

EXAMINED BY :	EMERGING DISPLAY TECHNOLOGIES CORPORATION	FILE NO. CAS-0009783
Sam Chou		ISSUE : MAY.18, 2026
APPROVED BY:		TOTAL PAGE : 27
Elvis Wu		VERSION : 2
CUSTOMER ACCEPTANCE SPECIFICATIONS		
MODEL NO. : EVME101000VDYW (RoHS) FOR MESSRS :		
CUSTOMER'S APPROVAL DATE : BY :		

EMERGING DISPLAY
TECHNOLOGIES CORPORATION

MODEL NO.

EVME101000VDYW

VERSION

2

PAGE

0-1

DOC. FIRST ISSUE

RECORDS OF REVISION

JAN.06, 2025

DATE

REVISED
PAGE
NO.

SUMMARY

MAY.18, 2026

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3.1 TFT MODULE ELECTRICAL ABSOLUTE MAXIMUM RATINGS

ITEM	MAX.
FORWARD CURRENT FOR LED DRIVER	27

 →

ITEM	MAX.
FORWARD CURRENT FOR LED DRIVER	26.5

10

6. OPTICAL CHARACTERISTICS
REVISING THE ENTIRE PAGE

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7. OUTLINE DIMENSIONS
MARK△:ADD INSULATED TAPE

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NOTE (2) : BL_EN SIGNAL=0~3.3V , OPERATION CONDITIONS :

ITEM	SYMBOL	MIN.	TYP.	MAX.
LED_ENAPWM LOGIC-HIGH LEVEL	V _{oah}	3.0	3.3	3.6
LED_ENAPWM LOGIC-LOW LEVEL	V _{odl}	—	—	0.8
DIMMING FREQUENCY	F _{dim}	0.1	—	20

 →

ITEM	SYMBOL	MIN.	TYP.	MAX.
LED_ENAPWM LOGIC-HIGH LEVEL	V _{oah}	1.4	—	—
LED_ENAPWM LOGIC-LOW LEVEL	V _{odl}	—	—	0.5
DIMMING FREQUENCY	F _{dim}	0.1	—	20

25

14.1 STANDARD SPECIFICATIONS FOR RELIABILITY OF LCD MODULE

NO.	ITEM	DESCRIPTION
7	VIBRATION (NON-OPERATION)	0.76 ms ² (1.2G), 10-100 Hz XYZ DIRECTIONS, 1 HR EACH

NO.	ITEM	DESCRIPTION
7	VIBRATION (NON-OPERATION)	MIL-STD-883C METHOD 2000 (TEST CONDITION 2) RMS ACCELERATION (Gms):7.7Gms

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1. GENERAL SPECIFICATIONS

1.1 DATA SHEETS FOR CAPACITIVE TOUCH PANEL CONTROLLER/DRIVER PLEASE REFER TO :

EETI EXC80H60

1.2 MATERIAL SAFETY DESCRIPTION

ASSEMBLIES SHALL COMPLY WITH EUROPEAN ROHS REQUIREMENTS, INCLUDING PROHIBITED MATERIALS/COMPONENTS CONTAINING LEAD, MERCURY, CADMIUM, HEXAVALENT CHROMIUM, POLYBROMINATED BIPHENYLS (PBB) AND POLYBROMINATED DIPHENYL ETHERS (PBDE), BIS(2-ETHYLHEXYL) PHTHALATE (DEHP), BUTYL BENZYL PHTHALATE (BBP), DIBUTYL PHTHALATE (DBP), DIISOBUTYL PHTHALATE (DIBP).

2. MECHANICAL SPECIFICATIONS

2.1 TFT LCD MODULE MECHANICAL SPECIFICATIONS

(1) DISPLAY SIZE	-----	10.1 inch
(2) NUMBER OF DOTS	-----	1920 (RGB)W * 1200H DOTS
(3) MODULE SIZE	-----	270.2W * 179.8H * 16(MAX.)D mm (NOT INCLUDED FPC & PROTECT FILM)
(4) VIEWING AREA	-----	217.58W * 136.36H mm
(5) ACTIVE AREA	-----	216.576W * 135.36H mm
(6) DOT SIZE	-----	0.0376W * 0.1128H mm
(7) PIXEL SIZE	-----	0.1128W * 0.1128H mm
(8) LCD TYPE	-----	TFT, IPS, TRANSMISSIVE , NORMALLY BLACK
(9) COLOR	-----	16.7M
(10) VIEWING DIRECTION	-----	SUPER WIDE VIEW
(11) BACKLIGHT	-----	LED , COLOR : WHITE, GREEN
(12) INTERFACE MODE	-----	eDP 2 LANES
(13) WEIGHT	-----	TBD

2.2 CAPACITIVE TOUCH PANEL MECHANICAL SPECIFICATIONS

- (1) TOUCH PANEL SIZE ----- 10.1 inch
- (2) OUTER DIMENSION ----- 270.2W * 179.8H * 1.8D mm
(NOT INCLUDED FPC & PROTECT FILM)
- (3) VIEWING AREA ----- 217.58W * 136.36H mm
- (4) ACTIVE AREA ----- 219.54W * 138H mm
- (5) INPUT TYPE ----- MULTI TOUCH
- (6) NUMBER OF TOUCH SENSOR ----- 53 * 33 SENSORS
- (7) INTERFACE MODE ----- USB
- (8) RESOLUTION ----- 16384 * 16384

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3. ABSOLUTE MAXIMUM RATINGS

3.1 TFT MODULE ELECTRICAL ABSOLUTE MAXIMUM RATINGS

ITEM	SYMBOL	MIN.	MAX.	UNIT	REMARK
POWER SUPPLY VOLTAGE	VDD-VSS	-0.3	6.5	V	
INPUT SIGNAL VOLTAGE	VI	-0.3	VDD	V	
STATIC ELECTRICITY	—	—	—	V	NOTE (1)
FORWARD CURRENT FOR LED DRIVER	VBL+-VBL-	0	26.5	V	FOR EACH LED

NOTE (1) : LCM SHOULD BE GROUNDED DURING LCM HANDLING.

3.2 CAPACITIVE TOUCH PANEL ELECTRICAL ABSOLUTE MAXIMUM RATINGS

ITEM	SYMBOL	MIN.	MAX.	UNIT	REMARK
POWER SUPPLY VOLTAGE	VDD1-VSS1	-0.3	6	V	
DC INPUT VOLTAGE	VIN	VSS1-0.3	VDD1+0.3	V	
STATIC ELECTRICITY	—	—	100	V	NOTE (1)

NOTE (1) : TEST METHOD AND CONDITIONS :
CAPACITOR IS CHARGED UP TO 200 pF BY STATIC VOLTAGE, THEN
CONNECT WITH DISPLAY MODULE INTERFACE PINS FOR DISCHARGE.

3.3 ENVIRONMENTAL ABSOLUTE MAXIMUM RATINGS

ITEM	OPERATING		STORAGE		REMARK
	MIN.	MAX.	MIN.	MAX.	
AMBIENT TEMPERATURE	-20°C	70 °C	-30 °C	80 °C	NOTE (1), (2), (3), (4)
HUMIDITY	NOTE (3)		NOTE (3)		WITHOUT CONDENSATION

NOTE (1) : THE ABSOLUTE MAXIMUM RATINGS OF THIS PRODUCT SHOULD NOT BE EXCEEDED AT ANY TIME. IF THESE RATINGS ARE EXCEEDED, THE PRODUCT'S PERFORMANCE IS NOT GUARANTEED AND THE PRODUCT MAY EXPERIENCE PERMANENT DAMAGE.

NOTE (2) : BACKGROUND COLOR CHANGES SLIGHTLY DEPENDING ON AMBIENT TEMPERATURE THIS PHENOMENON IS REVERSIBLE.

NOTE (3) : WHEN THE LCD MODULE IS OPERATED AT A HIGHER AMBIENT TEMPERATURE THAN 60°C, THE PWM DUTY CYCLE OF THE LED BACKLIGHT SHOULD BE ADJUSTED TO BE LESS THAN 40%. IF THE MODULE IS OPERATED AT A HIGHER DUTY CYCLE THAN 40%, THEN THERE IS A POSSIBILITY OF DISTORTION AND IRREGULARITY OF THE PICTURE DUE TO LIQUID CRYSTAL BEHAVIOR.

NOTE (4) : Ta ≤ 60°C : 90%RH MAX.

Ta > 60°C : ABSOLUTE HUMIDITY MUST BE LOWER THAN 90%RH AT 60°C.

4. ELECTRICAL CHARACTERISTICS

4.1 TFT MODULE ELECTRICAL CHARACTERISTICS

ITEM	SYMBOL	CONDITION	MIN.	TYP.	MAX.	UNIT	REMARK
POWER SUPPLY VOLTAGE	VDD-VSS	—	3.0	3.3	3.6	V	
POWER SUPPLY CURRENT	IDD	—	—	520	650	mA	NOTE (1)
POWER SUPPLY VOLTAGE FOR LED DRIVER	VBL+ -VBL-	—	11.5	12	12.5	V	
POWER SUPPLY CURRENT FOR LED DRIVER	IBL	VBL+ -VBL -=12V LED B/L=ON	—	(750)	(1000)	mA	NOTE (2)
				(200)	(300)	mA	NOTE (3)
LED LIFE TIME (WHITE LED)	—	IF=20 mA (PER LED)	30000	—	—	HRS	NOTE(4) NOTE(5)

NOTE (1) : THE DISPLAY PATTERN IS ALL "RED".

NOTE (2) : THE BLACKLIGHT COLOR IS WHITE.

NOTE (3) : THE BLACKLIGHT COLOR IS GREEN.

NOTE (4) : CONDITIONS ; Ta=25 °C, CONTINUOUS LIGHTING.

NOTE (5) : DEFINITIONS OF LIFE TIME : LCM LUMINANCE BECOMES HALF OF THE INITIAL VALUE.

4.2 SIGNAL ELECTRICAL CHARACTERISTICS

ITEM	SYMBOL	CONDITION	MIN.	TYP.	MAX.	UNIT
CMOS/TTL DC SPECIFICATIONS						
LOGIC HIGH INPUT VOLTAGE	V _{IH}	—	0.7VDDIO_25	—	VDDIO_25	V
LOGIC LOW INPUT VOLTAGE	V _{IL}	—	VSS	—	0.3VDDIO_25	V
LOGIC HIGH OUTPUT VOLTAGE	V _{OH}	—	0.8VDDIO_25	—	VDDIO_25	V
LOGIC LOW OUTPUT VOLTAGE	V _{OL}	—	VSS	—	0.2VDDIO_25	V
INPUT CURRENT	I _{IN}	—	-10	—	10	μA
PULL LOW RESISTANCE	R _{PD}	AGMODE (Pin 13) PWMI (Pin 14) CABC_EN (Pin 58) COLOR_EN (Pin 59)	65	150	260	KΩ
DP DC SPECIFICATIONS						
MAIN LINK COMMON MODE VOLTAGE	VIC	—	0	—	2.0	V
MAIN LINK SWING VOLTAGE	VID	2.7Gbps	±60	—	±600	mV
		1.62Gbps	—	—	±600	mV
AUX COMMON MODE VOLTAGE	VIC_AUX	—	0	—	2.0	V
AUX SWING VOLTAGE	VID_AUX	TRANSMITTING	±0.195	—	±0.69	V
		RECEIVING	±0.16	—	±0.68	V
CHDS DC SPECIFICATIONS						
OUTPUT DIFFERENTIAL VOLTAGE RANGE	V _{OD}	RL=100Ω (T _A =25°C)	100	—	400	mV
OUTPUT DIFFERENTIAL VOLTAGE DEVIATION			V _{OD_CODE} *0.8 NOTE(1)	—	V _{OD_CODE} *1.2 NOTE(1)	mV
OUTPUT OFFSET VOLTAGE RANGE	V _{OS}		—	0.6	—	V
OUTPUT OFFSET VOLTAGE DEVIATION			V _{OS_CODE} -0.1 NOTE(1)	—	V _{OS_CODE} +0.1 NOTE(1)	V
ISP DC SPECIFICATIONS						
OUTPUT DIFFERENTIAL VOLTAGE RANGE	V _{OD}	RL=100Ω (T _A =25°C)	100	—	400	mV
OUTPUT DIFFERENTIAL VOLTAGE DEVIATION			V _{OD_CODE} *0.8 NOTE(1)	—	V _{OD_CODE} *1.2 NOTE(1)	mV
OUTPUT OFFSET VOLTAGE RANGE	V _{OS}		—	0.6	—	V
OUTPUT OFFSET VOLTAGE DEVIATION			V _{OS_CODE} -0.1 NOTE(1)	—	V _{OS_CODE} +0.1 NOTE(1)	V

ITEM	SYMBOL	CONDITION	MIN.	TYP.	MAX.	UNIT
PWM DC SPECIFICATIONS						
LX PIN SPIKE VOLTAGE	V_{LX}	—	-2	—	3.6	V

NOTE: (1) THE VOD_CODE AND VOS_CODE ARE PROGRAMMABLE BY DIFFERENT PANEL CHARACTERISTICS THROUGH ROM CODE.

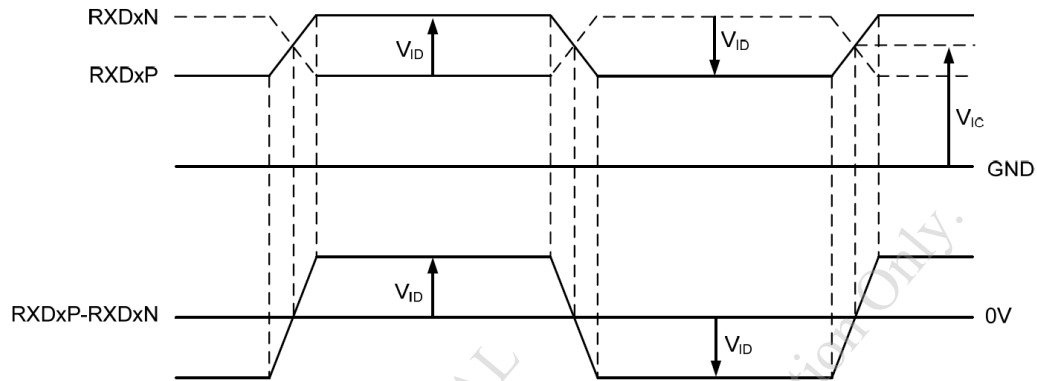


FIGURE: MAIN LINK VID AND VIC DEFINITION

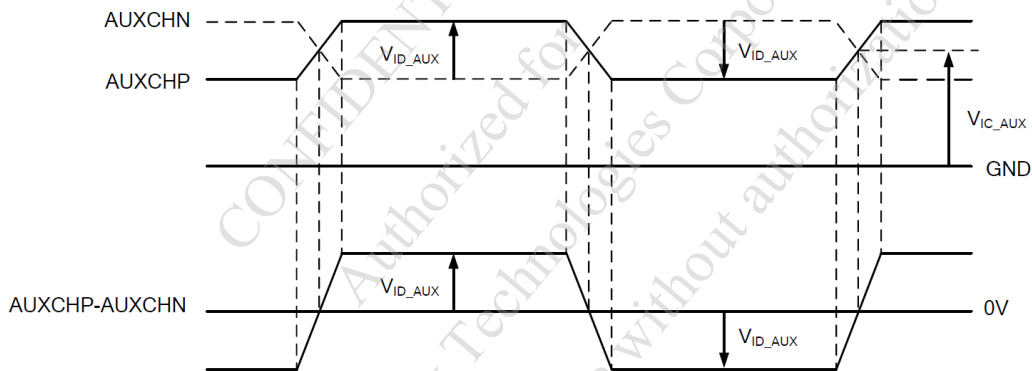


FIGURE: AUX CH VID_AUX AND VIC_AUX DEFINITION

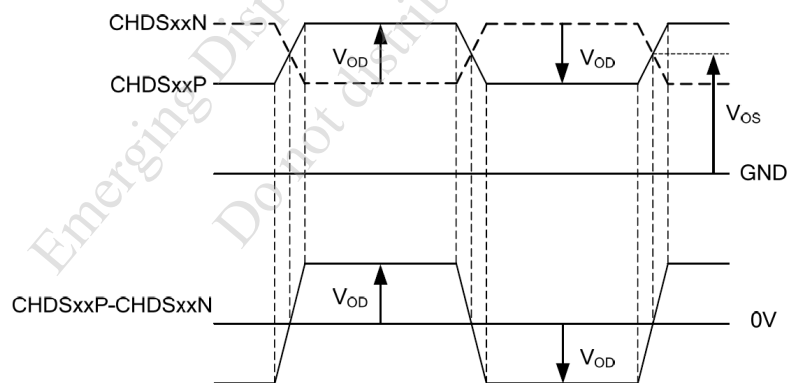


FIGURE: CHDS VOD AND VOS DEFINITION

4.3 CAPACITIVE TOUCH PANEL ELECTRICAL CHARACTERISTICS

Ta=25°C

ITEM	SYMBOL	CONDITION	MIN.	TYP.	MAX.	UNIT
POWER SUPPLY VOLTAGE	VDD1-VSS1	—	3.0	3.3	3.6	V
POWER SUPPLY CURRENT	IDD1	VDD1-VSS1=3.3V	—	(95)	(120)	mA

5. TIMING CHARACTERISTICS

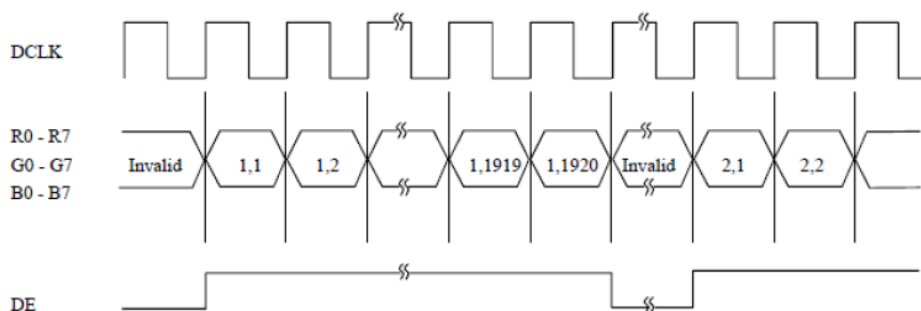
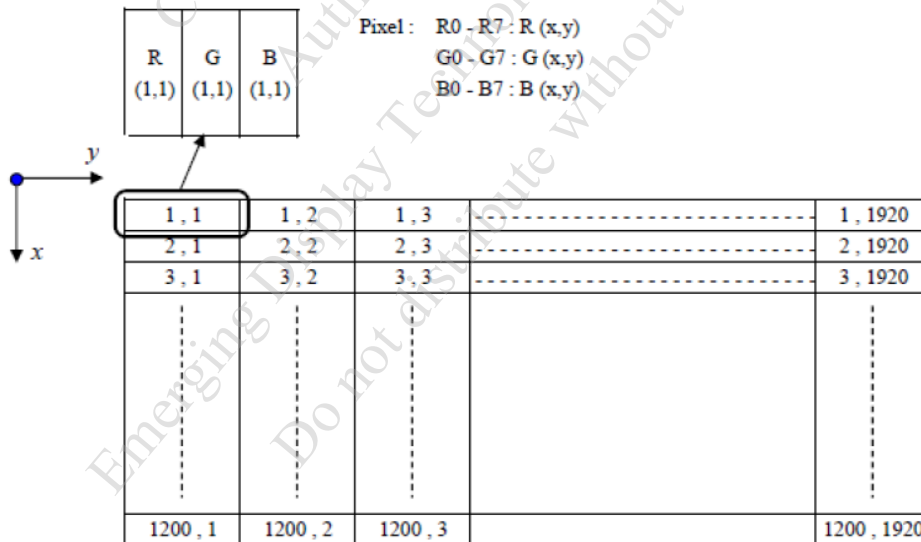
5.1 FOR TFT MODULE

5.1.1 INTERFACE TIMING (DE MODE)

ITEM	SYMBOL	MIN.	TYP.	MAX.	UNIT
FRAME RATE	—	—	60	—	Hz
CLOCK FREQUENCY	$1/T_{\text{clock}}$	—	154.5	—	MHz
VERTICAL SECTION	PERIOD	T_V	—	1250	—
	ACTIVE	T_{VD}	1200	—	—
	BLANKING	T_{VB}	$T_V - T_{VD}$	50	$T_V - T_{VD}$
	FRONT PORCH	T_{VFP}	—	18	—
	BACK PORCH	T_{VBP}	—	26	—
HORIZONTAL SECTION	PERIOD	T_H	—	2060	—
	ACTIVE	T_{HD}	1920	—	—
	BLANKING	T_{HB}	$T_H - T_{HD}$	140	$T_H - T_{HD}$
	FRONT PORCH	T_{HFP}	—	28	—
	BACK PORCH	T_{HBP}	—	80	—

5.1.2 eDP DATA INPUT FORMAT

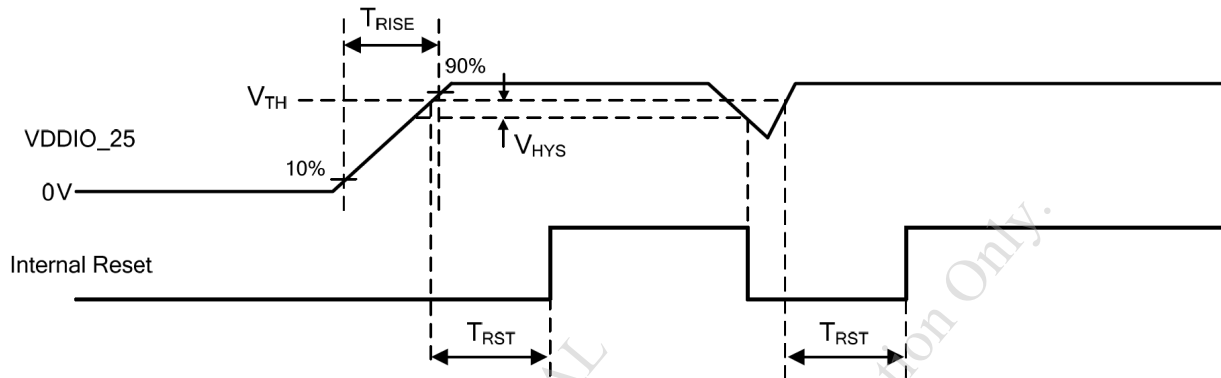
CORRESPONDENCE BETWEEN INPUT DATA AND DISPLAY IMAGE
DISPLAY DATA OF ADJACENT TWO PIXEL IS LATCHED DURING FOUR
CYCLE OF CLK



5.1.3 POWER ON/OFF SEQUENCE FOR LCD MODULE

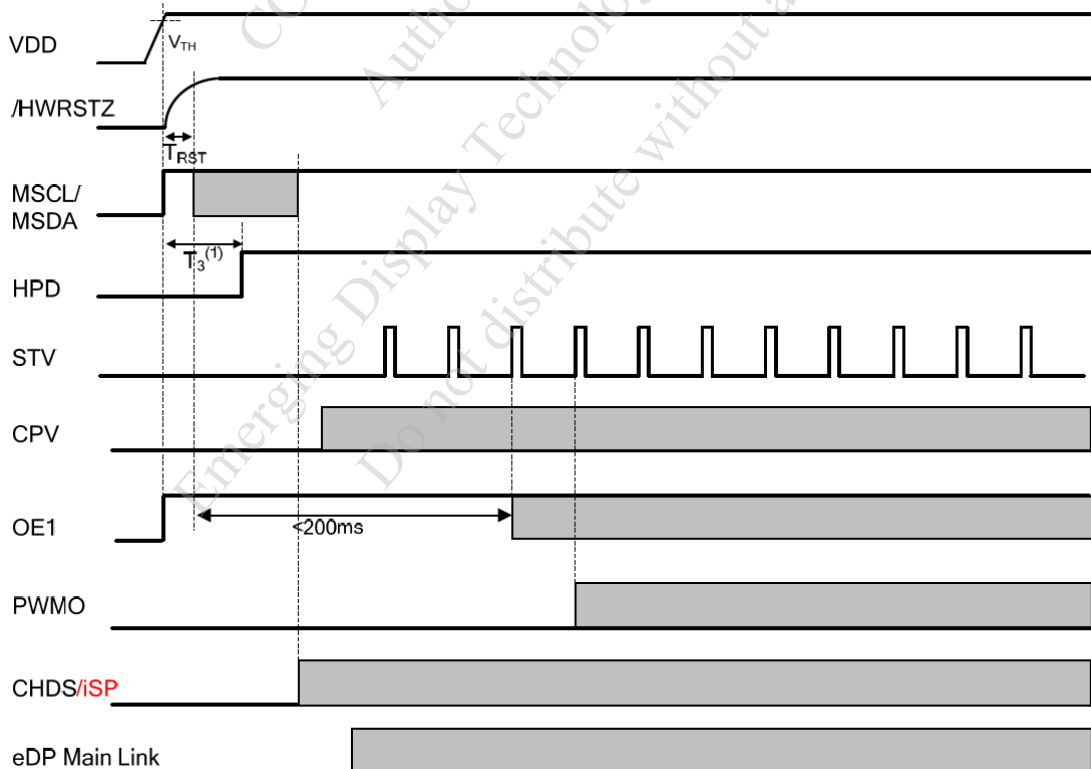
DISPLAY PORT PANEL POWER SEQUENCE:

POWER ON SEQUENCE



ITEM	SYMBOL	CONDITION	MIN.	TYP.	MAX.	UNIT
RESET THRESHOLD VOLTAGE	V _{TH}	—	1.7	1.9	2.1	V
HYSTERESIS VOLTAGE	V _{HYS}	—	200	—	—	mV
TIME CONSTANT OF RC	T _{RST}	—	—	0.8RC	—	S
VDD RISING TIME	T _{RISE}	FOR ALL POWER	0.1	—	10	ms

NOTE: (1) T_{RISE} < T_{RST}.



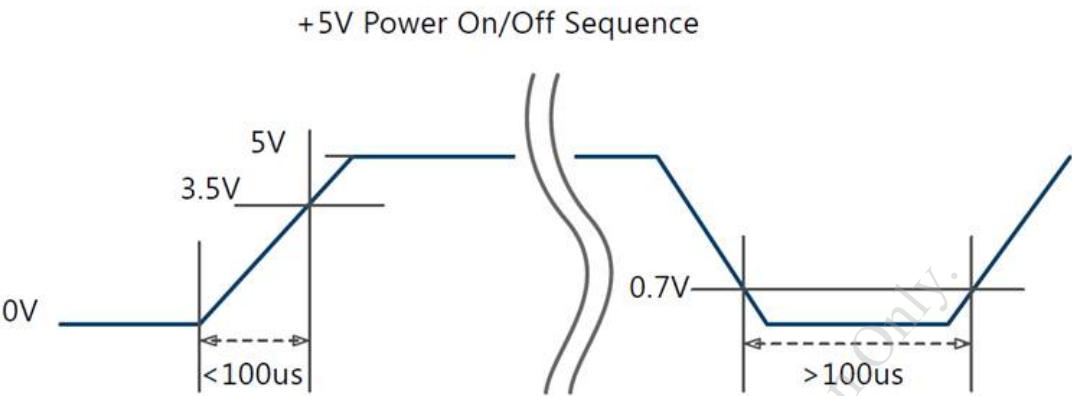
NOTE: (1) T₃ < 100ms

(2) THE POWER ON TIMING OF OUTPUT SIGNALS CAN BE ADJUSTED BY DIFFERENT PANEL CHARACTERISTICS THROUGH ROM CODE.

FIGURE: POWER UP SEQUENCE

5.2 CTP

5.2.1 POWER ON/OFF SEQUENCE



6. OPTICAL CHARACTERISTICS

6.1 OPTICAL CHARACTERISTICS (NORMAL)

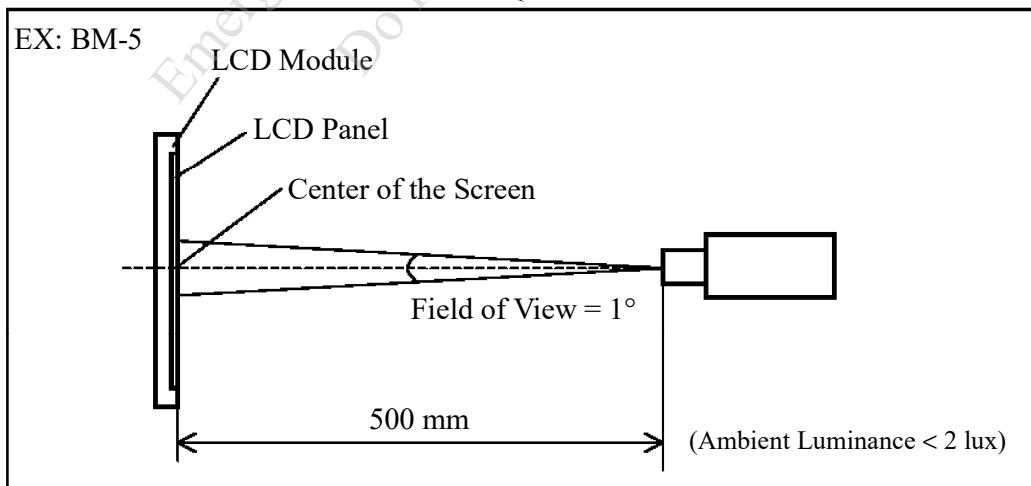
ITEM		SYMBOL	CONDITION		MIN.	TYP.	MAX.	UNIT	REMARK	
VIEWING ANGLE		$\theta y+$	CR $\geq$ 10	$\theta x=0^{\circ}$	80	85	—	deg	NOTE (2) NOTE (3)	
		$\theta y-$			80	85	—	deg		
		$\theta x+$		$\theta y=0^{\circ}$	80	85	—	deg		
		$\theta x-$			80	85	—	deg		
CONTRAST RATIO (CENTER) (WHITE)		CR		$\theta x=0^{\circ}, \theta y=0^{\circ}$		600	800	—	—	NOTE (3)
RESPONSE TIME		$T_R + T_F$				—	30	30	ms	NOTE (4)
COLOR CHROMATICITY (CENTER) (WHITE)		WHITE	$\theta x=0^{\circ}, \theta y=0^{\circ}$ VDD-VSS=3.3V VBL+ - VBL- =12V PWM=100%		0.28	0.33	0.38	—	NOTE (5)	
					W_y	0.32	0.37	0.42		—
		RED			R_x	0.55	0.60	0.65		—
					R_y	0.31	0.36	0.41		—
		GREEN			G_x	0.33	0.38	0.43		—
					G_y	0.55	0.60	0.65		—
		BLUE			B_x	0.10	0.15	0.20		—
					B_y	0.07	0.12	0.17		—
COLOR GAMUT		NTSC		—	51	—	%			
THE BRIGHTNESS OF MODULE(CENTER) (WHITE)		B		(850)	(950)	—	cd/m ²	NOTE (6)		
LUMINANCE UNIFORMITY		δ WHITE		(70)	—	—	%	NOTE (7)		

6.2 OPTICAL CHARACTERISTICS (NVIS GREEN B)

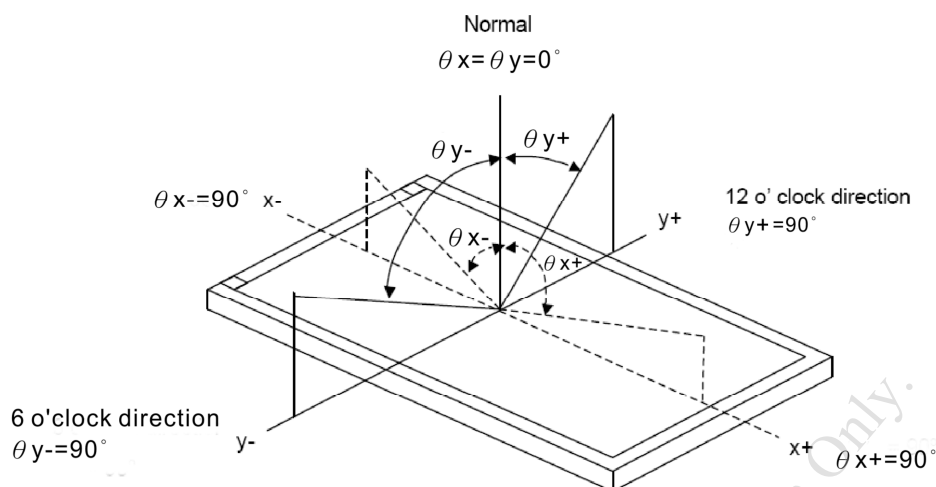
ITEM	SYMBOL	CONDITION	MIN.	TYP.	MAX.	UNIT	REMARK
COLOR CHROMATICITY (CENTER)	WHITE	$\theta_x=0^\circ, \theta_y=0^\circ$	0.074	0.131	0.188	—	NOTE (5)
			0.566	0.623	0.68	—	
THE BRIGHTNESS OF MODULE (CENTER)	B	$VDD-VSS=3.3V$ $VBL+ - VBL- =12V$	—	10.3	—	cd/m ²	NOTE (6) PWM=100%
THE BRIGHTNESS OF MODULE (CENTER)	B		—	(0.343)	—	cd/m ²	NOTE (6) PWM=(TBD)
LUMINANCE UNIFORMITY	δ WHITE		(75)	—	—	%	NOTE (7)

NOTE (1) : TEST CONDITION :

AFTER STABILIZING AND LEAVING THE PANEL ALONE AT A GIVEN TEMPERATURE FOR 30 MINUTES. MEASUREMENT SHOULD BE EXECUTED IN A STABLE, WINDLESS, AND DARK ROOM. THE MEASUREMENT CRITERIA AND CONDITION FOR EITHER BM-5 OR CA-210 OR EQUIVALENT LUMINANCE METER IS BASED ON THE EQUIPMENT'S MANUAL.



NOTE (2) : DEFINITION OF VIEWING ANGLE :



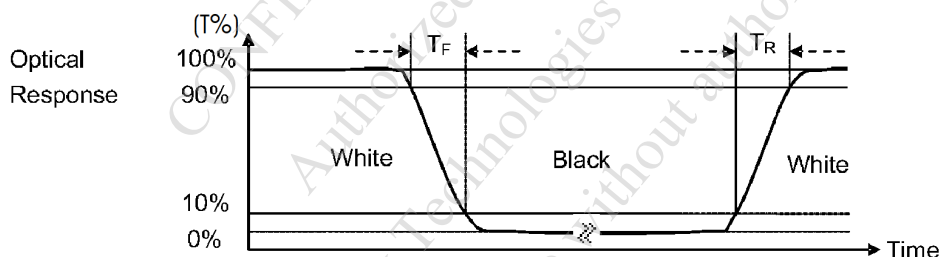
NOTE (3) : DEFINITION OF CONTRAST RATIO (CR) :

MEASURED AT THE CENTER POINT OF MODULE

$$\text{CONTRAST RATIO(CR)} = \frac{\text{BRIGHTNESS MEASURED WHEN LCD IS AT "WHITE STATE"}}{\text{BRIGHTNESS MEASURED WHEN LCD IS AT "BLACK STATE"}}$$

NOTE (4) : DEFINITION OF RESPONSE TIME : T_R AND T_F

THE FIGURE BELOW IS THE OUTPUT SIGNAL OF THE PHOTO DETECTOR.



NOTE (5) : DEFINITION OF COLOR CHROMATICITY

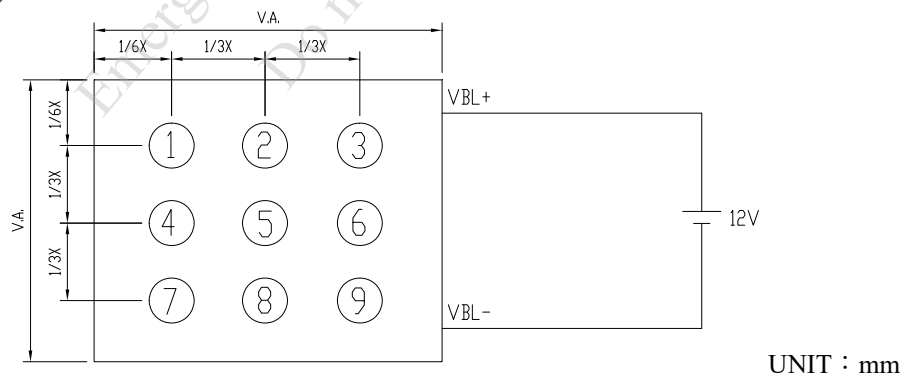
ALL THE INPUT TERMINALS OF MODULE ARE ELECTRICALLY OPENED.

(a) 100% RGB PIXEL DATA TRANSMISSION WHEN ALL THE INPUT TERMINALS OF MODULE ARE ELECTRICALLY POWERED ON.

(b) MEASURED AT THE CENTER POINT OF MODULE

NOTE (6) : MEASURED THE BRIGHTNESS OF WHITE STATE AT CENTER POINT.

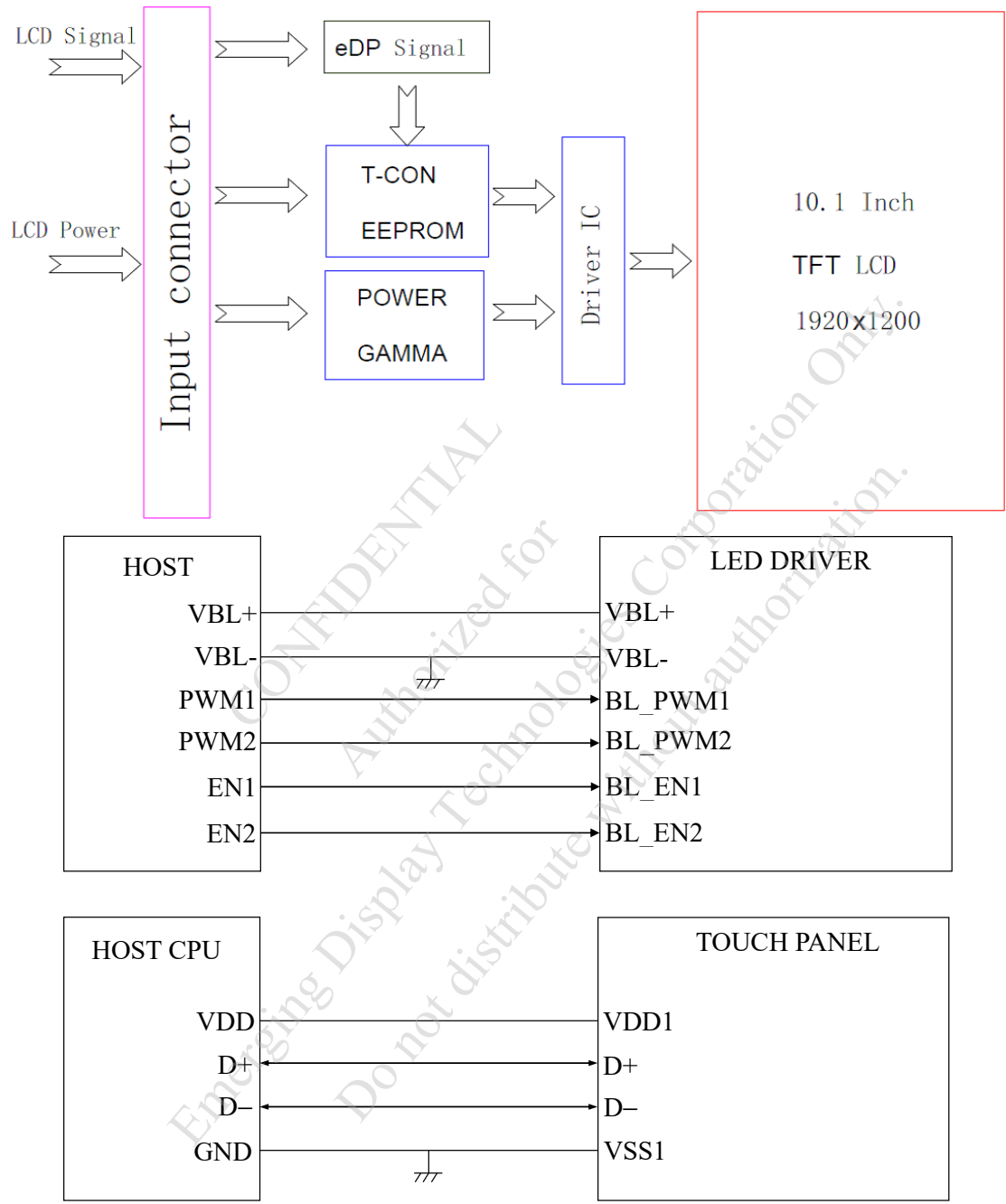
NOTE (7) : (a) DEFINITION OF BRIGHTNESS UNIFORMITY



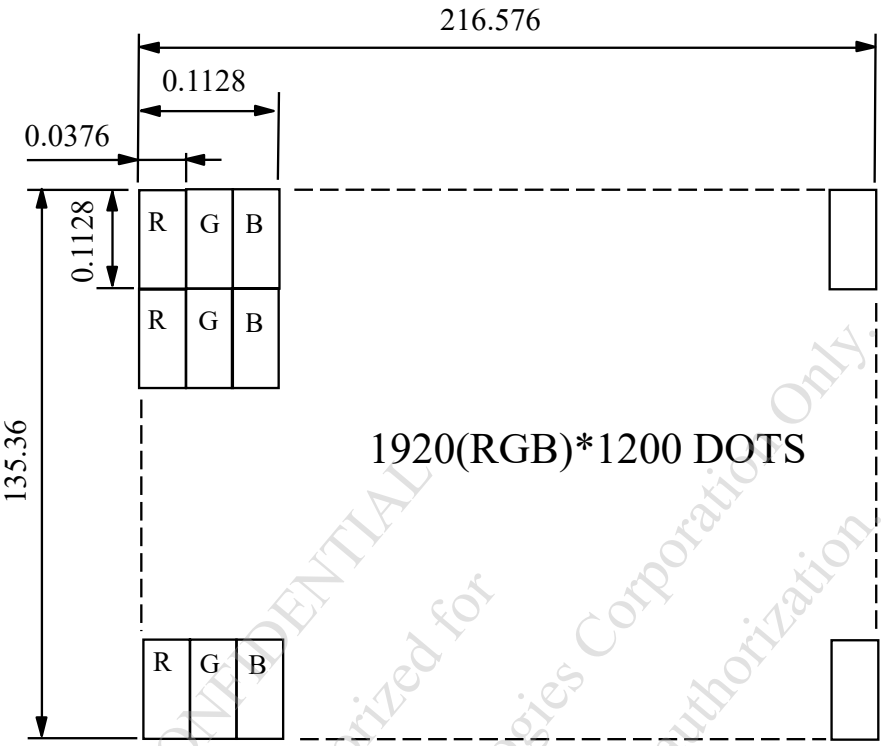
(b) THE BRIGHTNESS UNIFORMITY CALCULATING METHOD

$$\text{UNIFORMITY} = \frac{\text{MINIMUM BRIGHTNESS}}{\text{MAXIMUM BRIGHTNESS}} * 100\%$$

8. BLOCK DIAGRAM



9. DETAIL DRAWING OF DOT MATRIX



UNIT : mm
SCALE : NTS
NOT SPECIFIED TOLERANCE IS ± 0.1
DOTS MATRIX TOLERANCE IS ± 0.01

10. INTERFACE SIGNALS

10.1 LCD MODULE INTERFACE

PIN NO.	SYMBOL	FUNCTION
1	VSS	GROUND
2	NC	NOT CONNECT
3	NC	NOT CONNECT
4	NC	NOT CONNECT
5	NC	NOT CONNECT
6	NC	NOT CONNECT
7	NC	NOT CONNECT
8	NC	NOT CONNECT
9	NC	NOT CONNECT
10	NC	NOT CONNECT
11	NC	NOT CONNECT
12	NC	NOT CONNECT
13	NC	NOT CONNECT
14	HPD	HOT PLUG DETECTION SIGNAL PIN (3.3V)
15	VSS	GROUND
16	VSS	GROUND
17	NC	NOT CONNECT
18	VDD	POWER SUPPLY FOR LCD (3.3V)
19	VDD	
20	H_GND	HIGH SPEED GROUND (0V)
21	AUX_CH_N	COMPLEMENT SIGNAL AUX CHANNEL
22	AUX_CH_P	TRUE SIGNAL AUX CHANNEL
23	H_GND	HIGH SPEED GROUND (0V)
24	Lane0_P	TRUE SIGNAL LINK LANE 0
25	Lane0_N	COMPLEMENT SIGNAL LINK LANE 0
26	H_GND	HIGH SPEED GROUND (0V)
27	Lane1_P	TRUE SIGNAL LINK LANE 1
28	Lane1_N	COMPLEMENT SIGNAL LINK LANE 1
29	H_GND	HIGH SPEED GROUND (0V)
30	NC	NOT CONNECT

10.2 BACKLIGHT INTERFACE

PIN NO.	SYMBOL	FUNCTION
1	VBL+	POWER SUPPLY VOLTAGE FOR LED DRIVER
2	VBL+	POWER SUPPLY VOLTAGE FOR LED DRIVER
3	NC	NOT CONNECT
4	VBL-	POWER SUPPLY VOLTAGE FOR LED DRIVER
5	VBL-	POWER SUPPLY VOLTAGE FOR LED DRIVER
6	NC	NOT CONNECT
7	BL_PWM1	PWM SIGNAL INPUT(WHITE)
8	BL_PWM2	PWM SIGNAL INPUT(GREEN)
9	BL_EN1	LED ENABLE(WHITE)
10	BL_EN2	LED ENABLE(GREEN)

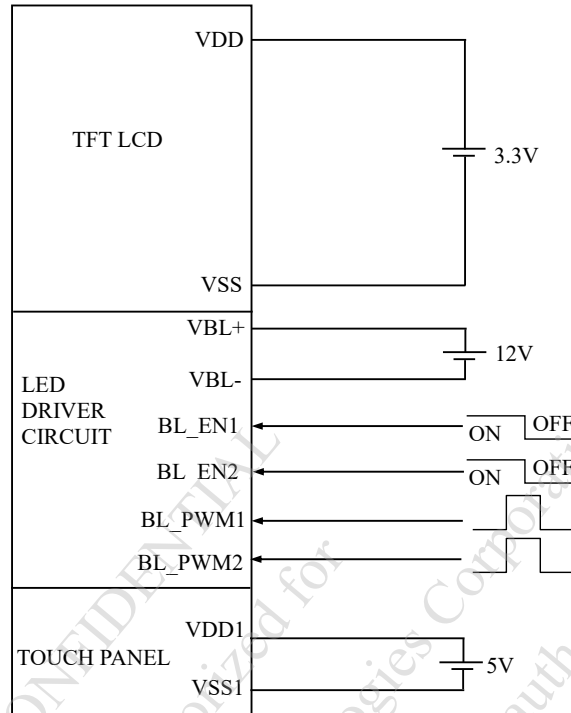
10.3 TOUCH PANEL INTERFACE

PIN NO.	SYMBOL	FUNCTION
1	NC	THE PIN WAS RESERVED FOR I2C VSS1
2	NC	THE PIN WAS RESERVED FOR I2C /RST
3	NC	THE PIN WAS RESERVED FOR I2C /INT
4	NC	THE PIN WAS RESERVED FOR I2C SCL
5	NC	THE PIN WAS RESERVED FOR I2C SDA
6	NC	THE PIN WAS RESERVED FOR I2C VCC(+5V)
7	VDD1	POWER SUPPLY VOLTAGE(+5.0V)
8	D-	USB D-
9	D+	USB D+
10	VSS1	GROUND

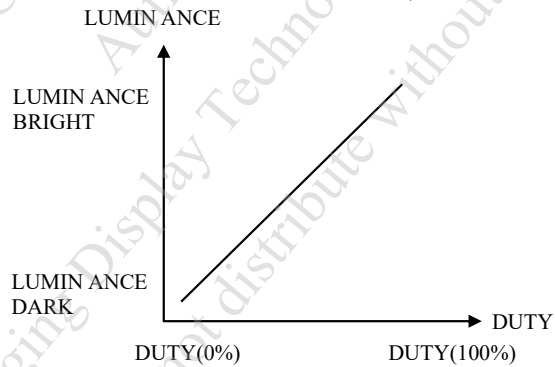
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11. POWER SUPPLY

11.1 POWER SUPPLY FOR LCM

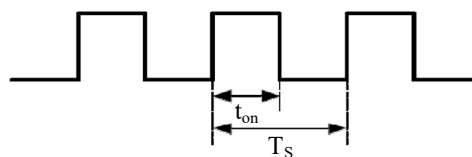


NOTE (1) : PWM ADJUST BRIGHTNESS TO CONTROL PIN, PULSE DUTY THE BIGGER THE BRIGHTER.



NOTE (2) : BL_EN SIGNAL=0~3.3V , OPERATION CONDITIONS :

ITEM	SYMBOL	MIN.	TYP.	MAX.	UNIT	REMARK
LED_EN&PWM LOGIC-HIGH LEVEL	V_{ADJH}	1.4	—	—	V	
LED_EN&PWM LOGIC-LOW LEVEL	V_{ADJL}	—	—	0.5	V	
DIMMING FREQUENCY	F_{ADJ}	0.1	—	20	kHz	



$$D = t_{on} / T_s \times 100\%$$

$$F_{ADJ} = 1 / T_s$$

12. CAPACITIVE TOUCH PANEL SPECIFICATION

12.1 OPTICAL CHARACTERISTICS

ITEM	CONDITION	MIN.	TYP.	MAX.	UNIT
TRANSPARENCY NOTE (1)	Ta = 25°C $\lambda=550\text{nm}$	85	—	—	%

NOTE (1) : OPTICAL MEASUREMENT SHOULD BE EXECUTED AFTER PANEL IS SECURED.

MEASUREMENT PROCESS SHOULD BE EXECUTED IN A STABLE, WINDLESS, AND DARK ROOM.

OPTICAL SPECIFICATIONS SHOULD BE MEASURED BY SPECTROPHOTOMETER.

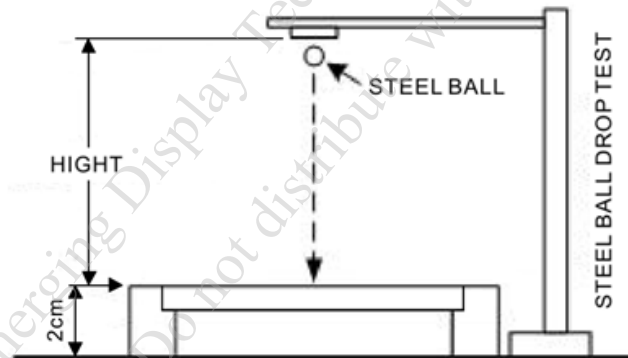
12.2 HARDNESS

ITEM	DESCRIPTION
SURFACE HARDNESS	7H (min)

12.3 DURABILITY

USING STEEL BALL AND FALLING ON TOUCH PANEL SURFACE, FROM THE HEIGHT MUST PASS BELOW CONDITIONS :

ITEM	CONDITION	INSPECTION METHOD	DESCRIPTION
STEEL BALL DROP TEST	WEIGHT : 67g HEIGHT OF FALL : 30 cm	VISUAL INSPECTION	SIGN OF FRACTURE OR DAMAGE IS NOT ACCEPTABLE 3 TIME/ 1 POINTS, 25°C(CENTER POINT)



13. INSPECTION CRITERIA

13.1 APPLICATION

THIS INSPECTION STANDARD IS TO BE APPLIED TO THE LCD MODULE DELIVERED FROM EMERGING DISPLAY TECHNOLOGIES CORP.(E.D.T) TO CUSTOMERS

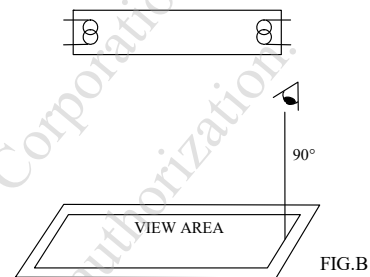
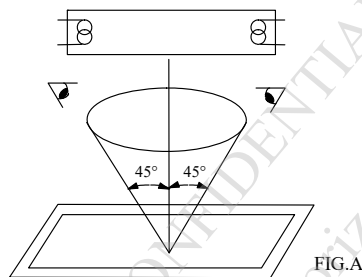
13.2 INSPECTION CONDITIONS

13.2.1 (1)OBSERVATION DISTANCE : $45 \pm 5\text{cm}$

(2)VIEWING ANGLE : $\pm 45^\circ$

$\pm 45^\circ$ (FOR SECTION WITHIN VIEWING AREA), REFER TO FIG.A
 90° (FOR SECTION OUTSIDE OF VIEWING AREA), REF TO FIG.B
PERPENDICULAR TO MODULE SURFACE

VIEWING ANGLE SHOULD BE SMALLER THAN 45°



THE INSPECTION CRITERIA IS ACCORDING TO LINE OF SIGHT. INSPECTION SHALL BE MADE WITHIN THE HALF SECTION OF THE VIEWING CONE GENERATED BY LINE SEGMENT OF 45° WITH RESPECT TO THE VERTICAL AXIS FROM CENTER VERTEX OF LCD, THE FLUORESCENT LAMP AND THE CONE AXIS MUST BE PERPENDICULAR TO THE LCD SURFACE.

IF THE DEFECTS ARE OUTSIDE OF VIEWING AREA, IT SHALL BE INSPECTED BY 90° WITH RESPECT TO THE VERTICAL AXIS FROM EDGE OF VIEWING AREA.

13.2.2 ENVIRONMENT CONDITIONS :

AMBIENT TEMPERATURE		$25 \pm 5^\circ\text{C}$
AMBIENT HUMIDITY		$65 \pm 20\%\text{RH}$
AMBIENT ILLUMINATION	COSMETIC INSPECTION	600~800 lux
	FUNCTIONAL INSPECTION	300~500 lux
INSPECTION TIME		15 secs

13.2.3 INSPECTION LOT

QUANTITY PER DELIVERY LOT FOR EACH MODEL

13.2.4 INSPECTION METHOD

A SAMPLING INSPECTION SHALL BE MADE ACCORDING TO THE FOLLOWING PROVISIONS TO JUDGE THE ACCEPTABILITY

(a)APPLICABLE STANDARD :

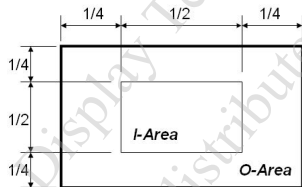
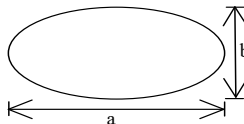
ANSI/ ASQ Z1.4 NORMAL INSPECTION LEVEL II

(b)AQL : MAJOR DEFECT : AQL 0.65

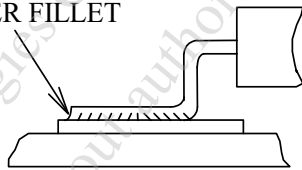
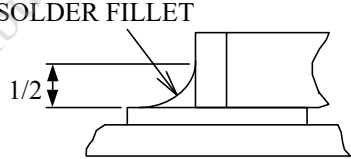
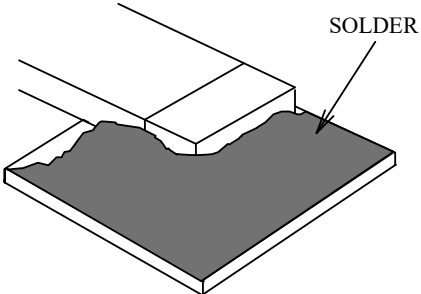
MINOR DEFECT : AQL 1.0

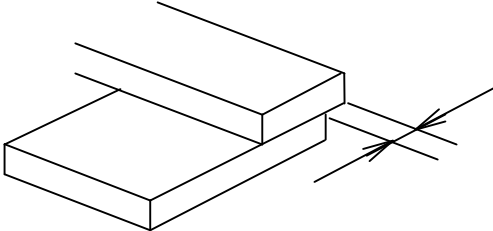
13.3 DEFECTS CLASSIFICATION

TYPE OF DEFECT	INSPECTION ITEM	DEFECT FEATURE	AQL
MAJOR DEFECT	1.DISPLAY ON	• DEFECT TO MISS SPECIFIED DISPLAY FUNCTION, FOR ALL AND SPECIFIED DOTS - EX: DISCONNECTION, SHORT CIRCUIT ETC	0.65
	2.CTP FUNCTION	• NO FUNCTION • BROKEN LINE • FALSE TOUCH	
	3.BACKLIGHT	• NO LIGHT • FLICKERING AND OTHER ABNORMAL ILLUMINATION	
	4.DIMENSIONS	• SUBJECT TO INDIVIDUAL ACCEPTANCE SPECIFICATIONS	
MINOR DEFECT	1.DISPLAY ZONE (VIEWING AREA)	• BLACK/WHITE SPOT / CIRCULAR TYPE • BUBBLES ON POLARIZER • NEWTON RING • BLACK/WHITE LINE / LINEAR TYPE • SCRATCH • CONTAMINATION • UNEVEN COLOR SPREAD	1.0
	2.BEZEL ZONE	• STAINS • SCRATCHES • FOREIGN MATTER	
	3.SOLDERING	• INSUFFICIENT SOLDER • SOLDERED IN INCORRECT POSITION • CONVEX SOLDERING SPOT • SOLDER BALLS • SOLDER SCRAPS	
	4.DISPLAY ON (ALL ON)	• LIGHT LINE	

NO.	ITEM	CRITERIA																					
1	DISPLAY ON INSPECTION	1. INCORRECT PATTERN 2. MISSING SEGMENT 3. DIM SEGMENT 4. OPERATING VOLTAGE BEYOND SPEC																					
2	OVERALL DIMENSIONS	OVERALL DIMENSION BEYOND SPEC																					
3	DOT DEFECT	1. INSPECTION PATTERN: FULL WHITE, FULL BLACK, RED, GREEN AND BLUE SCREENS. 2. <table border="1"> <thead> <tr> <th>ITEM</th><th colspan="2">JUDGMENT CRITERIA</th></tr> </thead> <tbody> <tr> <td>Area (Note 4)</td><td>I</td><td>O</td></tr> <tr> <td>Bright dot (Note 2)</td><td>1</td><td>1</td></tr> <tr> <td>Dark dot (Note 3)</td><td>4</td><td>4</td></tr> <tr> <td>Distance between Dark- dark (Note 3)</td><td colspan="2">≥5mm</td></tr> <tr> <td>Distance between Bright – Dark (Note 2, 3)</td><td colspan="2">≥5mm</td></tr> <tr> <td>Total Bright and Dark Dots</td><td colspan="2">4</td></tr> </tbody> </table> NOTE : (1) THE DEFINITION OF DOT : THE SIZE OF A DEFECTIVE DOT OVER 1/2 OF WHOLE DOT IS REGARDED AS ONE DEFECTIVE DOT. (2) BRIGHT DOT : DOTS APPEAR BRIGHT AND UNCHANGED IN SIZE IN WHICH LCD PANEL IS DISPLAYING UNDER BLACK PATTERN. THE BRIGHT DOT DEFECT MUST BE VISIBLE THROUGH 5% ND FILTER. (3) DARK DOT : DOTS APPEAR DARK AND UNCHANGED IN SIZE IN WHICH LCD PANEL IS DISPLAYING UNDER PURE RED, GREEN, BLUE PICTURE. (4) DEFINITION OF AREA: 	ITEM	JUDGMENT CRITERIA		Area (Note 4)	I	O	Bright dot (Note 2)	1	1	Dark dot (Note 3)	4	4	Distance between Dark- dark (Note 3)	≥5mm		Distance between Bright – Dark (Note 2, 3)	≥5mm		Total Bright and Dark Dots	4	
ITEM	JUDGMENT CRITERIA																						
Area (Note 4)	I	O																					
Bright dot (Note 2)	1	1																					
Dark dot (Note 3)	4	4																					
Distance between Dark- dark (Note 3)	≥5mm																						
Distance between Bright – Dark (Note 2, 3)	≥5mm																						
Total Bright and Dark Dots	4																						
4	BUBBLES ON POLARIZER /SURFACE STAINS /DIRT/CF FAIL/SPOT	<table border="1"> <thead> <tr> <th></th><th>AVERAGE DIAMETER (mm) : D</th><th>NUMBER OF PIECES PERMITTED</th></tr> </thead> <tbody> <tr> <td rowspan="3">BUBBLE ON THE POLARIZER</td><td>$D \leq 0.3$</td><td>IGNORE</td></tr> <tr> <td>$0.3 < D \leq 0.5$</td><td>5</td></tr> <tr> <td>$D > 0.5$</td><td>0</td></tr> </tbody> </table> NOTE : (1) POLARIZER BUBBLE IS DEFINED AS THE BUBBLE APPEARS ON ACTIVE DISPLAY AREA. THE DEFECT OF POLARIZER BUBBLE SHALL BE IGNORED IF THE POLARIZER BUBBLE APPEARS ON THE OUTSIDE OF ACTIVE DISPLAY AREA. (2) THE EXTRANEIOUS SUBSTANCE IS DEFINED AS IT CAN BE OBSERVED WHEN THE MODULE IS POWER ON. (3) THE DEFINITION OF AVERAGE DIAMETER, D IS DEFINED AS FOLLOWING. AVERAGE DIAMETER (D)=(a+b)/2 		AVERAGE DIAMETER (mm) : D	NUMBER OF PIECES PERMITTED	BUBBLE ON THE POLARIZER	$D \leq 0.3$	IGNORE	$0.3 < D \leq 0.5$	5	$D > 0.5$	0											
	AVERAGE DIAMETER (mm) : D	NUMBER OF PIECES PERMITTED																					
BUBBLE ON THE POLARIZER	$D \leq 0.3$	IGNORE																					
	$0.3 < D \leq 0.5$	5																					
	$D > 0.5$	0																					

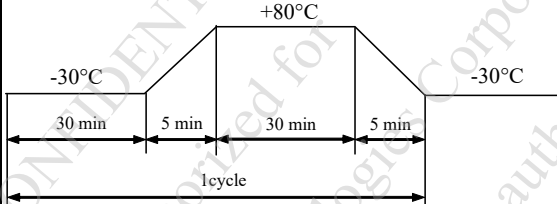
NO.	ITEM	CRITERIA									
5	BLACK/WHITE SPOT/DENT CIRCULAR TYPE	THE FOLLOWING BLACK/WHITE SPOT ARE WITHIN THE VIEWING AREA. AVERAGE DIAMETER : D (mm) <table><tr><th>SIZE D</th><th>PERMISSIBLE NO.</th></tr><tr><td>$D \leq 0.25$</td><td>IGNORE</td></tr><tr><td>$0.25 < D \leq 0.6$</td><td>6</td></tr><tr><td>$D > 0.6$</td><td>0</td></tr></table> NOTE (1) : THE DISTANCE BETWEEN DEFECTS SHOULD BE MORE THAN 10mm APART.	SIZE D	PERMISSIBLE NO.	$D \leq 0.25$	IGNORE	$0.25 < D \leq 0.6$	6	$D > 0.6$	0	
SIZE D	PERMISSIBLE NO.										
$D \leq 0.25$	IGNORE										
$0.25 < D \leq 0.6$	6										
$D > 0.6$	0										
6	SCRATCH	THE FOLLOWING SCRATCH IS WITHIN THE VIEWING AREA. WIDTH : W (mm) , LENGTH : L (mm) <table><tr><th>SIZE W & L</th><th>PERMISSIBLE NO.</th></tr><tr><td>$W \leq 0.05$</td><td>IGNORE</td></tr><tr><td>$0.05 \leq W \leq 0.1, L \leq 12$</td><td>6</td></tr><tr><td>$W > 0.1$ OR $L > 12$</td><td>0</td></tr></table> NOTE (1) : THE DISTANCE BETWEEN DEFECTS SHOULD BE MORE THAN 10mm APART.	SIZE W & L	PERMISSIBLE NO.	$W \leq 0.05$	IGNORE	$0.05 \leq W \leq 0.1, L \leq 12$	6	$W > 0.1$ OR $L > 12$	0	
SIZE W & L	PERMISSIBLE NO.										
$W \leq 0.05$	IGNORE										
$0.05 \leq W \leq 0.1, L \leq 12$	6										
$W > 0.1$ OR $L > 12$	0										
7	BLACK / WHITE LINE LINEAR TYPE / FOREIGN FIBER	THE FOLLOWING BLACK LINE, WHITE LINE IS WITHIN THE VIEWING AREA. WIDTH : W (mm) , LENGTH : L (mm) <table><tr><th>SIZE W & L</th><th>PERMISSIBLE NO.</th></tr><tr><td>$W \leq 0.05$</td><td>IGNORE</td></tr><tr><td>$0.05 \leq W \leq 0.1, L \leq 12$</td><td>6</td></tr><tr><td>$W > 0.1$ OR $L > 12$</td><td>0</td></tr></table> NOTE (1) : THE DISTANCE BETWEEN DEFECTS SHOULD BE MORE THAN 10mm APART.	SIZE W & L	PERMISSIBLE NO.	$W \leq 0.05$	IGNORE	$0.05 \leq W \leq 0.1, L \leq 12$	6	$W > 0.1$ OR $L > 12$	0	
SIZE W & L	PERMISSIBLE NO.										
$W \leq 0.05$	IGNORE										
$0.05 \leq W \leq 0.1, L \leq 12$	6										
$W > 0.1$ OR $L > 12$	0										
8	BUBBLE / DENT FOR OPTICAL BONDING	BUBBLES WITHIN VIEWING AREA. AVERAGE DIAMETER : D (mm) <table><tr><th>SIZE D</th><th>PERMISSIBLE NO.</th></tr><tr><td>$D \leq 0.25$</td><td>IGNORE</td></tr><tr><td>$0.25 < D \leq 0.6$</td><td>6</td></tr><tr><td>$D > 0.6$</td><td>0</td></tr></table> NOTE (1) : THE DISTANCE BETWEEN DEFECTS SHOULD BE MORE THAN 10mm APART.	SIZE D	PERMISSIBLE NO.	$D \leq 0.25$	IGNORE	$0.25 < D \leq 0.6$	6	$D > 0.6$	0	
SIZE D	PERMISSIBLE NO.										
$D \leq 0.25$	IGNORE										
$0.25 < D \leq 0.6$	6										
$D > 0.6$	0										
9	CHIPPING	<table><tr><td>CORNER</td><td>$X \leq 3\text{mm} \cdot Y \leq 3\text{mm} \cdot Z \leq 1$ (t : THICKNESS)</td></tr><tr><td>EDGE</td><td>$X \leq 6\text{mm} \cdot Y \leq 1\text{mm} \cdot Z < t$ (t : THICKNESS)</td></tr></table>	CORNER	$X \leq 3\text{mm} \cdot Y \leq 3\text{mm} \cdot Z \leq 1$ (t : THICKNESS)	EDGE	$X \leq 6\text{mm} \cdot Y \leq 1\text{mm} \cdot Z < t$ (t : THICKNESS)	Chip of glass				
CORNER	$X \leq 3\text{mm} \cdot Y \leq 3\text{mm} \cdot Z \leq 1$ (t : THICKNESS)										
EDGE	$X \leq 6\text{mm} \cdot Y \leq 1\text{mm} \cdot Z < t$ (t : THICKNESS)										
10	PIN HOLE / IMPURITIES ON PRINTING	AVERAGE DIAMETER : D (mm) <table><tr><th>SIZE D</th><th>PERMISSIBLE NO.</th></tr><tr><td>$D \leq 0.2$</td><td>IGNORE</td></tr><tr><td>$0.2 < D \leq 0.4$</td><td>6</td></tr><tr><td>$D > 0.4$</td><td>0</td></tr></table> NOTE (1) : THE DISTANCE BETWEEN DEFECTS SHOULD BE MORE THAN 10mm APART.	SIZE D	PERMISSIBLE NO.	$D \leq 0.2$	IGNORE	$0.2 < D \leq 0.4$	6	$D > 0.4$	0	
SIZE D	PERMISSIBLE NO.										
$D \leq 0.2$	IGNORE										
$0.2 < D \leq 0.4$	6										
$D > 0.4$	0										
11	CRACKED GLASS	NOT ACCEPTABLE									
12	LINE DEFECT ON DISPLAY	OBVIOUS VERTICAL OR HORIZONTAL LINE DEFECT IS NOT ALLOWED									
13	MURA ON DISPLAY	IT'S OK IF MURA IS SLIGHT VISIBLE THROUGH 5% ND FILTER									
14	UNEVEN COLOR SPREAD, COLORATION	TO BE DETERMINED BASED UPON THE LIMITED SAMPLE.									

NO.	ITEM	CRITERIA
15	BEZEL APPEARANCE	1. BEZEL MAY NOT HAVE RUST, BE DEFORMED OR HAVE FINGER PRINTS STAINS OF OTHER CONTAMINATION. 2. BEZEL MUST COMPLY WITH JOB SPECIFICATIONS.
16	PCB	1. THERE MAY NOT BE MORE THAN 2mm OF SEALANT OUTSIDE THE SEAL AREA ON THE PCB, AND THERE SHOULD BE NO MORE THAN THREE PLACES. 2. NO OXIDATION OR CONTAMINATION PCB TERMINALS. 3. PARTS ON PCB MUST BE THE SAME AS ON THE PRODUCTION CHARACTERISTIC CHART. THERE SHOULD BE NO WRONG PARTS, MISSING PARTS OR EXCESS PARTS. 4. THE JUMPER ON THE PCB SHOULD CONFORM TO THE PRODUCT CHARACTERISTIC CHART. 5. IF SOLDER GETS ON BEZEL TAB PADS, LED PAD, ZEBRA PAD OR SCREW HOLD PAD; MAKE SURE IT IS SMOOTHED DOWN.
17	SOLDERING	1. NO SOLDERING FOUND ON THE SPECIFIED PLACE 2. INSUFFICIENT SOLDER (a)LSI, IC A POOR WETTING OF SOLDER IS BETWEEN LOWER BEND OR "HEEL" OF LEAD AND PAD  (b)CHIP COMPONENT · SOLDER IS LESS THAN 50% OF SIDES AND FRONT FACE WETTING  · SOLDER WETS 3 SIDES OF TERMINAL, BUT LESS THAN 25% OF SIDES AND FRONT SURFACE AREA ARE COVERED 

NO.	ITEM	CRITERIA
17	SOLDERING	3. PARTS ALIGNMENT (a) LSI, IC LEAD WIDTH IS MORE THAN 50% BEYOND PAD OUTLINE  (b) CHIP COMPONENT COMPONENT IS OFF CENTER, AND MORE THAN 50% OF THE LEADS IS OFF THE PAD OUTLINE  4. NO UNMELTED SOLDER PASTE MAY BE PRESENT ON THE PCB. 5. NO COLD SOLDER JOINTS, MISSING SOLDER CONNECTIONS, OXIDATION OR ICICLE. 6. NO RESIDUE OR SOLDER BALLS ON PCB. 7. NO SHORT CIRCUITS IN COMPONENTS ON PCB.
18	BACKLIGHT	1. NO LIGHT 2. FLICKERING AND OTHER ABNORMAL ILLUMINATION 3. SPOTS OR SCRATCHES THAT APPEAR WHEN LIT MUST BE JUDGED USING LCD SPOT, LINES AND CONTAMINATION STANDARDS. 4. BACKLIGHT DOESN'T LIGHT OR COLOR IS WRONG.
19	GENERAL APPEARANCE	1. NO OXIDATION, CONTAMINATION, CURVES OR, BENDS ON INTERFACE PIN (OLB) OF TCP. 2. NO CRACKS ON INTERFACE PIN (OLB) OF TCP. 3. NO CONTAMINATION, SOLDER RESIDUE OR SOLDER BALLS ON PRODUCT. 4. THE IC ON THE TCP MAY NOT BE DAMAGED, CIRCUITS. 5. THE UPPERMOST EDGE OF THE PROTECTIVE STRIP ON THE INTERFACE PIN MUST BE PRESENT OR LOOK AS IF IT CAUSE THE INTERFACE PIN TO SEVER. 6. THE RESIDUAL ROSIN OR TIN OIL OF SOLDERING (COMPONENT OR CHIP COMPONENT) IS NOT BURNED INTO BROWN OR BLACK COLOR. 7. SEALANT ON TOP OF THE ITO CIRCUIT HAS NOT HARDENED. 8. PIN TYPE MUST MATCH TYPE IN SPECIFICATION SHEET. 9. LCD PIN LOOSE OR MISSING PINS. 10. PRODUCT PACKAGING MUST BE THE SAME AS SPECIFIED ON PACKAGING SPECIFICATION SHEET. 11. PRODUCT DIMENSION AND STRUCTURE MUST CONFORM TO PRODUCT SPECIFICATION SHEET. 12. THE APPEARANCE OF HEAT SEAL SHOULD NOT ADMIT ANY DIRT AND BREAK.

14. RELIABILITY TEST

14.1 STANDARD SPECIFICATIONS FOR RELIABILITY OF LCD MODULE

NO.	ITEM	DESCRIPTION
1	HIGH TEMPERATURE TEST (OPERATION)	THE SAMPLE SHOULD BE ALLOWED TO STAND AT +70°C FOR 240 hrs
2	LOW TEMPERATURE TEST (OPERATION)	THE SAMPLE SHOULD BE ALLOWED TO STAND AT -20°C FOR 240 hrs
3	HIGH TEMPERATURE TEST (STORAGE)	THE SAMPLE SHOULD BE ALLOWED TO STAND AT +80°C FOR 240 hrs
4	LOW TEMPERATURE TEST (STORAGE)	THE SAMPLE SHOULD BE ALLOWED TO STAND AT -30°C FOR 240 hrs
5	HIGH TEMP / HUMIDITY TEST (STORAGE)	THE SAMPLE SHOULD BE ALLOWED TO STAND AT 60°C, 90% RH 240 hrs
6	TEST (STORAGE)	THE SAMPLE SHOULD BE ALLOWED TO STAND THE FOLLOWING 10 CYCLES OF OPERATION: 
7	VIBRATION (NON-OPERATION)	MIL-STD-810G CHANGE1 METHOD 514.7 TEST CONDITION: RMS ACCELERATION (Grms):7.7Grms
8	SHOCK (NON-OPERATION)	490.0 m/s ² (50G), 10 ms XYZ DIRECTIONS, 1 TIME EACH
9	ESD (ELECTROSTATIC DISCHARGE) (NON-OPERATION)	AIR DISCHARGE ± 12KV, 10 TIMES CONTACT DISCHARGE ± 8KV (ACCORDING TO IEC-61000-4-2)

NOTE (1) : THE TEST SAMPLES HAVE RECOVERY TIME FOR 2 HOURS AT ROOM TEMPERATURE BEFORE THE FUNCTION CHECK. IN THE STANDARD CONDITIONS, THERE IS NO DISPLAY FUNCTION NG ISSUE OCCURRED.

NOTE (2) : WHEN THE LCD MODULE IS OPERATED AT A HIGHER AMBIENT TEMPERATURE THAN 60°C, THE PWM DUTY CYCLE OF THE LED BACKLIGHT SHOULD BE ADJUSTED TO BE LESS THAN 40%. IF THE MODULE IS OPERATED AT A HIGHER DUTY CYCLE THAN 40%, THEN THERE IS A POSSIBILITY OF DISTORTION AND IRREGULARITY OF THE PICTURE DUE TO LIQUID CRYSTAL BEHAVIOR.

NOTE (3) : TESTING CONDITIONS AND INSPECTION CRITERIA

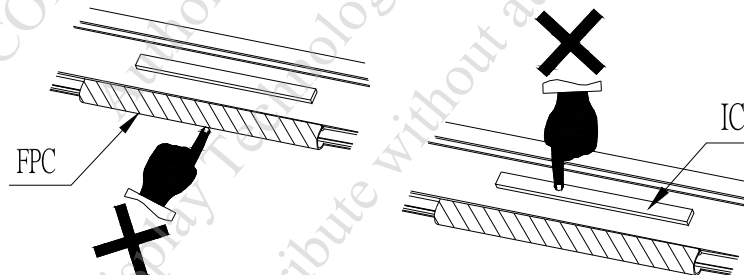
NOTE (4) : TESTING CONDITIONS AND INSPECTION CRITERIA

NO.	ITEM	TEST MODEL	INSPECTION CRITERIA
1	CURRENT CONSUMPTION	REFER TO SPECIFICATION	THE CURRENT CONSUMPTION SHOULD CONFORM TO THE PRODUCT SPECIFICATION.
2	CONTRAST	REFER TO SPECIFICATION	AFTER THE TESTS HAVE BEEN EXECUTED, THE CONTRAST MUST BE LARGER THAN HALF OF ITS INITIAL VALUE PRIOR TO THE TESTS.
3	APPEARANCE	VISUAL INSPECTION	DEFECT FREE

15. CAUTION

15.1 OPERATION

- 15.1.1 DO NOT CONNECT OR DISCONNECT MODULES TO OR FROM THE MAIN SYSTEM WHILE POWER IS BEING SUPPLIED .
- 15.1.2 USE THE MODULE WITHIN SPECIFIED TEMPERATURE ; LOWER TEMPERATURE CAUSES THE RETARDATION OF BLINKING SPEED OF THE DISPLAY ; HIGHER TEMPERATURE MAKES OVERALL DISPLAY DISCOLOR. WHEN THE TEMPERATURE RETURNS TO NORMALITY, THE DISPLAY WILL OPERATE NORMALLY .
- 15.1.3 ADJUST THE LC DRIVING VOLTAGE TO OBTAIN THE OPTIMUM CONTRAST.
- 15.1.4 POWER ON SEQUENCE INPUT SIGNALS SHOULD NOT BE SUPPLIED TO LCD MODULE BEFORE POWER SUPPLY VOLTAGE IS APPLIED AND REACHES THE SPECIFIED VALUE .
IF ABOVE SEQUENCE IS NOT FOLLOWED , CMOS LSIS OF LCD MODULES MAY BE DAMAGED DUE TO LATCH - UP PROBLEM .
- 15.1.5 NOT ALLOWED TO INFLICT ANY EXTERNAL STRESS AND TO CAUSE ANY MECHANICAL INTERFERENCE ON THE BENDING AREA OF FPC DURING THE TAIL BENDING BACKWARDS!
DO NOT STRESS FPC AND IC ON THE MODULE!



15.2 STORAGE

- 15.2.1 STORE THE MODULE IN A DARK ROOM OR KEEP IN ORIGINAL PACKAGE WHERE MUST KEEP AT $25 \pm 10^{\circ}\text{C}$ AND 65%RH OR LESS.
- 15.2.2 DO NOT STORE THE MODULE IN SURROUNDINGS CONTAINING ORGANIC SOLVENT OR CORROSIVE GAS.
- 15.2.3 STORE THE MODULE IN AN ANTI-ELECTROSTATIC CONTAINER OR BAG.

15.3 NOTICE

- 15.3.1 USE A GROUNDED SOLDERING IRON WHEN SOLDERING CONNECTOR I/O TERMINALS . FOR SOLDERING OR REPAIRING, TAKE PRECAUTION AGAINST THE TEMPERATURE OF THE SOLDERING IRON AND THE SOLDERING TIME TO PREVENT PEELING OFF THE THROUGH-HOLE-PAD .
- 15.3.2 DO NOT DISASSEMBLE . EDT SHALL NOT BE HELD RESPONSIBLE IF THE MODULE IS DISASSEMBLED AND UPON THE REASSEMBLY THE MODULE FAILED .
- 15.3.3 DO NOT CHARGE STATIC ELECTRICITY , AS THE CIRCUIT OF THIS MODULE CONTAINS CMOS LSIS. A WORKMAN'S BODY SHOULD ALWAYS BE STATIC-PROTECTED BY USE OF AN ESD STRAP. WORKING CLOTHES FOR SUCH PERSONNEL SHOULD BE OF STATIC-PROTECTED MATERIAL .
- 15.3.4 ALWAYS GROUND THE ELECTRICALLY-POWERED DRIVER BEFORE USING IT TO INSTALL THE LCD MODULE. WHILE CLEANING THE WORK STATION BY VACUUM CLEANER, DO NOT BRING THE SUCKING MOUTH NEAR THE MODULE ; STATIC ELECTRICITY OF THE ELECTRICALLY-POWERED DRIVER OR THE VACUUM CLEANER MAY DESTROY THE MODULE .
- 15.3.5 DON'T GIVE EXTERNAL SHOCK.
- 15.3.6 DON'T APPLY EXCESSIVE FORCE ON THE SURFACE.
- 15.3.7 LIQUID IN LCD IS HAZARDOUS SUBSTANCE. MUST NOT LICK AND SWALLOW.
WHEN THE LIQUID IS ATTACH TO YOUR, SKIN, CLOTH ETC.
WASH IT OUT THOROUGHLY AND IMMEDIATELY.
- 15.3.8 DON'T OPERATE IT ABOVE THE ABSOLUTE MAXIMUM RATING.
- 15.3.9 STORAGE IN A CLEAN ENVIRONMENT, FREE FROM DUST, ACTIVE GAS AND SOLVENT.
- 15.3.10 STORE WITHOUT ANY PHYSICAL LOAD.
- 15.3.11 REWIRING: NO MORE THAN 3 TIMES.