.
Pixel Size (W×H)	0.198 x 0.198	mm.
Color depth	16.7M	color
Interface	Parallel 24-bit RGB	-
Driving IC Package	COG	-
Module weight	43±10%	g

1.2 Display specification

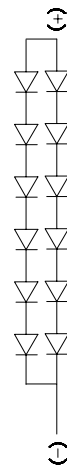| Display	Descriptions	Note
LCD Type	a-Si TFT	-
LCD Mode	TN / Normal white	-
Polarizer Mode	Transmissive	-
Polarizer Surface	ANTI-GLARE	-
Pixel arrangement	RGB-stripe	-
Backlight Type	LED	-
Viewing Direction(Gray inversion)	6 O'clock Direction	1

*Color tone is slightly changed by temperature and driving voltage.

Note 1   The viewing direction defined in this specification is according to the rubbing direction of its TFT surface treatment by the TFT glass manufacturer. The grayscale inversion is at this direction as well. However, the optimal viewing direction for human view is normally where the color does NOT change to grayscale inversion, and this would be the opposite site of the specified viewing direction in this specification. In any case we advise customers to judge by themselves, and be aware of this phenomenon.
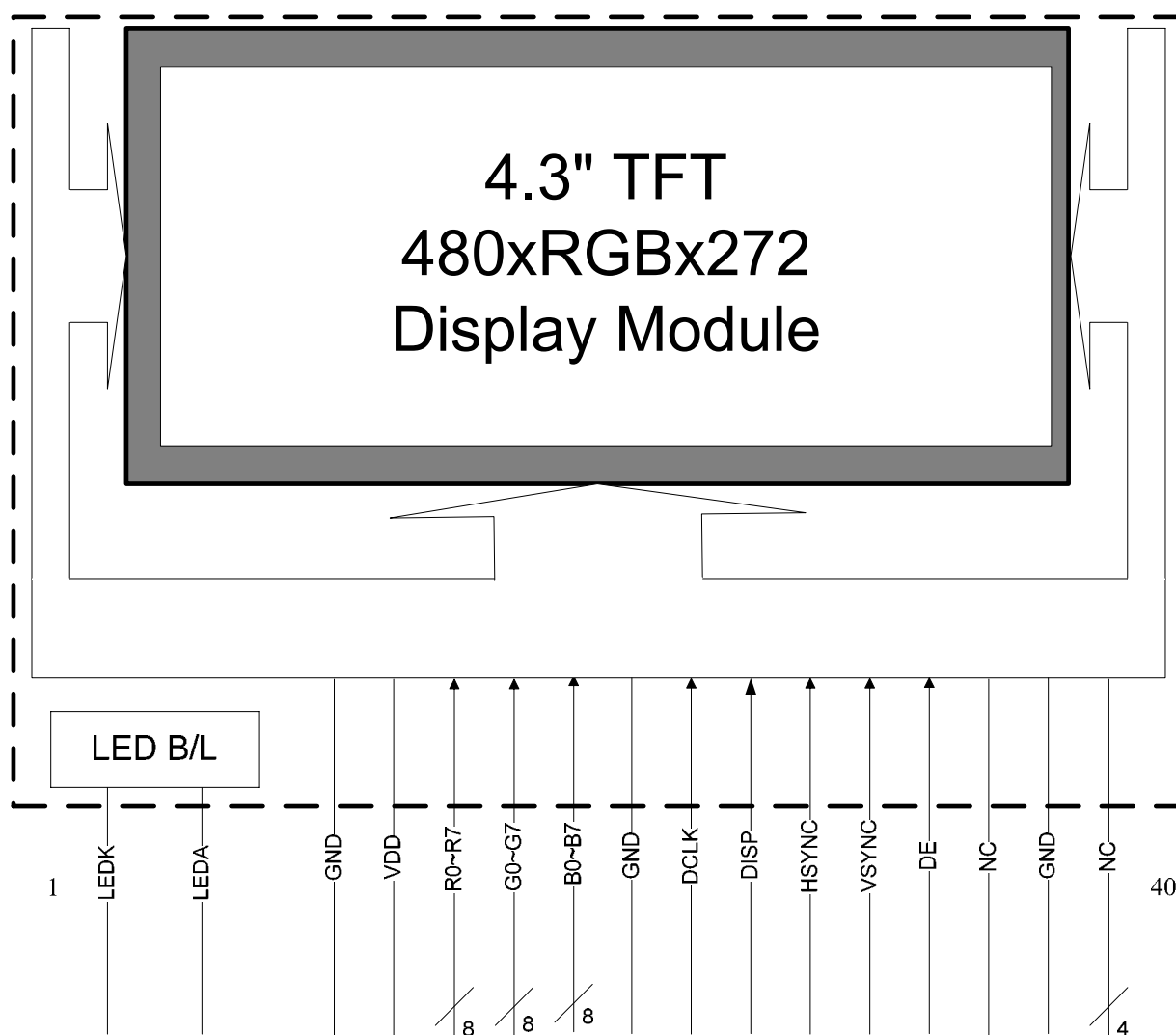
1.3 Outline dimension

PIN NO.	SIGNAL
1	LEDK
2	LEDA
3	GND
4	VDD
5	R0
6	R1
7	R2
8	R3
9	R4
10	R5
11	R6
12	R7
13	G0
14	G1
15	G2
16	G3
17	G4
18	G5
19	G6
20	G7
21	B0
22	B1
23	B2
24	B3
25	B4
26	B5
27	B6
28	B7
29	GND
30	DCLK
31	DISP
32	HSYNC
33	VSYNC
34	DE
35	NC
36	GND
37	NC
38	NC
39	NC
40	NC

1.0(MIN) (UNBENDING AREA)

20.5±0.2

5.0±0.5

ISOLATION PI

1.5(MIN) (UNBENDING AREA)

LABEL

2.8±0.3

REMOVE TAPE

COMPONENT HEIGHT 1.2MAX

STIFFENER

CONDUCTOR

0.3±0.05

BACKLIGHT CIRCUIT DIAGRAM

(+) (−)

PIXEL DETAIL

0.198

R G B

0.198

0.066

Viewing Direction
480xRGBx272 Dots

G1

G543 S720

(52.7)

105.4(OUTLINE)
99.0(BEZEL WINDOW)
95.04(A.A)

G2

G544 S1

ISOLATION PI

COMPONENT AREA HEIGHT 1.2(MAX)

0.5

48.44±0.5

S0.15

W0.35

19.5±0.1

3.5±0.5

18.51±0.5

3.2
5.18
4.25
3.03

53.856(A.A)
56.26(BEZEL WINDOW)
67.1(OUTLINE)

22.45±0.5
43.52±0.5
47.95±0.8

NOTE:
1.LCD: TFT, TRANSMISSIVE, NORMALLY WHITE,ANTI-GLARE
2.Top: −20°C∼70°C, Tst:−30°C∼80°C
3.VIEWING DIRECTION: 6 O'CLOCK (GRAYSCALE INVERSION)
4.THIS PRODUCT CONFORM WITH THE STANDARD OF ROHS
5.TOLERANCE FOR NOT ASSINGNED ±0.2
6.THE MINIMUM BENDABLE RADIUS(INNER) OF THE FPC IS 0.5mm
7.LED B/L: WHITE*12PCS
8.B/L:CONSTANT CURRENT IF=40mA, VF=18.2V(TYP)
9.IC:HX8257-A
10.COMPONENT AREA AND SOLDER AREA CAN NOT BENDING

1.4 Block diagram:

4.3" TFT
480xRGBx272
Display Module

LED B/L

1

LEDK
LEDA
GND
VDD
R0~R7
G0~G7
B0~B7
GND
DCLK
DISP
HSYNC
VSYNC
DE
NC
GND
NC

40

8   8   8

4

1.5 Interface Pin Connection :

Pin No.	Pin Symbol	I/O	Description
1	LEDK	P	Power for LED backlight cathode.
2	LEDA	P	Power for LED backlight anode.
3	GND	P	Power Ground.
4	VDD	P	Power Voltage.
5 ~ 12	R0 ~ R7	I	Red data signal.
13 ~ 20	G0 ~ G7	I	Green data signal.
21 ~ 28	B0 ~ B7	I	Blue data signal.
29	GND	P	Power Ground.
30	DCLK	I	Dot data clock.
31	DISP	I	Display on/off.
32	HSYNC	I	Horizontal sync signal.
33	VSYNC	I	Vertical sync signal.
34	DE	I	Data Enable.
35	NC	-	No connect.
36	GND	P	Power Ground.
37~40	NC	-	No connect.

2. ELECTRICAL CHARACTERISTICS

2.1 Absolute Maximum Ratings

Items	Symbol	Min.	Max.	Unit
Power supply voltage	VDD	-0.3	3.96	V
Operate temperature range	T_{OP}	-20	70	℃
Storage temperature range	T_{ST}	-30	80	℃

*Note1 :

The operating temperature is for product's functionality, please pay attention to human injury when using the product under extreme temperature.

2.2 DC Characteristics

$T_a = 25°C$

Items	Symbol	Min.	Typ.	Max.	Unit	Condition
Supply voltage	VDD	3.0	3.3	3.6	V	-
Input Voltage	V_{IL}	0	-	0.3VDD	V	L level
	V_{IH}	0.7VDD	-	VDD	V	H level
Current consumption	I_{VDD}	-	-	40	mA	Note 1

*Note1 :

Measuring Condition:

Standard Value MAX.

Ta = 25°C

VDD -GND = 3.3V

Display Pattern

0 gray black pattern

2.2.1 Back-light only Specification

PARAMETER	SYMBOL	MIN	TYP	MA	nit	Test Condition	NOTE
Supply Current	If	-	40	-	mA	Ta=25°C	-
Supply Voltage	Vf	-	18.2	-	V	Ta=25°C	-
Half-Life Time	Lf	-	50000	-	hrs	Ta=25°C	1

Note 1 : The "Half-Life Time" is defined as the LED chip brightness decreases to 50% than original brightness, Based on Ta 25±2°C,60±10% RH condition.

2.3 AC Characteristics

Parallel RGB Input Timing Requirement

Parameter	Symbol	Sepc.			Unit
		Min.	Tpy.	Max.	
Clock cycle	$f_{CLK}^{(1)}$	-	9	15	MHz
Hsync cycle	1/th	-	17.14	-	KHz
Vsync cycle	1/tv	-	59.94	-	Hz
Horizontal Signal					
Horizontal cycle	th	525	525	605	CLK
Horizontal display period	thd	480	480	480	CLK
Horizontal front porch	thf	2	2	82	CLK
Horizontal pulse width	$thp^{(2)}$	2	41	41	CLK
Horizontal back porch	$thb^{(2)}$	2	2	41	CLK
Vertical Signal					
Vertical cycle	tv	285	286	399	$H^{(1)}$
Vertical display period	tvd	272	272	272	$H^{(1)}$
Vertical front porch	tvf	1	2	227	$H^{(1)}$
Vertical pulse width	$tvp^{(2)}$	1	10	11	$H^{(1)}$
Vertical back porch	$tvb^{(2)}$	1	2	11	$H^{(1)}$

Note: (1) Unit: CLK=1/f_{CLK} , H=th,

(2)It is necessary to keep tvp+tvb=12 and thp+thb=43 in sync mode.

Interface Timing Chart
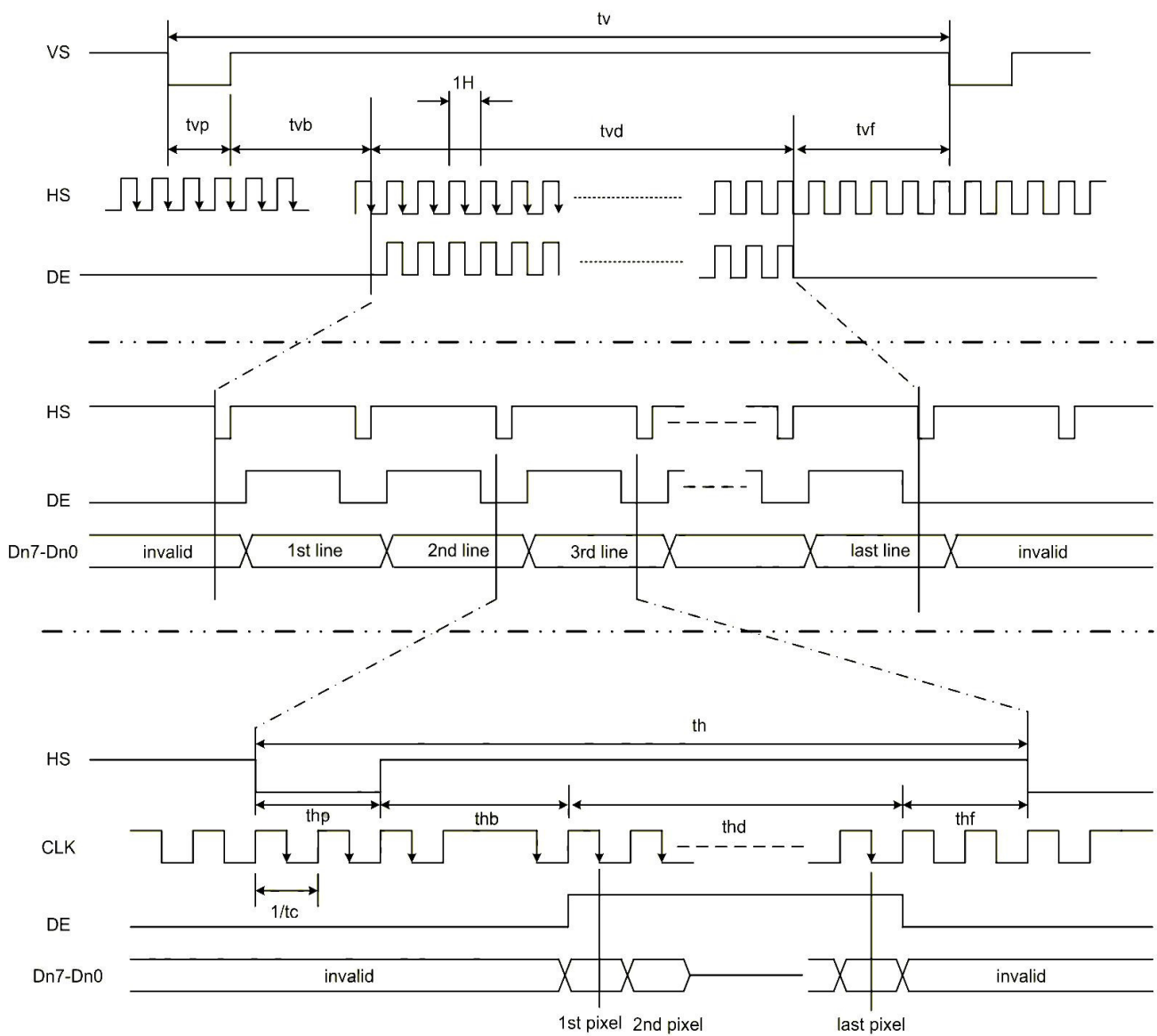
Input Setup Timing Requirement

Parameter	Symbol	Spec.			Unit
		Min.	Typ.	Max.	
DISP setup time	t_{diss}	10	-	-	ns
DISP hold time	t_{dish}	10	-	-	ns
Clock period	$PW_{CLK}^{(1)}$	66.7	-	-	ns
Clock pulse high period	$PWH^{(1)}$	26.7	-	-	ns
Clock pulse low period	$PWL^{(1)}$	26.7	-	-	ns
Hsync setup time	t_{hs}	10	-	-	ns
Hsync hold time	t_{hh}	10	-	-	ns
Data setup time	t_{ds}	10	-	-	ns
Data hold time	t_{dh}	10	-	-	ns
DE setup time	t_{des}	10	-	-	ns
DE hold time	t_{deh}	10	-	-	ns
Vsync setup time	t_{vhs}	10	-	-	ns
Vsync hold time	t_{vhh}	10	-	-	ns

Note: (1) For parallel interface, maximum clock frequency is 15MHz.

Power Sequence Timing

$$t_1 > 50 \text{ mSec}$$
$$t_2 \geqq 200 \text{ mSec}$$
$$t_3 \geqq 200 \text{ mSec}$$
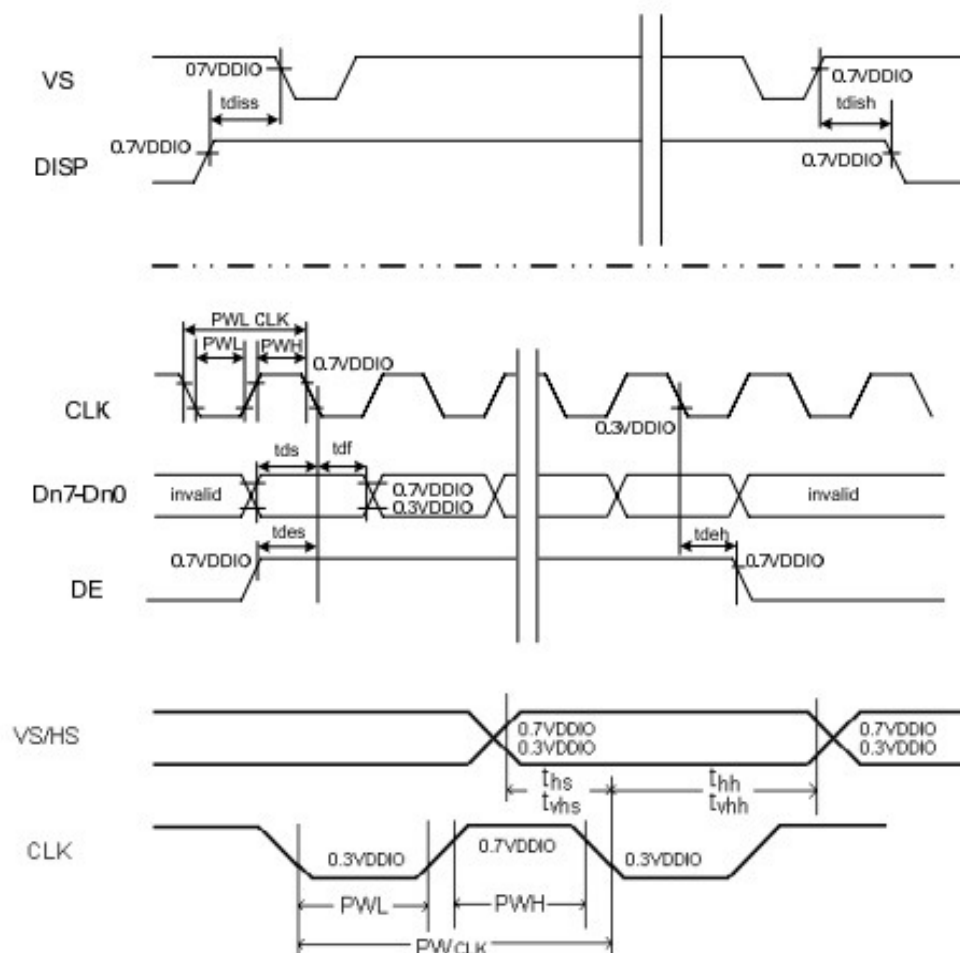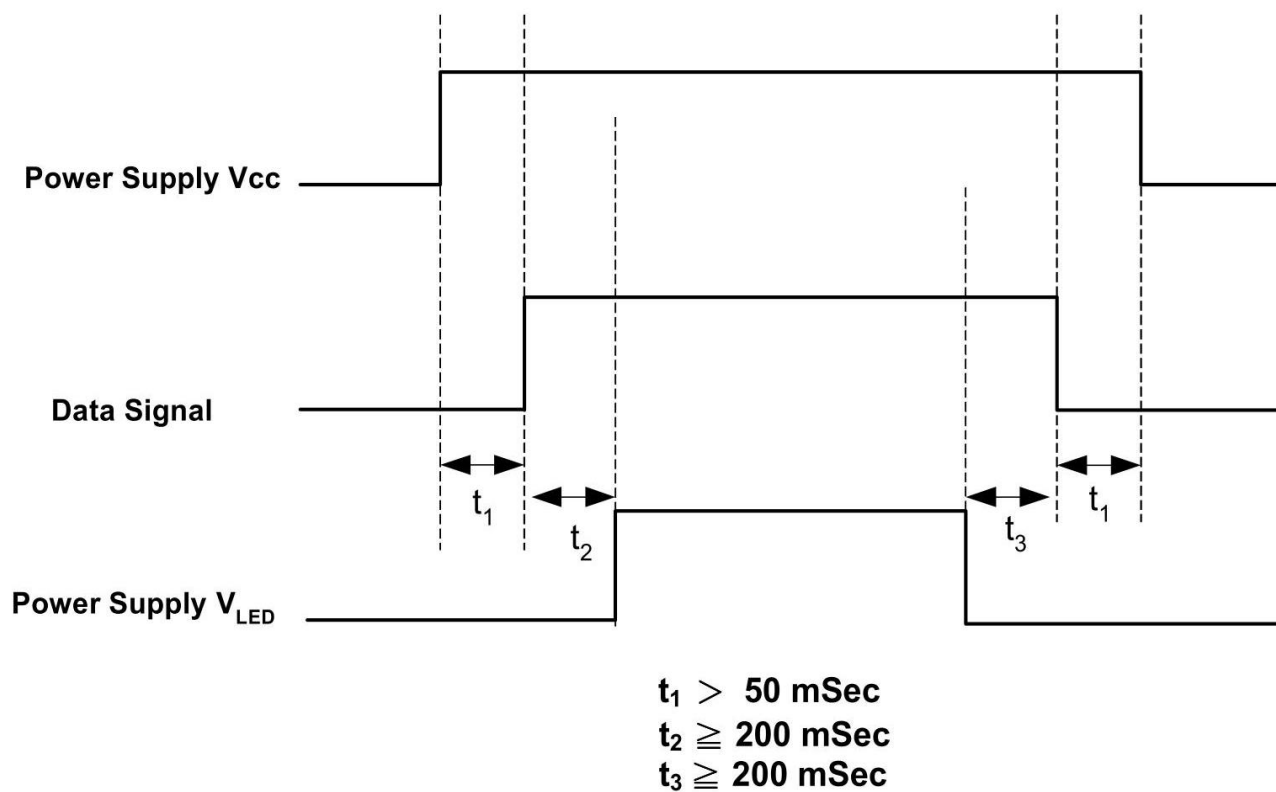
Note: Data Signal includes DCLK, HS, VS, R0~ R5, G0~ G5, B0~ B5.

3. OPTICAL CHARACTERISTICS

3.1 Characteristics

Electrical and Optical Characteristics

No.	Item			symbol / temp.		Min.	Typ.	Max.	Unit	Note
1	Response Time			Tr	25	5	7	-	ms	2
				Tf	25	20	28	-		
2	Viewing Angle	Hor.	Cr 10	θ_{2+}	$\Phi = 0°$	60	80	-	degree	3
				θ_{2-}	$\Phi = 180°$	60	80	-		
		Ver.		θ_{1+}	$\Phi = 270°$	60	80	-		
				θ_{1-}	$\Phi = 90°$	45	80	-		
3	Contrast Ratio			Cr	25	400	500	-	-	4
4	Red x-code			Rx	25	0.559	0.609	0.659	-	5
	Red y-code			Ry		0.307	0.357	0.407		
	Green x-code			Gx		0.299	0.349	0.399		
	Green y-code			Gy		0.524	0.574	0.624		
	Blue x-code			Bx		0.095	0.145	0.195		
	Blue y-code			By		0.055	0.105	0.155		
	White x-code			Wx		0.255	0.305	0.355		
	White y-code			Wy		0.280	0.330	0.380		
	Brightness			Y		900	1100	-	cd/m^2	
5	Brightness Uniformity				25	80	-	-	%	6

3.2 Definition of optical characteristics

Measurement condition :

Transmissive and Transflective type

PHOTAL LCD-5000
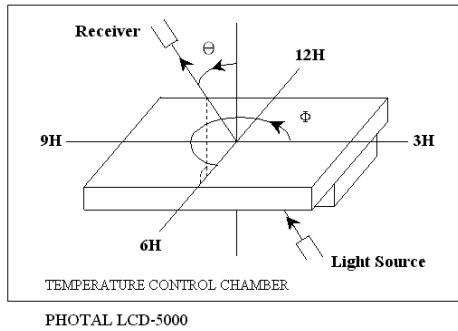
[Note 1] Definition of LCD Driving Vop and Waveform :
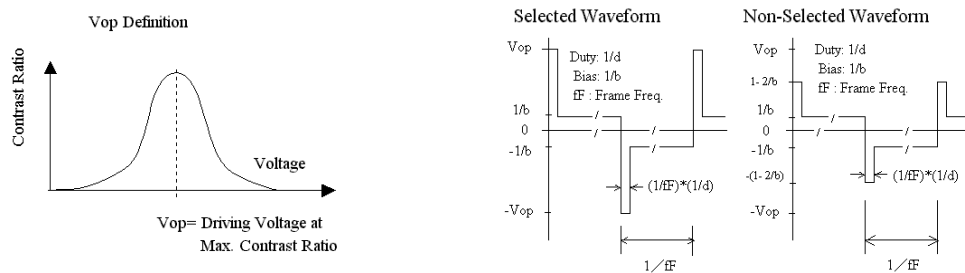
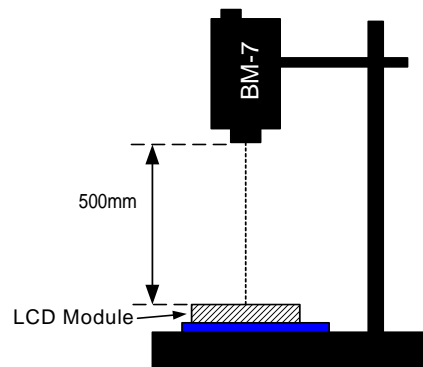## [Note 2] Definition of Response Time

for Positive type :
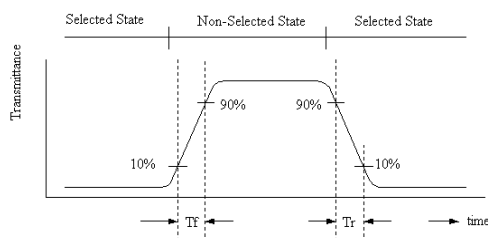
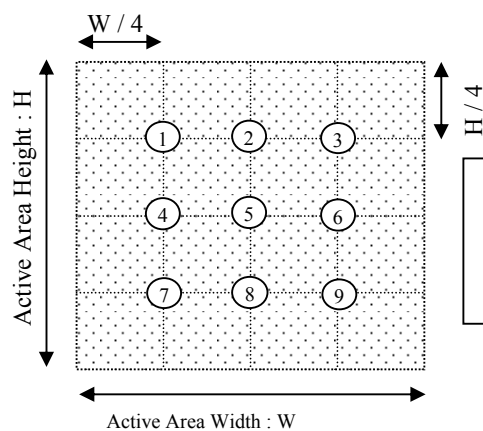## [Note 3] Definition of Viewing Angle :   [Note 4] Definition of Contrast Ratio :

$$\text{Contrast Ratio} = \frac{TH}{TL}$$
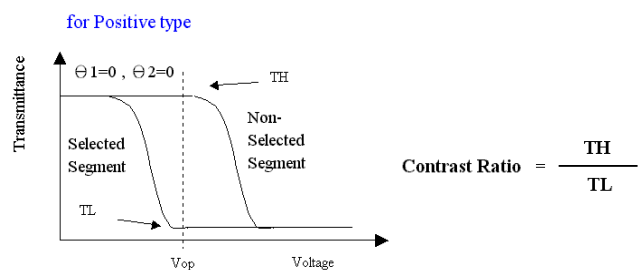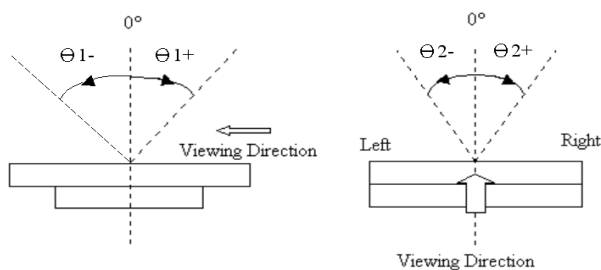
[Note 5] Definition of measurement of Color Chromaticity and Brightness

BM-7

500mm

LCD Module

[Note 6] Definition of Brightness Uniformity

W / 4

H / 4

Active Area Height : H

1	2	3
4	5	6
7	8	9

Active Area Width : W

$$\text{Brightness Uniformity} = \frac{\text{Minimum Brightness of Point 1~9}}{\text{Maximum Brightness of Point 1~9}}$$

[Note 7] Definition of Measurement of Reflectance

BM-7

White Light Source
(Ring)

500mm

15 deg.

LCD Module
or referance
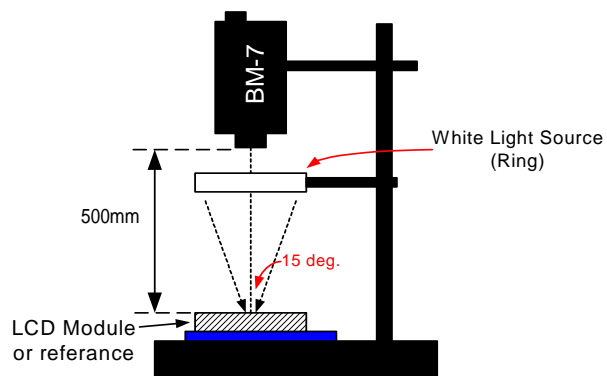
4. RELIABILITY :

Item No	Items	Condition	Note
1	High temperature operating	70 , 200 hours	1
2	Low temperature operating	-20 , 200 hours	1
3	High temperature storage	80 , 200 hours	1
4	Low temperature storage	-30 , 200 hours	1
5	High temperature & humidity storage	60 , 90%RH, 100 hours	2
6	Thermal Shock storage	-30 , 30min.<=> 80 , 30min. 10 Cycles	1
7	Vibration test	10 => 55 =>10 => 55 => 10 Hz , within 1 minute Amplitude : 1.5mm. 15 minutes for each Direction (X,Y,Z)	
8	Drop test	Packed, 100CM free fall, 6 sides, 1 corner, 3edges	
9	Life time	50,000 hours 25 , 60%RH , specification condition driving	

Note 1   The product move into the room temperature for at least 2 hours with no condensation.

Note 2   The product move into the room temperature for at least 24 hours with no condensation.

Note 3 : Please change the display picture (autorun) during operating mode. Avoid displaying static images
     * One single product test for only one item.
     * One single product test for only one item.
     * Judgment after test : keep in room temperature for more than 2 hours.
        - Current consumption < 2 times of initial value
        - Contrast > 1/2 initial value
        - Function : work normally

5. PRODUCT HANDLING AND APPLICATION

PRECAUTION FOR HANDLING LCM

The LCD module contains a C-MOS LSI. People who operate the LCM should wear ESD protection eguipement to prevent ESD hurt on products.

Do not input any signal before power is turned on.

Do not take LCM from its packaging bag until it is assembled.

Peel off the LCM protective film slowly since static electricity may be generated.

Pay attention to the humidity of the work shop, 50~60%RH is satisfactory.

Use a non-leak iron for soldering LCM.

Do not touch the display surface or connection terminals area with bare hands.Smudges on the display surface reduce the insulation between terminals.

Cautions for soldering to LCM:

Condition for soldering I/O terminals:

Temperature at iron tip :350 ±15 .

Soldering time : 3~4sec./ terminals.

Type of solder : Eutectic solder(rosin flux filled).

PRECAUTION IN USE OF LCM

Do not contact or scratch the front surface and the contact pads of a LCM with hard materials such as metal or glass or with one's nail.

To clean the surface , wipe it gently with soft cloth dampened by alcohol.

Do not attempt to wiped off the contact pads.

Keep LCM away from direct sunlight , also avoid them in high-temperature & high humidity environment for a long period.

Do not drive LCM by DC voltage.

Do not expose LCM to organic solvent.

Liquid in LCM is hazardous substance. In case a contact with liquid crystal material is occured, be sure to immediately wash such material away by soap and water.

The polarizer is easily damaged and should be handle with special care. Don't press or rub it with hard objects.

PRECAUTION FOR STORING AND USE OF LCM

To avoid degradation of the device , do not store the module under the conditions of direct sunlight , high temperature or high humidity . Keep the module in bags designed to prevent static electricity charging under low temperature / normal humidity conditions(avoid high temperature / high humidity and low temperature below 0)

Never use the LCD , LCM under 45 Hz , the liquid crystal will decomposition and cause permently damage on display !!

USING ON MEDICAL CARE , SAFETY OR HAZARDOUS APPLICATION OR SYSTEM

For the application in medical care, safety and hazardous prodcuts or systems, an authorization from URT is required. URT will not responsible for any damage or loss which caused by the products without any authorization given by URT.

This product is not allowed to be designed and used for military application and/or purpose.

The delivery of this product to the countries and/or regions where the embargoes are imposed by U.N. is prohibited.

The application and delivery of this product must comply with Startegic High-Tech Commodities (SHTC) export control and the sales to the embargoed and/or sanctioned countries or regions are strictly prohibited.

6. DATE CODE OF PRODUCTS

Date code will be shown on each product :
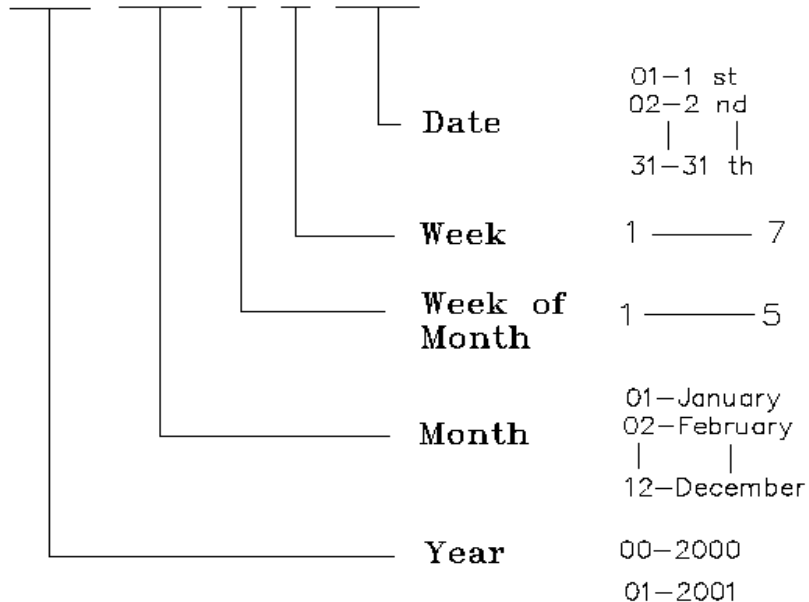
YY MM DD - XXXX

Year Month Day - Serial No.

Example: 141108 - 0003 ==> Year 2014, November,8th , Serial No.0003

Note   The lot no. attached on the packing box will be used for tracking once the part is too small to print the date code.
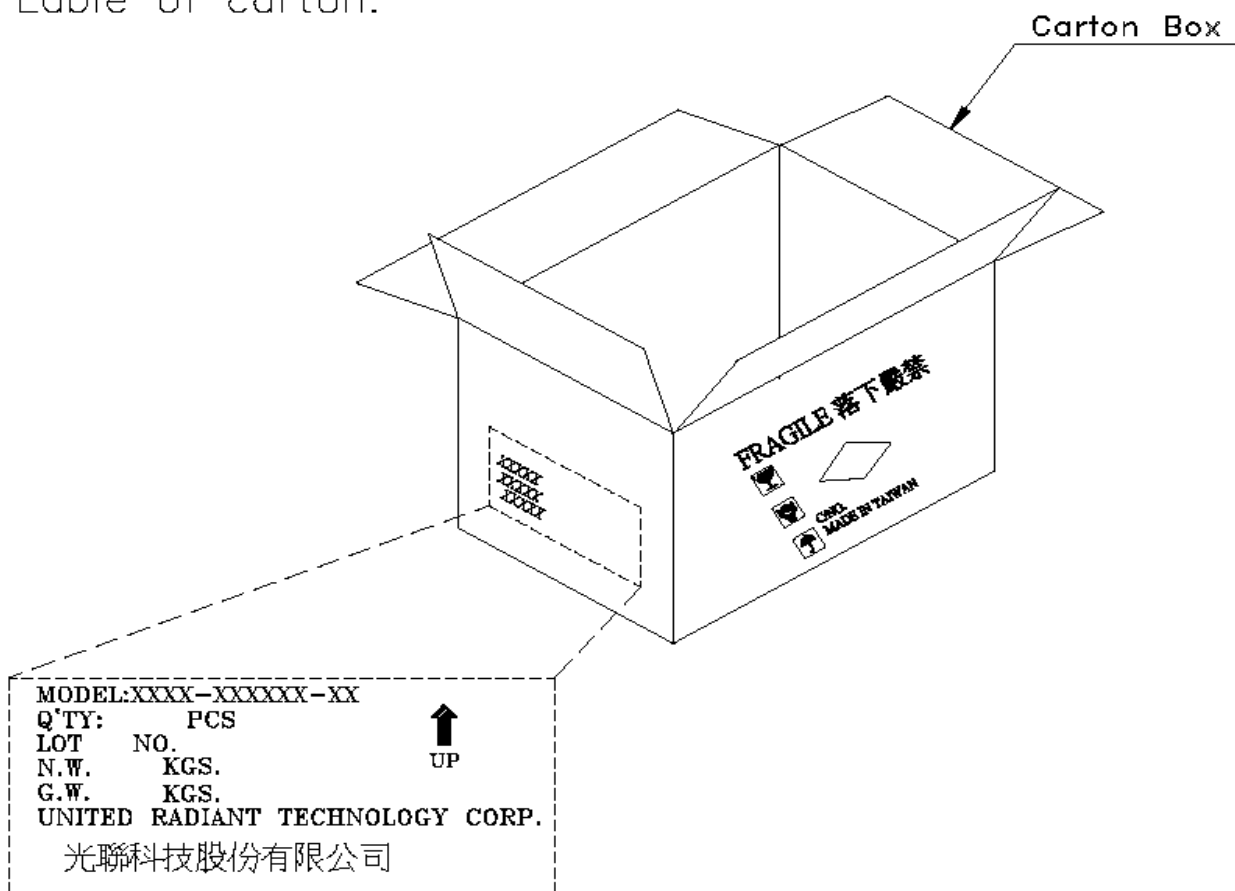
7. PACKING

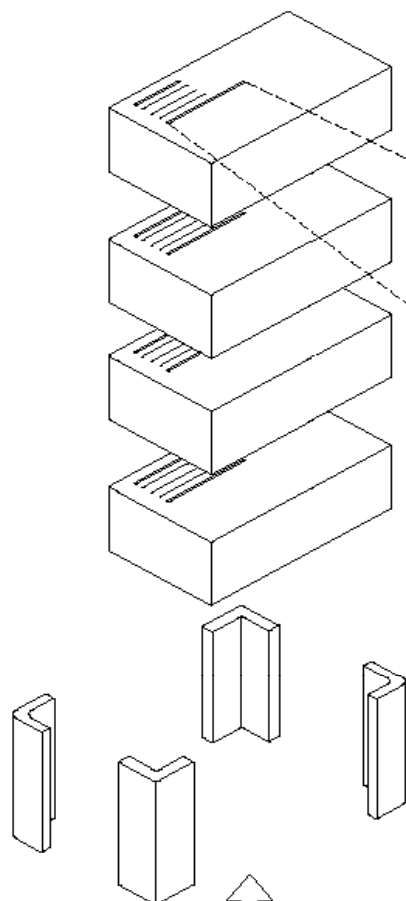Instruction of lot number:

LOT NO.: 0 0 0 8 3 5 2 5 (EX)

Date	01—1 st 02—2 nd | | 31—31 th
Week	1 ——— 7
Week of Month	1 ——— 5
Month	01—January 02—February | 12—December
Year	00—2000 01—2001

Lable of carton:

Carton Box

FRAGILE 落下嚴禁

C/NO.
MADE IN TAIWAN

MODEL:XXXX—XXXXXX—XX
Q'TY: PCS
LOT   NO.
N.W.   KGS.
G.W.   KGS.
UNITED RADIANT TECHNOLOGY CORP.
光聯科技股份有限公司

UP

MODEL NO:

60   PCS/INDEX BOX

4   INDEX BOX/STACK

240   PCS/CARTON

NOTE:

Model		No.
Q'ty		pcs
*		
Lot	No.	
Q.C.		

Carton Dimensions :
360*300*355 mm

Cross Weight :
About 13.8 kg

8. INSPECTION STANDARD

8.1. QUALITY :

THE QUALITY OF GOODS SUPPLIED TO PURCHASER SHALL COME UP TO THE FOLLOWING STANDARD.

8.1.1. THE METHOD OF PRESERVING GOODS

AFTER DELIVERY OF GOODS FROM U.R.T. TO PURCHASER. PURCHASER SHALL CONTROL THE LCM

AT -10 TO 40 ,AND IT MIGHT BE DESIRABLE TO KEEP AT THE NORMAL ROOM TEMPERATURE

AND HUMIDITY UNTIL INCOMING INSPECTION OR THROWING INTO PROCESS LINE.

8.1.2. INCOMING INSPECTION

(A) THE METHOD OF INSPECTION   (B) LINEAR TYPE:

IF PURCHASER MAKE AN INCOMING INSPECTION , A SAMPLING PLAN SHALL BE APPLIED ON THE CONDITION THAT QUALITY OF ONE DELIVERY SHALL BE REGARDED AS ONE LOT.

(B) THE STANDARD OF QUALITY

ISO-2859-1 (SAME AS MIL-STD-105E) , LEVEL   SINGLE PLAN.

CLASS	AQL(%)
CRITICAL	0.4 %
MAJOR	0.65 %
MINOR	1.5 %

EVERY ITEM SHALL BE INSPECTED ACCORDING TO THE CLASS.

(C) MEASURE

IF AS THE RESULT OF ABOVE RECEIVING INSPECTION , A LOT OUT IS DISCOVERED. PURCHASER SHALL BE INFORM SELLER OF IT WITHIN SEVEN DAYS. BUT FIRST SHIPMENT WITHIN FOURTEEN DAYS.

8.1.3. WARRANTY POLICY

U.R.T. WILL PROVIDE ONE-YEAR WARRANTY FOR THE PRODUCTS ONLY IF UNDER SPECIFICATION OPERATING CONDITIONS. U.R.T. WILL REPLACE GOOD PRODUCTS FOR THESE DEFECT PRODUC´ WHICH UNDER WARRANTY PERIOD AND BELONG TO THE RESPONSIBILITY OF U.R.T.

8.2. CHECKING CONDITION

8.2.1. CHECKING DIRECTION SHALL BE IN THE 45 DEGREE AREA FROM VIEWING DIRECTION.
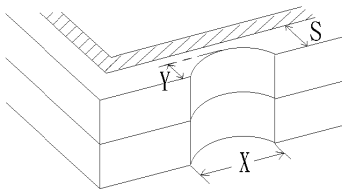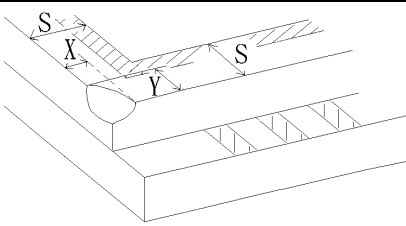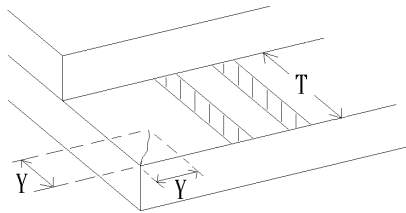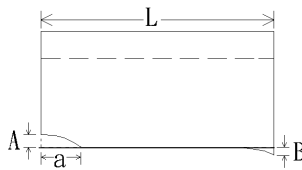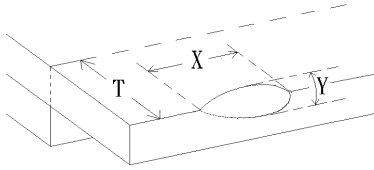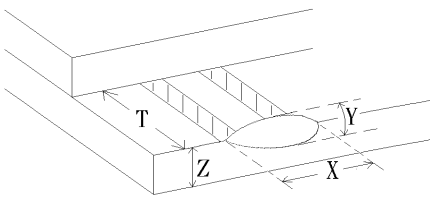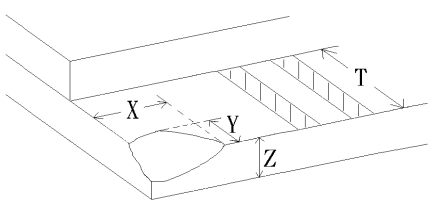
8.2.2. CHECKER SHALL SEE OVER 300±25 mm. WITH BARE EYES FAR FROM SAMPLE AND USING 2 PCS. OF 20W FLUORESCENT LAMP.

8.3. INSPECTION PLAN :

CLASS	ITEM	JUDGEMENT	CLASS
PACKING & INDICATE	1. OUTSIDE AND INSIDE PACKAGE	"MODEL NO." , "LOT NO." AND "QUANTITY" SHOULD INDICATE ON THE PACKAGE.	Minor
	2. MODEL MIXED AND QUANTITY	OTHER MODEL MIXED...............REJECTED QUANTITY SHORT OR OVER......REJECTED	Critical
	3. PRODUCT INDICATION	(B) LINEAR TYPE: THE PRODUCT	Major
ASSEMBLY	4. DIMENSION, LCD GLASS SCRATCH AND SCRIBE DEFECT.	ACCORDING TO SPECIFICATION OR DRAWING.	Major
APPEARANCE	5. VIEWING AREA	POLARIZER EDGE OR LCD'S SEALING LINE IS VISABLE IN THE VIEWING AREA ……..REJECTED	Minor
	6. BLEMISH BLACK SPOT WHITE SPOT IN THE LCD AND LCD GLASS CRACKS	ACCORDING TO STANDARD OF VISUAL INSPECTION (INSIDE VIEWING AREA)	Minor
	7. BLEMISH BLACK SPOT WHITE SPOT AND SCRATCH ON THE POLARIZER	ACCORDING TO STANDARD OF VISUAL INSPECTION (INSIDE VIEWING AREA)	Minor
	8. BUBBLE IN POLARIZER	ACCORDING TO STANDARD OF VISUAL INSPECTION (INSIDE VIEWING AREA)	Minor
	9. LCD'S RAINBOW COLOR	STRONG DEVIATION COLOR (OR NEWTON RING) OF LCD......REJECTED. OR ACCORDING TO LIMITED SAMPLE (IF NEEDED, AND INSIDE VIEWING AREA)	Minor
ELECTRICAL	10. ELECTRICAL AND OPTICAL CHARACTERISTICS (CONTRAST VOP CHROMATICITY … ETC)	ACCORDING TO SPECIFICATION OR DRAWING . (INSIDE VIEWING AREA)	Critical
	11.MISSING LINE	MISSING DOT LINE CHARACTER ....REJECTED	Critical
	12.SHORT CIRCUIT WRONG PATTERN DISPLAY	NO DISPLAY WRONG PATTERN DISPLAY CURRENT CONSUMPTION OUT OF SPECIFICATION...... REJECTED	Critical
	13. DOT DEFECT (FOR COLOR AND TFT)	ACCORDING TO STANDARD OF VISUAL INSPECTION	Minor

8.4. STANDARD OF VISUAL INSPECTION

NO.	CLASS	ITEM	JUDGEMENT
8.4.1	MINOR	BLACK AND WHITE SPOT FOREIGN MATERIEL DUST IN THE CELL BLEMISH SCRATCH	(A) ROUND TYPE: unit : mm. (B) LINEAR TYPE: unit : mm.
8.4.2	MINOR	BUBBLE IN POLARIZER DENT ON POLARIZER	unit : mm.
8.4.3	MINOR	Dot Defect	(see below)

8.4.1 (A) ROUND TYPE: unit : mm.

DIAMETER (mm.)		ACCEPTABLE Q'TY
	0.1	DISREGARD
0.1 <	0.25	3 (Distance>5mm)
0.25 <		0

NOTE: =(LENGTH+WIDTH)/2

8.4.1 (B) LINEAR TYPE: unit : mm.

LENGTH	WIDTH		ACCEPTABLE Q'TY
------	W	0.03	DISREGARD
L 5.0	0.03 < W	0.07	3 (Distance>5mm)
------	0.07 < W		FOLLOW ROUND TYPE

8.4.2 unit : mm.

DIAMETER		ACCEPTABLE Q'TY
	0.2	DISREGARD
0.2 <	0.5	2 (Distance>5mm)
0.5 <		0

8.4.3 Dot Defect

Items	ACC. Q'TY
Bright dot	N 4 (Distance>5mm)
Dark dot	N 4 (Distance>5mm)

Pixel Define :

Note 1: The definition of dot: The size of a defective dot over 1/2 of whole dot is regarded as one defective dot.

Note 2: Bright dot: Dots appear bright and unchanged in size in which LCD panel is displaying under black pattern.

Note 3: Dark dot: Dots appear dark and unchanged in size in which LCD panel is displaying under pure red, green ,blue pattern.

NO.	CLASS	ITEM	JUDGEMENT	
8.4.4	MINOR	LCD GLASS CHIPPING	Y > S	Reject
8.4.5	MINOR	LCD GLASS CHIPPING	X or Y > S	Reject
8.4.6	MAJOR	LCD GLASS GLASS CRACK	Y > (1/2) T	Reject
8.4.7	MAJOR	LCD GLASS SCRIBE DEFECT	1. a> L/3 , A>1.5mm. Reject 2. B : ACCORDING TO DIMENSION	
8.4.8	MINOR	LCD GLASS CHIPPING (ON THE TERMINAL AREA)	$= (x+y)/2 > 30mm$	Reject
8.4.9	MINOR	LCD GLASS CHIPPING (ON THE TERMINAL SURFACE)	Y > (1/3) T	Reject
8.4.10	MINOR	LCD GLASS CHIPPING	Y > T	Reject