Version : 3.0

TECHNICAL SPECIFICATION

MODEL NO : PD080SL3

The content of this information is subject to be changed without notice.

Please contact PVI or its agent for further information.

☐ Customer's Confirmation

Customer _____

Date _____

By _____

☐ PVI's Confirmation

Confirmed By _____Emmy Chang_____

Prepared By _____

Revision History

Rev.	Eng.	Issued Date	Revised Content
0.1	Sarah Huang	Oct 29, 2007	Preliminary
1.0	Sarah Huang	Jan 08, 2008	Add Page 25 15.Packing
2.0	Sarah Huang	Feb 25, 2008	Modify Page10 7. Electrical Characteristics: VIH from $0.7V_{CC} \sim V_{CC}$ to $0.7V_{DD} \sim V_{DD}$ VIL from $0 \sim 0.2V_{CC}$ to $0 \sim 0.2V_{DD}$
3.0	李穎銘	Aug,20,2008	Add Page 23 13.Handling Cautions

PRIME VIEW

TECHNICAL SPECIFICATION

CONTENTS

PRIME VIEW

PD080SL3

1.Application

This data sheet applies to a color TFT LCD module; PD080SL3.The module applies to notebook PC, sub-note-book PC and other OA product, which require high quality flat panel display.
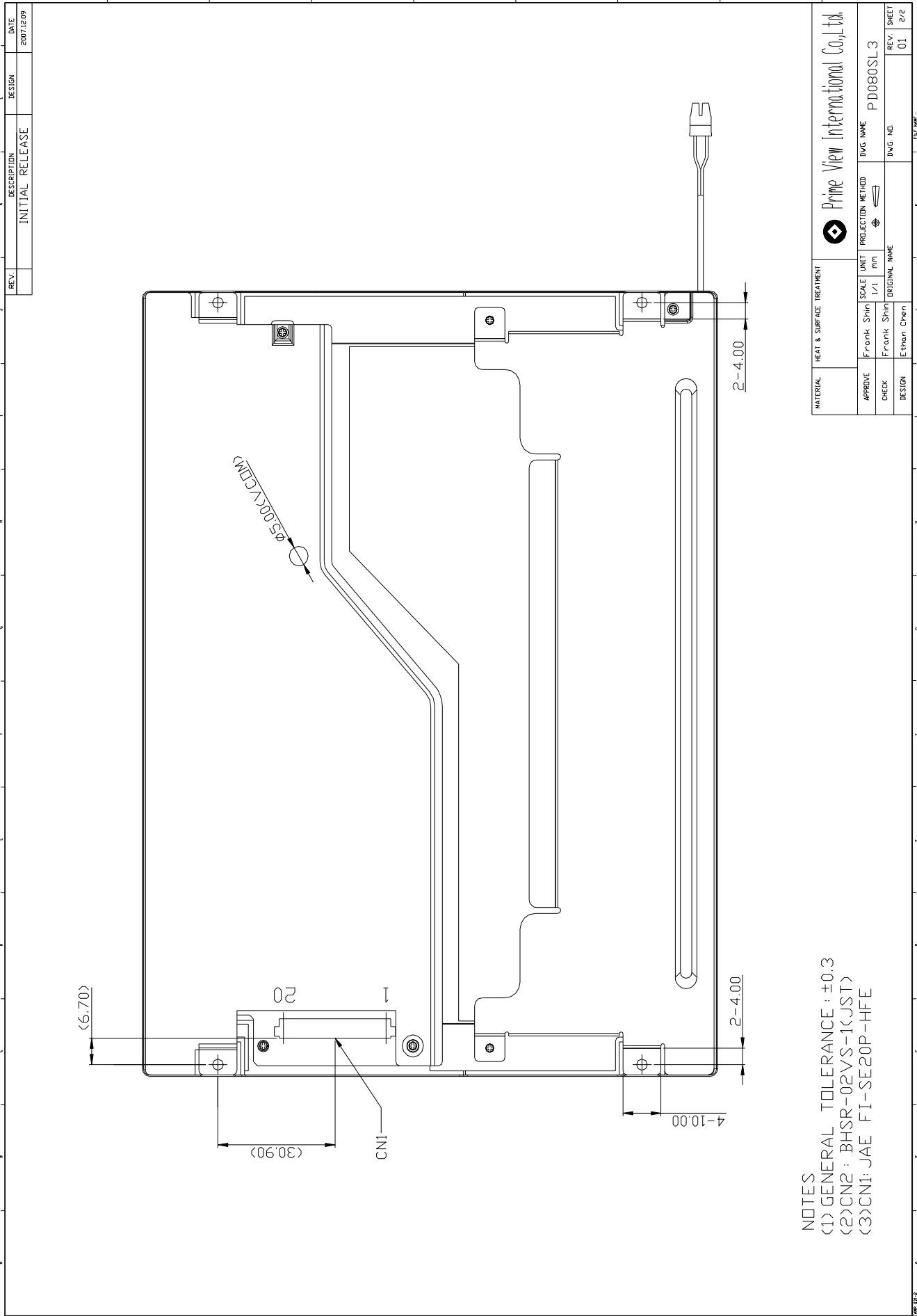
Prime View assumes no responsibility for any damage resulting from the use of the device which dose not complies with the instructions and the precautions in these specification sheets.

2. Features

. Amorphous silicon TFT LCD panel with LED backlight unit
. Pixel in stripe configuration
. Slim and compact, designed for O/A application
. Display Colors：262,144 colors or 16,777,216 colors
. Backlight driving DC/AC inverter not included in this module

3.Mechanical Specifications

Parameter	Specifications	Unit
Screen Size	8 (diagonal)	inch
Display Format	800×(RGB)×600	dot
Display Colors	262,144	
Active Area	162(H)×121.5 (V)	mm
Pixel Pitch	0.2025 (H)×0.2025 (V)	mm
Pixel Configuration	Stripe	
Outline Dimension	200(W)×152(H)×10.5(D) (typ.)	mm
Weight	343±15	g
Back-light	42-LED	
Surface treatment	Anti-Glare+ SWV	
Display mode	Normally white	
Gray scale inversion direction	6 (Note 12-1)	o'clock

PRIME VIEW

4. Mechanical Drawing of TFT-LCD Module

NOTES
(1) GENERAL TOLERANCE : ±0.3
(2) CN2 : BHSR-02VS-1(JST)
(3) CN1: JAE FI-SE20P-HFE

DATE	2007/12/09	
DESIGN		
DESCRIPTION	INITIAL RELEASE	
REV.		

Prime View International Co.,Ltd.

MATERIAL	HEAT & SURFACE TREATMENT	SCALE 1/1	UNIT mm	DWG. NAME PD080SL3
		PROJECTION METHOD		DWG. NO.
APPROVE Frank Shin		ORIGINAL NAME		
CHECK Frank Shin				REV. 01	SHEET 1/2
DESIGN Ethan Chen				FILE NAME

DATE 2007.12.09

DESIGN

DESCRIPTION INITIAL RELEASE

REV.

Prime View International Co.,Ltd.

DWG. NAME PD080SL3

DWG. NO.

REV. 01 SHEET 2/2

HEAT & SURFACE TREATMENT

MATERIAL

SCALE 1/1 UNIT mm

PROJECTION METHOD

APPROVE Frank Shin

CHECK Frank Shin

DESIGN Ethan Chen

ORIGINAL NAME

2-4.00

2-4.00

φ5.00V(COM)

4-10.00

(6.70)

20

1

(30.90)

CN1

NOTES
<1> GENERAL TOLERANCE : ±0.3
<2> CN2 : BHSR-02VS-1(JST)
<3> CN1: JAE FI-SE20P-HFE

5. CONNECTIONS AND FUNCTIONS FOR INTERFACE PINS

5-1) LCD panel signal processing board

CN1 socket (LCD module side): FI-SE20P-HFE(Japan Aviation Electronics Industry Limited(JAE))

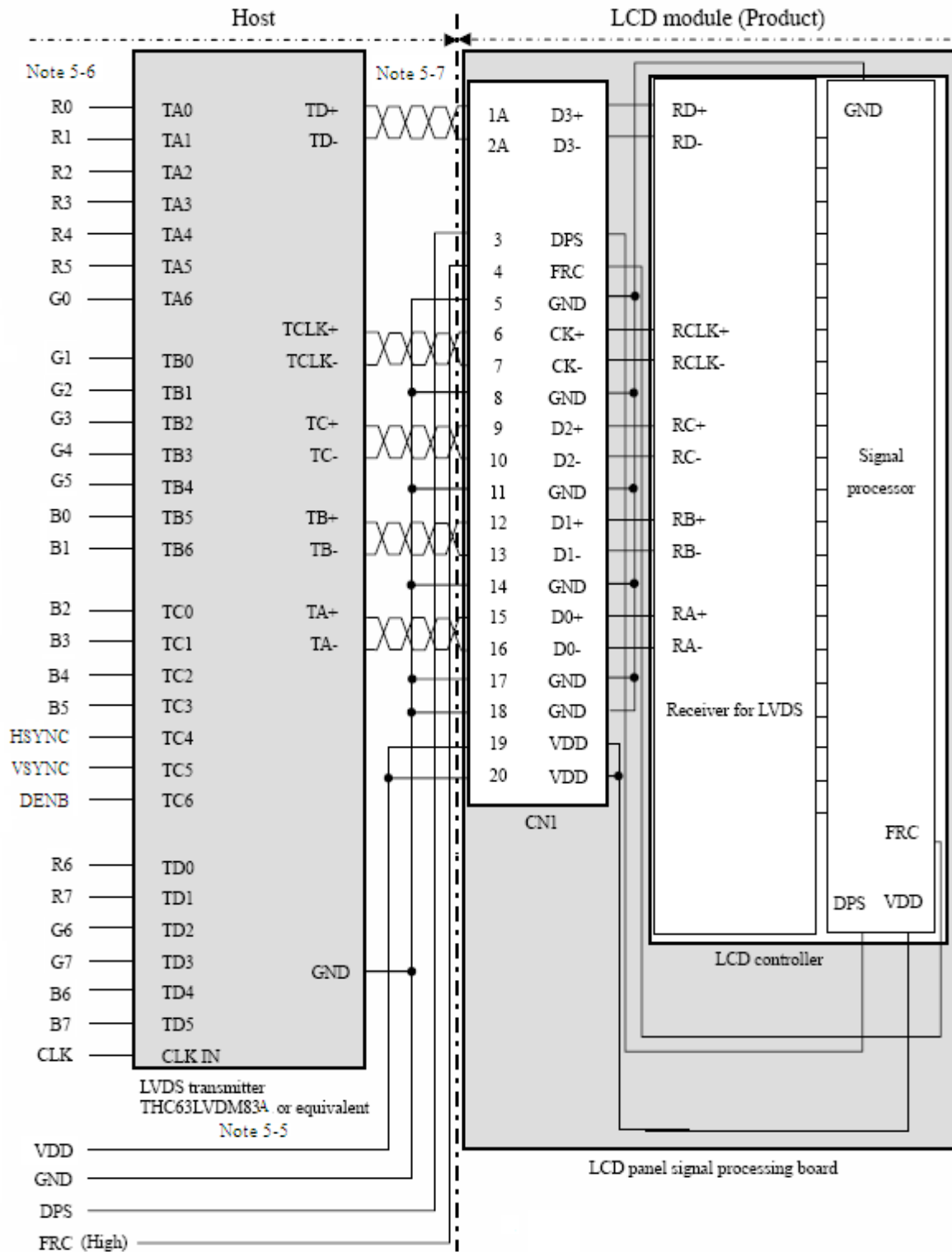| Pin No.		Symbol	Signal	Remarks		
1	A	D3+	Pixel data	Note 5 -1, 5 -3		
	B	GND	Ground	Note 5 - 4		
2	A	D3-	Pixel data	Note 5 -1, 5 -3		
	B	GND	Ground	Note 5 - 4		
3		DPS	Selection of scan direction	High:	Reverse scan	Note 5 - 2
				Low or Open:	Normal scan	
4		FRC	Selection of the number of colors	High:	16,777,216 colors	Note 5 -1
				Low or Open:	262,144 colors	
5		GND	Ground	Note 5 - 4		
6		CK+	Pixel clock	Note 5 -3		
7		CK-				
8		GND	Ground	Note 5 - 4		
9		D2+	Pixel data	Note 5 -3		
10		D2-				
11		GND	Ground	Note 5 - 4		
12		D1+	Pixel data	Note 5 -3		
13		D1-				
14		GND	Ground	Note 5 - 4		
15		D0+	Pixel data	Note 5 -3		
16		D0-				
17		GND	Ground	Note 5 - 4		
18		GND				
19		VDD	Power supply	Note 5 - 4		
20		VDD				

Note 5 -1 : See **DISPLAY COLORS AND INPUT DATA SIGNALS** .
Note 5 -2 : See **SCANNING DIRECTIONS** .
Note 5 -3 : Twist pair wires with 100Ω (Characteristic impedance) should be connected between LCD panel signal processing board and LVDS transmitter.
Note 5 - 4 : All GND and VDD terminals should be used without any non-connected lines.

5－2) Connection between receiver and transmitter for LVDS
　(1) Input data signal: 8bit

Host | LCD module (Product)

Note 5-6

R0	TA0	TD+
R1	TA1	TD-
R2	TA2
R3	TA3
R4	TA4
R5	TA5
G0	TA6
		TCLK+
G1	TB0	TCLK-
G2	TB1
G3	TB2	TC+
G4	TB3	TC-
G5	TB4
B0	TB5	TB+
B1	TB6	TB-
B2	TC0	TA+
B3	TC1	TA-
B4	TC2
B5	TC3
HSYNC	TC4
VSYNC	TC5
DENB	TC6
R6	TD0
R7	TD1
G6	TD2
G7	TD3	GND
B6	TD4
B7	TD5
CLK	CLK IN

LVDS transmitter
THC63LVDM83A or equivalent
Note 5-5

VDD
GND
DPS
FRC (High)

Note 5-7

CN1

1A	D3+
2A	D3-
3	DPS
4	FRC
5	GND
6	CK+
7	CK-
8	GND
9	D2+
10	D2-
11	GND
12	D1+
13	D1-
14	GND
15	D0+
16	D0-
17	GND
18	GND
19	VDD
20	VDD

RD+
RD-

RCLK+
RCLK-

RC+
RC-

RB+
RB-

RA+
RA-

Receiver for LVDS

GND

Signal processor

FRC

DPS   VDD

LCD controller

LCD panel signal processing board

Note 5-5 : Recommended transmitter THC63LVDM83A (THine Electronics Inc.) or equivalent
Note 5-6 : LSB (Least Significant Bit) - R0, G0, B0　MSB (Most Significant Bit) - R7, G7, B7
Note 5-7 : Twist pair wires with 100Ω (Characteristic impedance) should be connected between LCD
　　　　　panel signal processing board and LVDS transmitter.

(2) Input data signal: 6bit
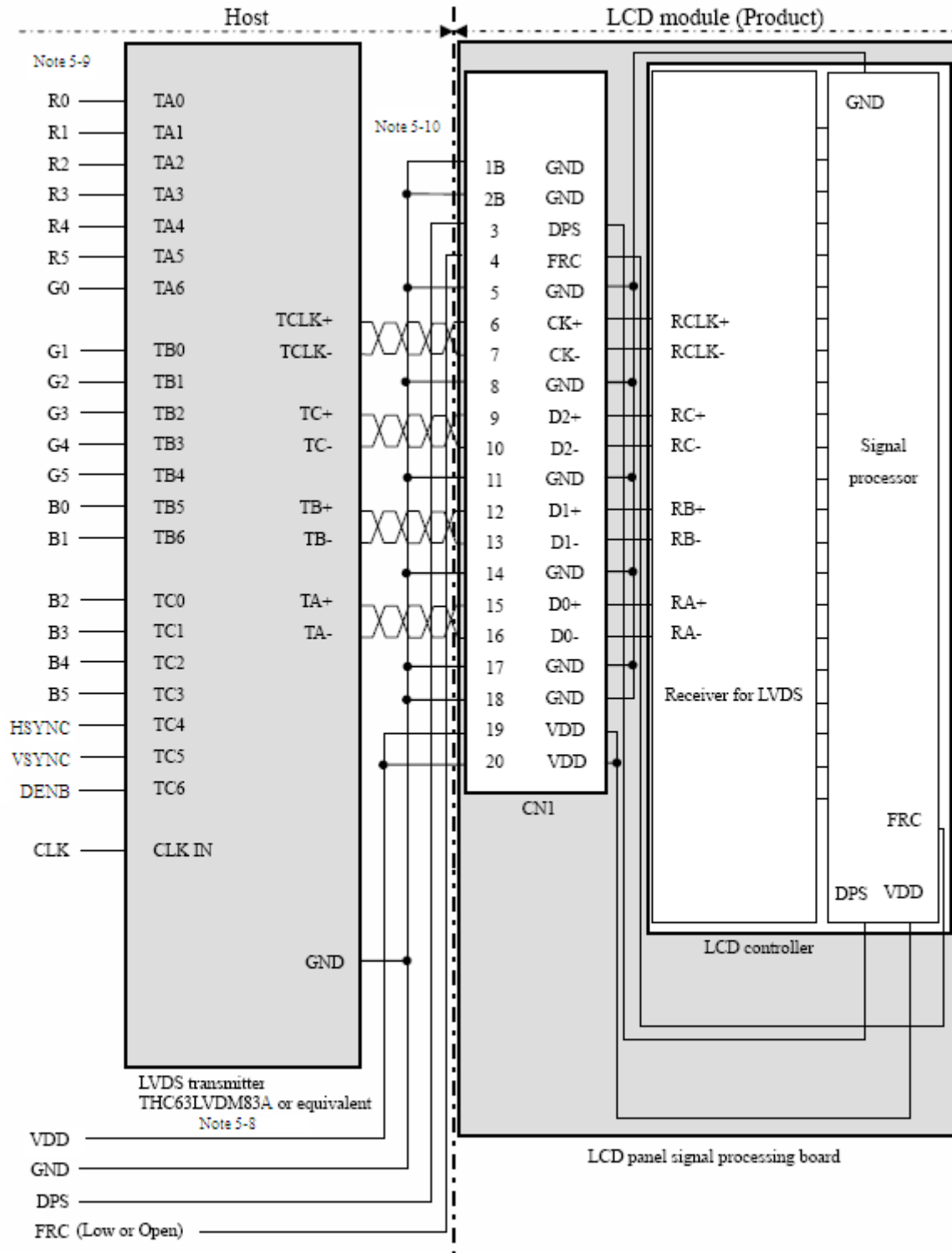
Note 5-8 : Recommended transmitter THC63LVDM83A (THine Electronics Inc.) or equivalent
Note 5-9 : LSB (Least Significant Bit) – R0, G0, B0   MSB (Most Significant Bit) – R5, G5, B5
Note 5-10: Twist pair wires with 100Ω (Characteristic impedance) should be connected between LCD panel signal processing board and LVDS transmitter.

DENB input signal.

     If customer wanted to off the DENB mode , you must keep the DENB always High or Low.
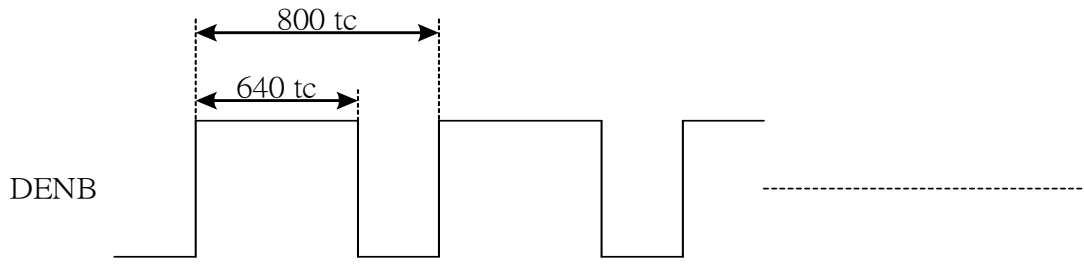
(tc: the period of sampling clock)

6. Absolute Maximum Ratings

GND=0V, Ta=25℃

Parameters	Symbol	MIN.	MAX.	Unit	Remark
Supply Voltage	V_{DD}	-0.3	+4.0	V	
Input Signals Voltage	V_{IN}	-0.3	VDD+0.3	V	Note 6-1

Note 6-1: LVDS signal.

7. Electrical Characteristics

7-1) Recommended Operating Conditions:

GND = 0V，Ta = 25℃

Item		Symbol	Min.	Typ.	Max.	Unit	Remark
Supply Voltage		V_{DD}	3.0	3.3	3.6	V	
Current Dissipation		I_{DD}	-	153	-	mA	Note 7-1
Total power consumption		P_{DD}	0.46	0.51	0.56	W	
LVDS Differential input high threshold		VTH	-	-	100	mV	Note 7-2
LVDS Differential input low threshold		VTL	-100	-	-	-	
Input voltage for DPS & FPC signal	High	VIH	$0.7 V_{DD}$	-	V_{DD}	V	
	Low	VIL	0	-	$0.2 V_{DD}$	V	

Note 7-1 : To test the current dissipation of V_{DD}, using the "color bars" testing pattern shown as below.

1. White
2. Yellow
3. Cyan
4. Green
5. Magenta
6. Red
7. Blue
8. Black

I_{DD} current dissipation testing pattern

Note7-2 : Please refers to THC63LVDM83A specification by Thin Corporation. This LCD module conforms to LVDS standard.

PRIME VIEW

7-2) Recommended Driving Condition for Back Light

Ta = 25℃

Parameter	Symbol	Min	TYP	MAX	Unit	Remark
Supply voltage of LED backlight	V_{LED}	-	-	(11)	V	Note 7-3
Supply current of LED backlight	I_{LED}	-	20	-	mA	Note 7-4
Backlight Power Consumption	P_{LED}	-	-	3.08	W	Note 7-3/7-5

Note 7-3 : I_{LED}= 20mA,constant current

Note 7-4 : The LED driving condition is defined for each LED module. (3 LED Serial)
Input current = 20mA * 14 = 280mA

Note 7-5 : $P_{LED} = V_{LED-1} * I_{LED-1} + V_{LED-2} * I_{LED-2} ….. + V_{LED-13} * I_{LED-13} + V_{LED-14} * I_{LED-14}$
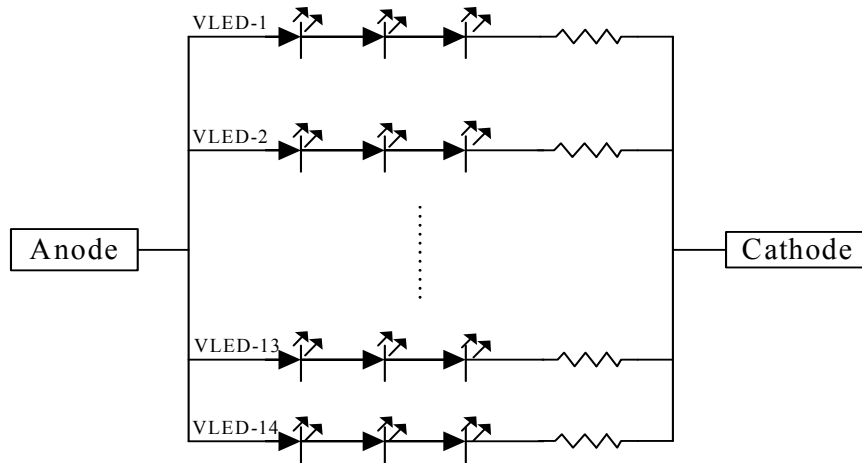
7-3) Backlight driving
Connector type : BHSR-02VS-1(JST)

PIN NO.	Symbol	Description	Remark
1	+	Input terminal (Anode)	Red
2	-	Input terminal (Cathode)	Black

8. Pixel Arrangement
The LCD module pixel arrangement is the stripe.

PRIME VIEW
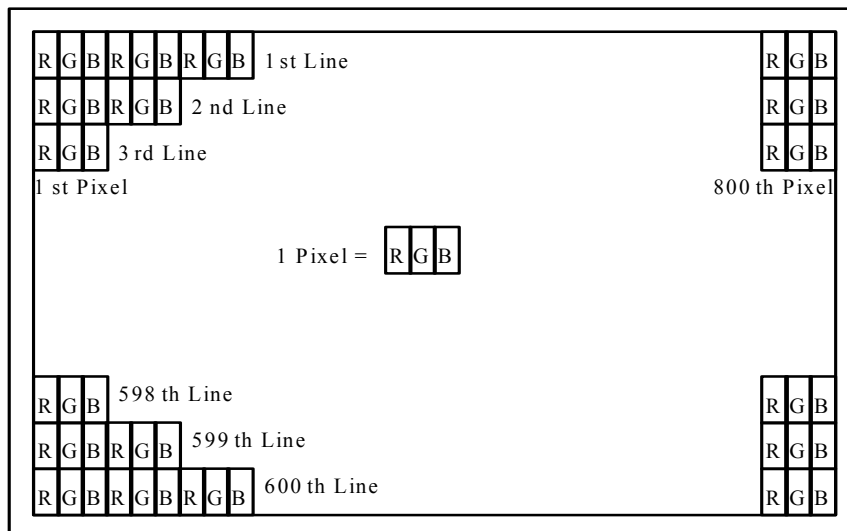
9. Display Colors and Input Data Signals

9-1) Combinations between input data signals and FRC signal

This product can display in equivalent to 16,777,216 colors in 256 gray scales and 262,144 colors in 64 gray scales by combination between input data signals and FRC signal. See following table.

Combination	Input data signals	CN1-Pin No.1 and 2	FRC terminal	Display colors	Remarks
①	8-bit	D3+/-	High	16,777,216	Note 9-1
②	6-bit	GND	Low or Open	262,144	Note 9-2

Note 9-1 : See " **9-2) 16,777,216 colors**".
Note 9-2 : See " **9-3) 262,144 colors**".

9-2) 16,777,216 colors

This product can display equivalent of 16,777,216 colors in 256 gray scales by combination ①

Display colors		Data signal (0: Low level, 1: High level)		
		R7 R6 R5 R4 R3 R2 R1 R0	G7 G6 G5 G4 G3 G2 G1 G0	B7 B6 B5 B4 B3 B2 B1 B0
Basic Colors	Black	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0
	Blue	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	1 1 1 1 1 1 1 1
	Red	1 1 1 1 1 1 1 1	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0
	Magenta	1 1 1 1 1 1 1 1	0 0 0 0 0 0 0 0	1 1 1 1 1 1 1 1
	Green	0 0 0 0 0 0 0 0	1 1 1 1 1 1 1 1	0 0 0 0 0 0 0 0
	Cyan	0 0 0 0 0 0 0 0	1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1
	Yellow	1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1	0 0 0 0 0 0 0 0
	White	1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1
Red gray scale	Black	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0
		0 0 0 0 0 0 0 1	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0
	dark	0 0 0 0 0 0 1 0	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0
	↑	:	:	:
	↓	:	:	:
	bright	1 1 1 1 1 1 0 1	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0
		1 1 1 1 1 1 1 0	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0
	Red	1 1 1 1 1 1 1 1	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0
Green gray scale	Black	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0
		0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 1	0 0 0 0 0 0 0 0
	dark	0 0 0 0 0 0 0 0	0 0 0 0 0 0 1 0	0 0 0 0 0 0 0 0
	↑	:	:	:
	↓	:	:	:
	bright	0 0 0 0 0 0 0 0	1 1 1 1 1 1 0 1	0 0 0 0 0 0 0 0
		0 0 0 0 0 0 0 0	1 1 1 1 1 1 1 0	0 0 0 0 0 0 0 0
	Green	0 0 0 0 0 0 0 0	1 1 1 1 1 1 1 1	0 0 0 0 0 0 0 0
Blue gray scale	Black	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0
		0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 1
	dark	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	0 0 0 0 0 0 1 0
	↑	:	:	:
	↓	:	:	:
	bright	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	1 1 1 1 1 1 0 1
		0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	1 1 1 1 1 1 1 0
	Blue	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	1 1 1 1 1 1 1 1

PRIME VIEW

PD080SL3

9-3) 262,144 colors

This product can display equivalent of 262,144 colors in 64 gray scales by combination ②

Display colors		Data signal (0: Low level, 1: High level)																	
		R5	R4	R3	R2	R1	R0	G5	G4	G3	G2	G1	G0	B5	B4	B3	B2	B1	B0
Basic colors	Black	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Blue	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1
	Red	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0
	Magenta	1	1	1	1	1	1	0	0	0	0	0	0	1	1	1	1	1	1
	Green	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0
	Cyan	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1
	Yellow	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
	White	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Red gray scale	Black	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
	dark	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
	↑			:						:						:			
	↓			:						:						:			
	bright	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
		1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
	Red	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Green gray scale	Black	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
	dark	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
	↑			:						:						:			
	↓			:						:						:			
	bright	0	0	0	0	0	0	1	1	1	1	0	1	0	0	0	0	0	0
		0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0
	Green	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0
Blue gray scale	Black	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	dark	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
	↑			:						:						:			
	↓			:						:						:			
	bright	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	1
		0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0
	Blue	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1

9-4) DISPLAY POSITIONS

The following table is the coordinates per pixel (See " **9-5) SCANNING DIRECTIONS**".).

C (0, 0)

R	G	B

C(0, 0)	C(1, 0)	• • •	C(X, 0)	• • •	C(798, 0)	C(799, 0)
C(0, 1)	C(1, 1)	• • •	C(X, 1)	• • •	C(798, 1)	C(799, 1)
• • •	• • •	• • •	•	•	•	•
•	•	• • •	•	• • •	•	• • •
•	•	•	•	•	•	•
C(0, Y)	C(1, Y)	• • •	C(X, Y)	• • •	C(798, Y)	C(799, Y)
•	•	•	•	•	•	•
•	•	• • •	•	• • •	•	•
•	•	•	•	•	•	•
C(0, 598)	C(1, 598)	• • •	C(X, 598)	• • •	C(798, 598)	C(799, 598)
C(0, 599)	C(1, 599)	• • •	C(X, 599)	• • •	C(798, 599)	C(799, 599)

9-5) SCANNING DIRECTIONS

The following figures are seen from a front view. Also the arrow shows the direction of scan.

C (0, 0)
D (0, 0)   C (799, 0)
                  D (799, 0)

PVI

C (0, 599)   C (799, 599)
D (0, 599)   D (799, 599)

Note 9-1
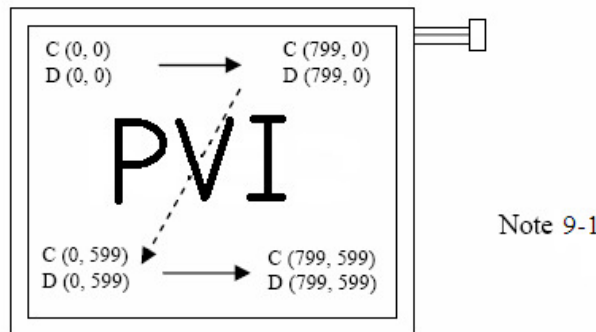
Figure1. Normal scan (DPS: Low or Open)

C (0, 0)   C (799, 0)
D (799, 599)   D (0, 599)

IΛd

C (0, 599)   C (799, 599)
D (799, 0)   D (0, 0)

Note 9-1
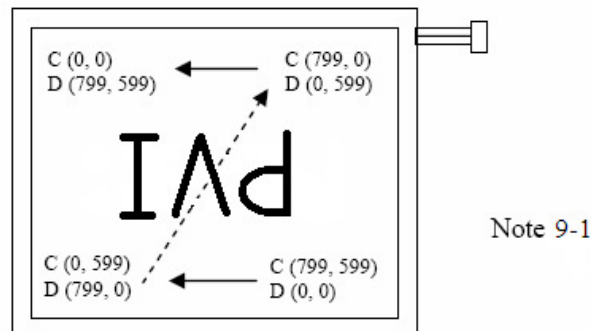
Figure2. Reverse scan (DPS: High)

Note1: Meaning of C (X, Y) and D (X, Y)
C (X, Y): The coordinates of the display position (See " **9-4) DISPLAY POSITIONS**".)
D (X, Y): The data number of input signal for LCD panel signal processing board

10. Input signal timing:

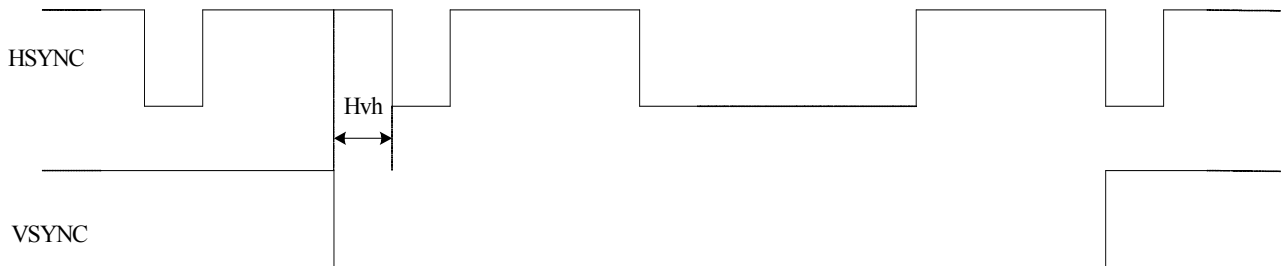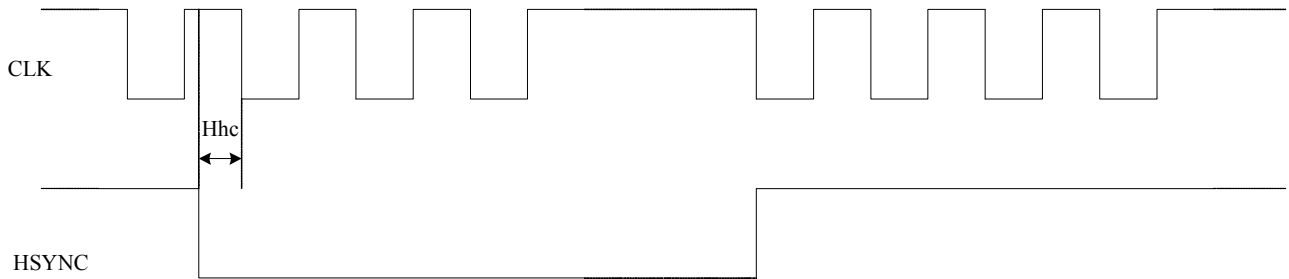DENB pin have high priority than SYNC mode(HSVC+VSYNC). When IC only use SYNC pin, DENB pin have to connect to ground.

(A) Timing Specifications (DENB Mode):

Item	Symbol	Min.	Typ.	Max.	Unit	Remark
Frame Cycling Period	t1	604 X t3	628X t3	800 X t3	-	
		14	16.58	20	ms	
Vertical Display Period	t2	600 X t3	600 X t3	600 X t3	-	
Horizontal Scanning Time	t3	920 X t5	1056 X t5	1064 X t5	-	
		24	26.4	33	μ s	
Horizontal Display Period	t4	800 X t5	800 X t5	800 X t5	-	
Clock Cycle	t5	20	25.0	31.25	ns	
Clock High Level Time	t6	9.0	-	-	ns	
Clock Low Level Time	t7	9.0	-	-	ns	
Hold time	t8	4.0	-	-	ns	
Set-up time	t9	5.0	-	-	ns	

(B) Timing Specifications (SYNC Mode)

Item		Symbol	Min.	Typ.	Max.	Unit	Remark
HSYNC	Period	Hp	24	26.4	33	us	
			920	1056	1064	tc	
	Display period	Hdp	800	800	800	tc	
	Pulse width	Hpw	12	128	202	tc	
	Back-porch	Hbp	12	86	202	tc	
	Front-porch	Hfp	42	42	42	tc	
	Hpw+Hbp		214	214	214	tc	
	Hsync-CLK	Hhc	10	-	Tc-10	ns	
	Vsync-Hsync	Hvh	0	0	200	tc	
VSYNC	Period (Frame cycling period)	Vp	14	16.58	20	ms	Note 1
			604	628	800	Hp	
	Display period	Vdp	600	600	600	Hp	
	Pulse width	Vpw	2	4	27	Hp	
	Back-porch	Vbp	0	23	25	Hp	
	Front-porch	Vfp	1	1	1	Hp	
	Vpw+Vbp		27	27	27	Hp	

Note 1: Frame cycling period is optimum in 16.58ms.(60HZ)

PRIME VIEW

PD080SL3

(C)Timing Chart:

PRIME VIEW

HSYNC

Hp

Hpw

Hdp

Hbp

Hfp

R,G,B valid data

CLK

Hhc

HSYNC

HSYNC

Hvh

VSYNC

PRIME VIEW

PD080SL3

Vp

Vpw

VSYNC

Vdp

Vbp

Vfp

R,G,B valid data

t 5

t 6

t 7

CLK

V_{IH}(Min):0.8Vcc

V_{IL}(Max):0.2Vcc

Input Signal
CenterLevel:
0.5Vcc

t 8

t 9

HYSNC
VSYNC
DENB
R7-R0
G7-G0
B7-B0

VALID
DATA

V_{IH}(Min):0.8Vcc

V_{IL}(Max):0.2Vcc

a

b

CLK

0.5Vcc
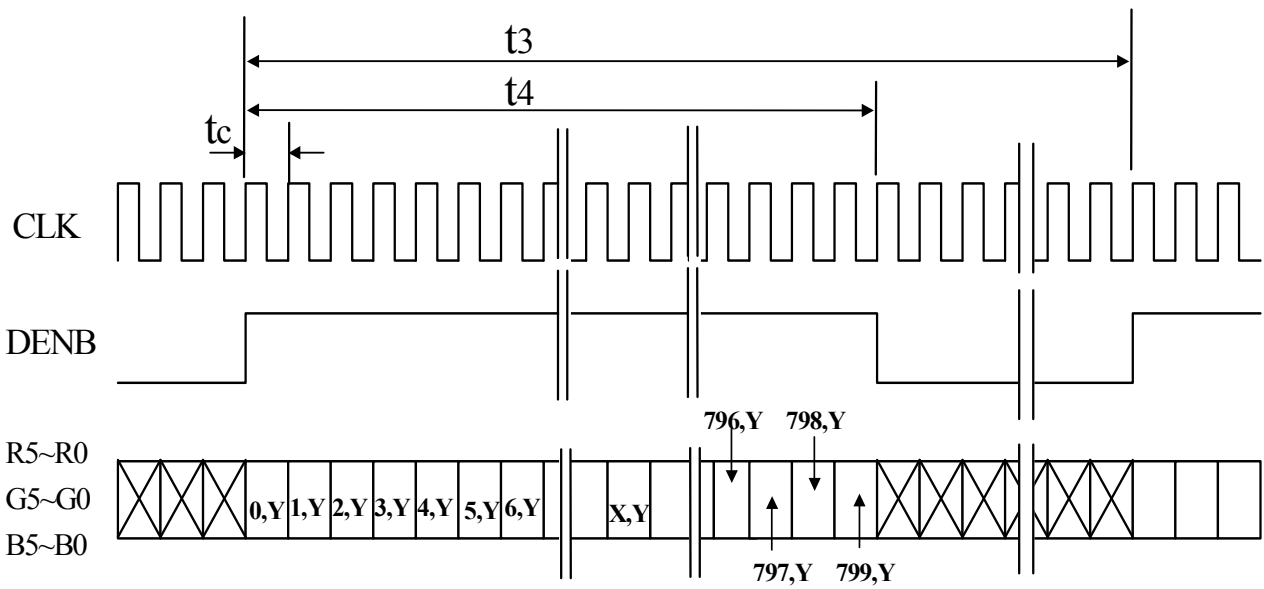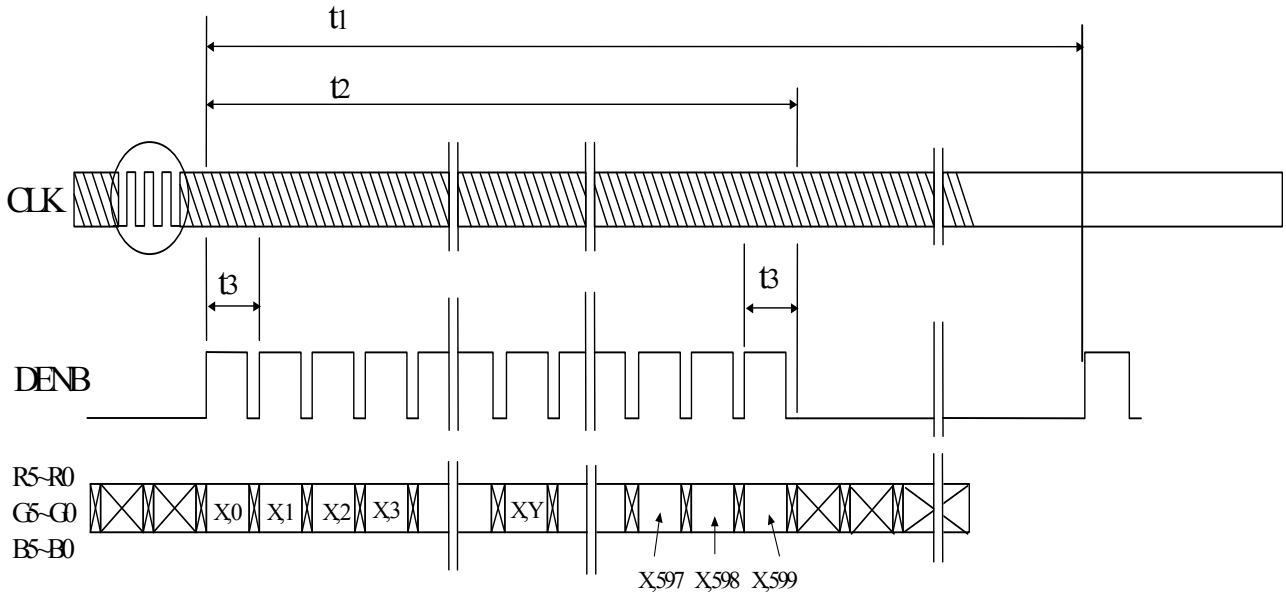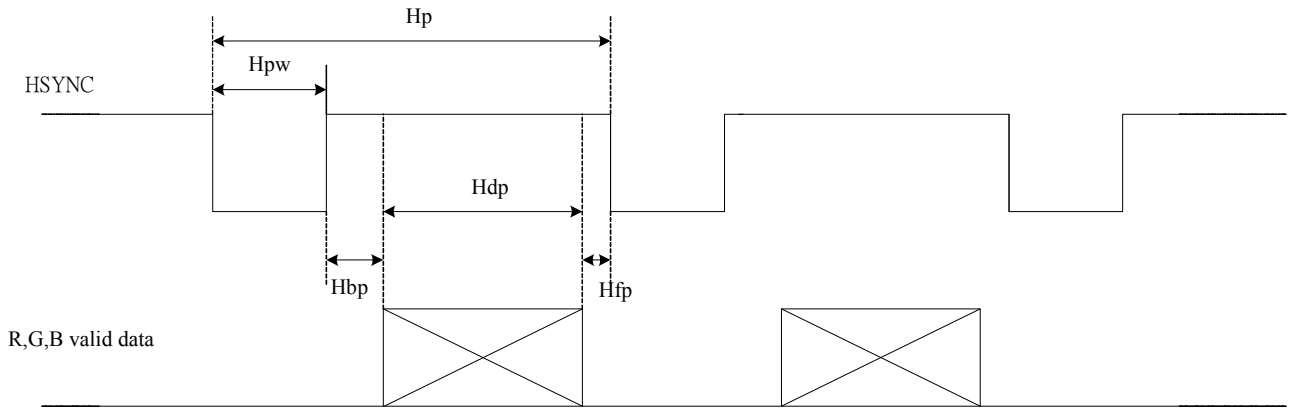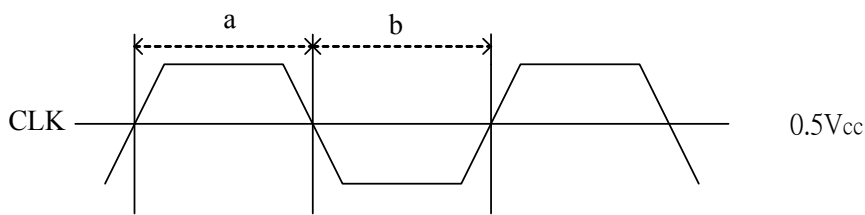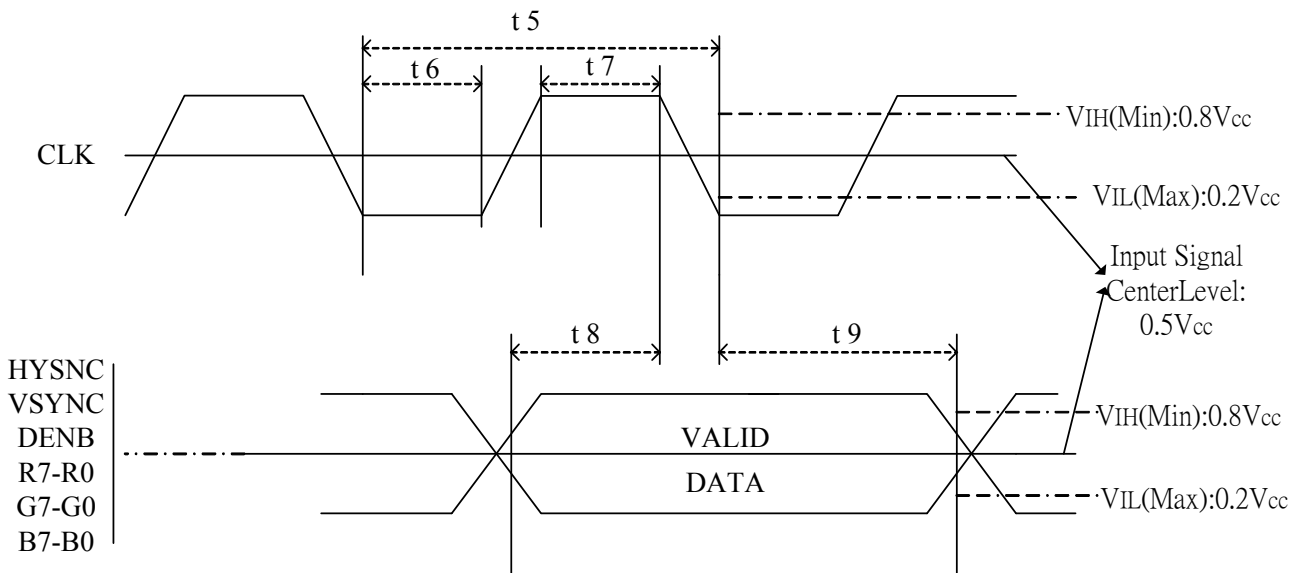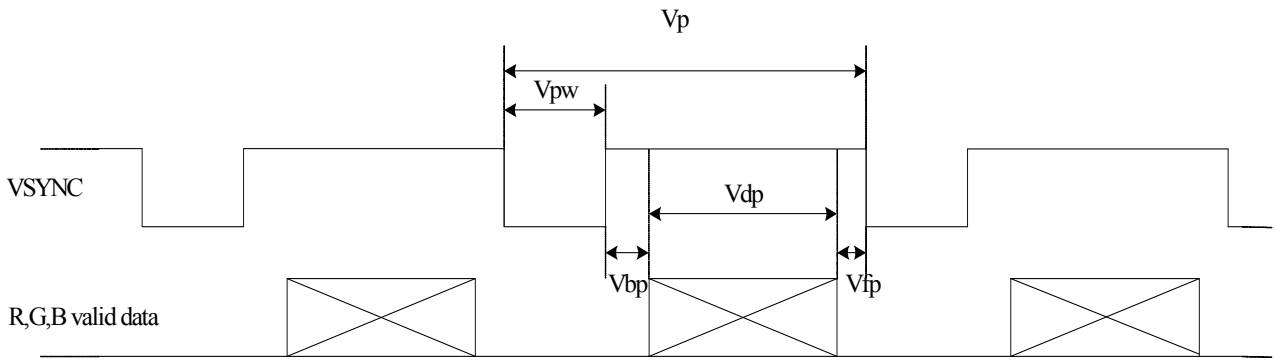
Duty (a ,b) : 50 $\pm$10%

11.Power On Sequence
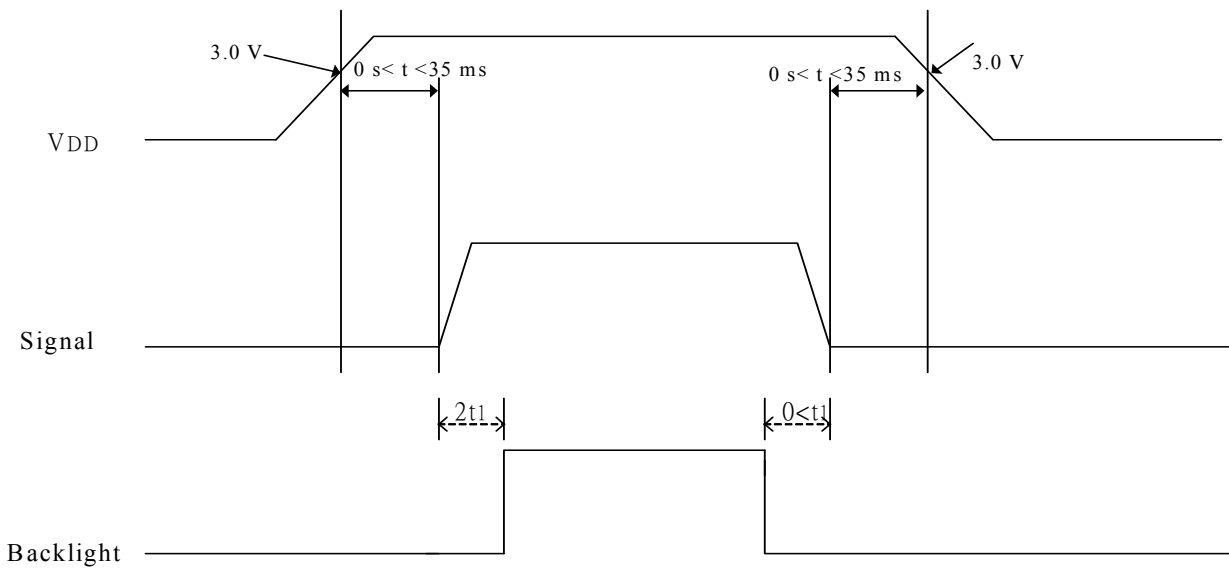
1. The supply voltage for input signals should be same as $V_{DD.}$

2. When the power is off, please keep whole signals (Hsync, Vsync, DENB, CLK, Data) low level or high impedance.

12. Optical Characteristics
  12-1) Specification:

Ta = 25℃

Parameter		Symbol	Condition	MIN.	TYP.	MAX.	Unit	Remarks
Viewing Angle	Horizontal	θ	CR≥10	55	60	-	deg	Note 12-1
	Vertical	θ (to 12 'clock)		40	45	-	deg	
		θ (to 6 o'clock)		55	60	-	deg	
Contrast Ratio		CR	Optimum direction	200	400	-	-	Note 12-2
Luminance		L	θ =0°/ φ =0°	390	420	-	cd/㎡	Note 12-3
LED Life Time		-	25℃	20000	30000	-	hrs	Note 12-4
Response time	Rise	Tr	θ =0°	-	15	30	ms	Note 12-5
	Fall	Tf	φ =0°	-	25	50	ms	
Uniformity		U	-	75	80	-	%	Note 12-6
White Chromaticity		x	θ =0°/ φ =0°	0.28	0.32	0.36	-	
		y	θ =0°/ φ =0°	0.31	0.35	0.39	-	
Cross Talk Ratio		CTK	-	-	-	3.5	%	Note 12-7

The optical characteristics shall be measured in dark room (ambient illumination on panel surface less than 1 Lux). The measuring configuration shows as following figure.

Photometer (TOPCON BM-5A or BM-7 fast)

500 mm +/- 50 mm

Field = 1°

TFT-LCD module

Optical characteristics measuring configuration
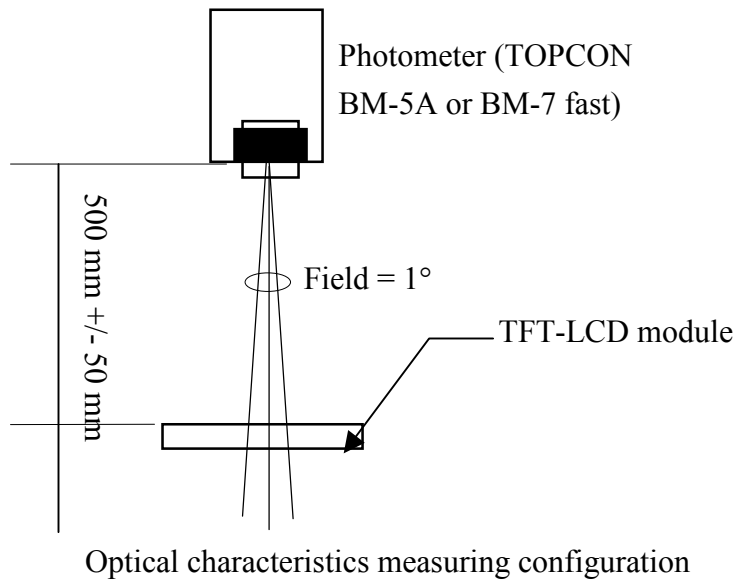
Note 12-1：The definitions of viewing angles are as follows.

LED connector

12 o'clock

θ

3 o'clock

9 o'clock

φ

6 o'clock
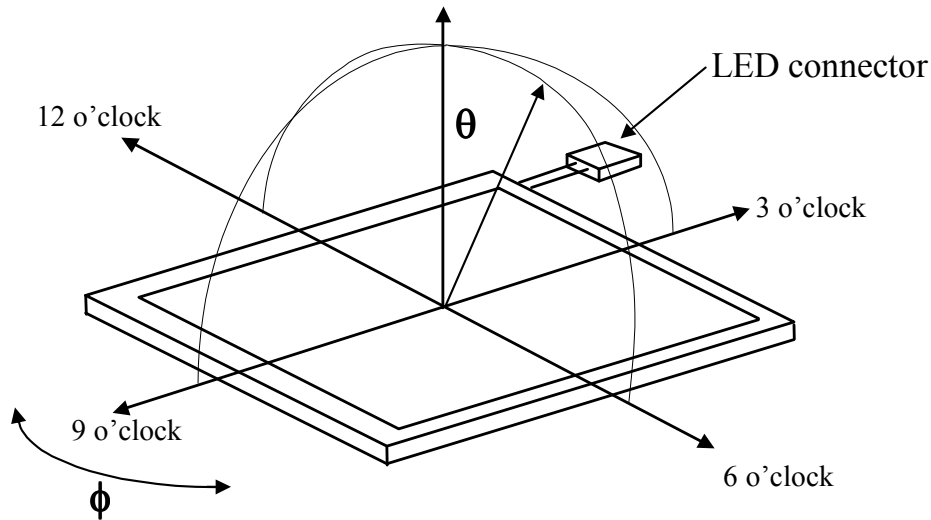
Note 12-2 : The definition of contrast ratio $CR = \dfrac{\text{Luminance at gray level 63}}{\text{Luminance at gray level 0}}$

Note 12-3 : Topcon BM-5A or BM-7 fast luminance meter 1˚field of view is used in the testing

Note 12-4: The "LED Life time " is defined as the module brightness decrease to 50% original brightness that the ambient temperature is 25℃ and I_{LED} =20mA.

Note 12-5: Definition of Response Time Tr and Tf:
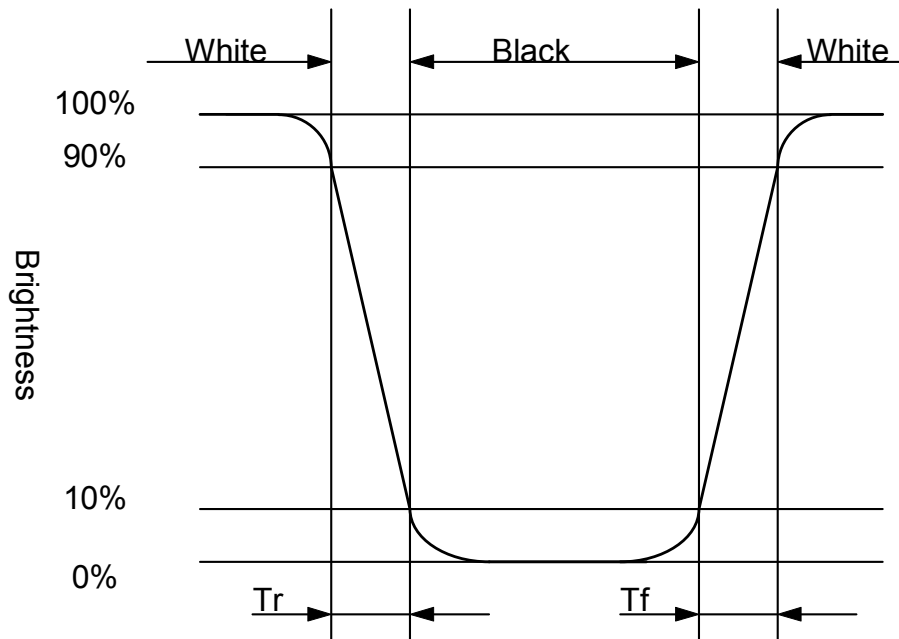
Note 12-6: The uniformity of LCD is defined as

$$U = \frac{\text{The Minimum Brightness of the 9 testing Points}}{\text{The Maximum Brightness of the 9 testing Points}}$$
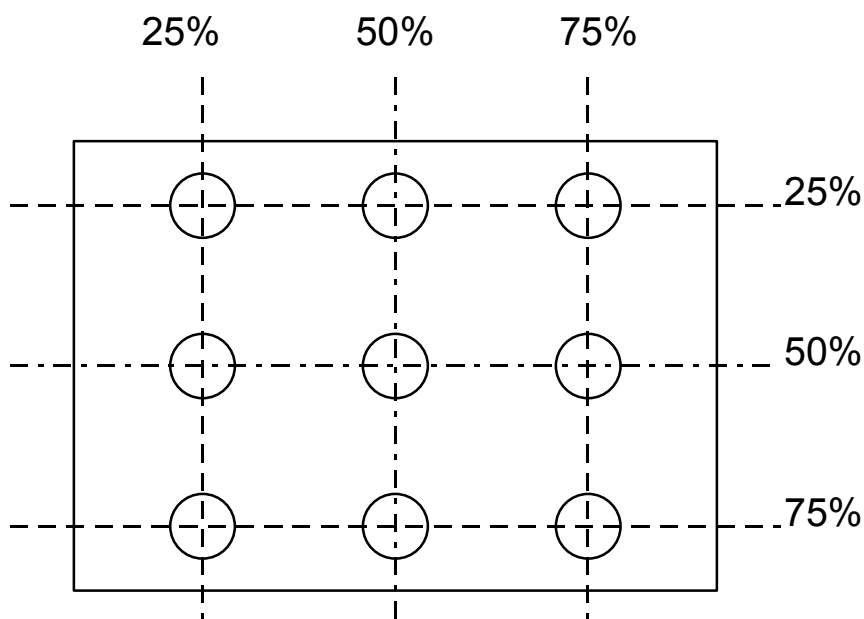
Luminance meter : BM-5A or BM-7 fast(TOPCON)
Measurement distance : 500 mm +/- 50 mm
Ambient illumination : < 1 Lux
Measuring direction : Perpendicular to the surface of module
The test pattern is white.

PRIME VIEW

Note 12-7: Cross Talk (CTK) = $\dfrac{\left|YA\text{-}YB\right|}{YA}\times100\%$
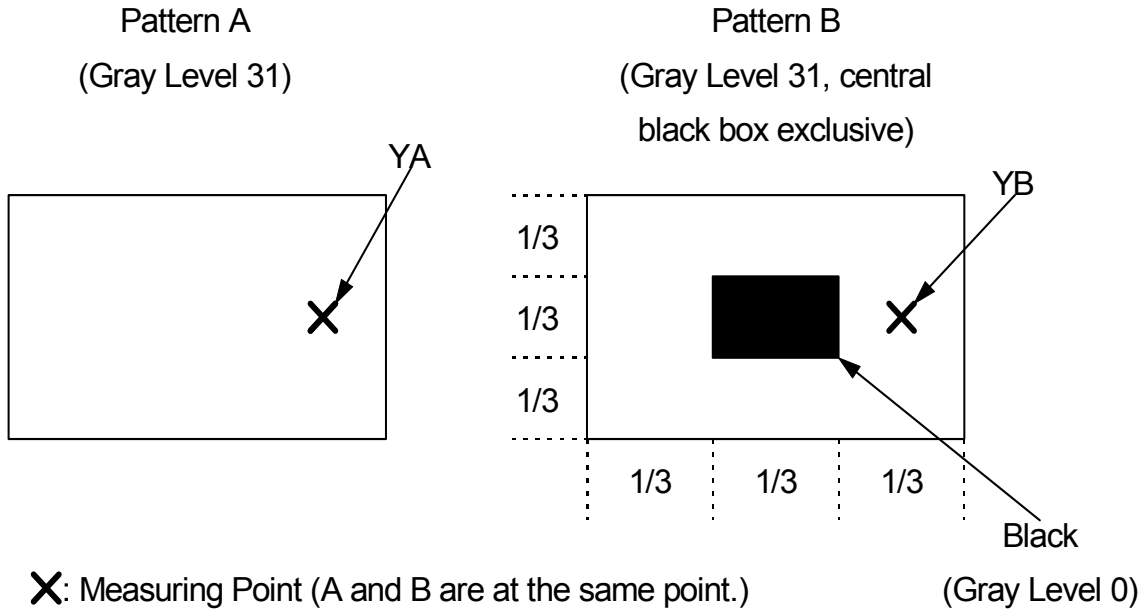
YA: Brightness of Pattern A
YB: Brightness of Pattern B
Luminance meter : BM 5A (TOPCON)
Measurement distance : 500 mm +/- 50 mm
Ambient illumination : < 1 Lux
Measuring direction : Perpendicular to the surface of module

Pattern A
(Gray Level 31)

Pattern B
(Gray Level 31, central
black box exclusive)

✕: Measuring Point (A and B are at the same point.)

Black
(Gray Level 0)

13. Handling Cautions

13-1) Mounting of module

a) Please power off the module when you connect the input/output connector.
b) Polarizer which is made of soft material and susceptible to flaw must be handled carefully.
c) Protective film (Laminator) is applied on surface to protect it against scratches and diets.
d) Please following the tear off direction as figure13-1 to remove the protective film as slowly as possible, so that electrostatic charge can be minimized.

13-2) Precautions in mounting

a) When metal part of the TFT-LCD module (shielding lid and rear case) is soiled, wipe it with soft dry cloth.
b) Wipe off water drops or finger grease immediately. Long contact with water may cause discoloration or spots.
c) TFT-LCD module uses glass, which breaks or cracks easily if dropped or bumped on hard surface. Please handle with care.
d) Since CMOS LSI is used in the module. So take care of static electricity and earth yourself when handling.

13-3) Adjusting module

a) Adjusting volumes on the rear face of the module have been set optimally before shipment.
b) Therefore, do not change any adjusted values. If adjusted values are changed, the specifications described may not be satisfied.

13-4) Others

a) Do not expose the module to direct sunlight or intensive ultraviolet rays for many hours.
b) Store the module at a room temperature place.
c) The voltage of beginning electric discharge may over the normal voltage because of leakage current from approach conductor by to draw lump read lead line around.
d) If LCD panel breaks, it is possibly that the liquid crystal escapes from the panel.
   Avoid putting it into eyes or mouth. When liquid crystal sticks on hands, clothes or feet. Wash it out immediately with soap.
e) Observe all other precautionary requirements in handling general electronic components.
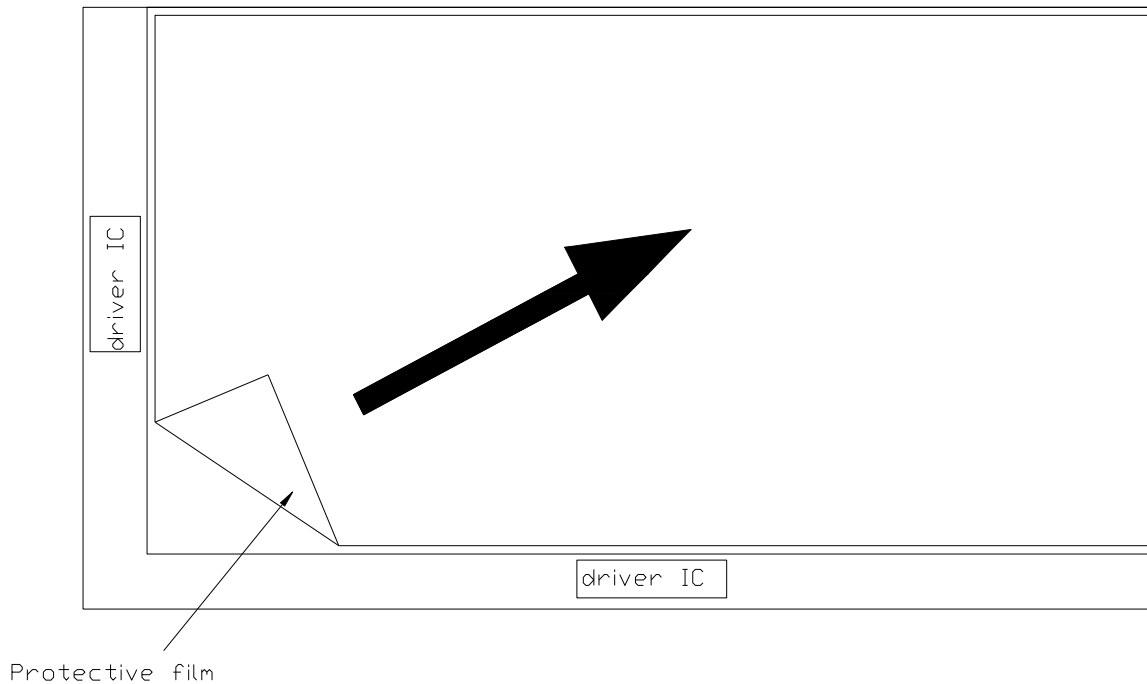f) Please adjust the voltage of common electrode as material of attachment by 1 module.

Figure 13 -1 the way to peel off protective film

14. Reliability Test

No	Test Item	Test Condition
1	High Temperature Storage Test	Ta = +80℃, 240 hrs
2	Low Temperature Storage Test	Ta = -25℃, 240 hrs
3	High Temperature Operation Test	Ta =+80℃, 240 hrs
4	Low Temperature Operation Test	Ta = -25℃, 240 hrs
5	High Temperature & High Humidity Operation Test	Ta = +60℃, 90%RH, 240 hrs
6	Thermal Cycling Test (non-operating)	-20℃←→+80℃, 100 Cycles 30 min 30 min
7	Vibration Test (non-operating)	Frequency：10 ~ 57 H$_Z$ Amplitude：0.15 mm 58~500Hz, 1G Sweep time：11 min ; Test Period：3 hrs (1 hr for each direction of X, Y, Z)
8	Shock Test (non-operating)	80G, 6ms, X,Y, Z 1 times for each direction
9	Electron Static Discharge	C=150pF,R=330Ω Contact=±8KV，Air=±15KV 10 times/terminal

Ta: ambient temperature
Note: The protective film must be removed before temperature test

[Criteria]
    In the standard conditions, there is not display function NG issue occurred. (Including: line defect, no image). All the cosmetic specification is judged before the reliability stress.

15.Packing

ZONE	REV.	DOCUUMENT NO.	DESCRIPTION	DATE	REV.BY

NOTE:
1.Q'TY: 20 pcs panel/carton.
2.Dimension:530*295*230mm
3.Weight: 10.00 Kg

4	50-0100111	CARTON		1	
3	50-0500281	抗靜電袋		20	抗靜電
2		PD080SL3		20	
1	50-0301691	瓦楞隔板緩衝材		1	上蓋+底座
ITEM	PART NO.	DESCRIPTION		QTY	REMARK

MTL.SPEC.		UNSPECIFIED TOL'S		REMARK	
		ANGLE			
		ROUGHNESS			

元太科技工業股份有限公司
Prime View International Co., Ltd.

APPROVE	Franks	'07.12.09	SCALE	UNIT	SHEET	DWG.TITLE
CHECK	Franks	'07.12.09			1 OF 1	PD080SL3 Packing Draw
DRAWN	Ethanc	'07.12.09	MTL.NO.			DWG FILE:

REV. 01 A4 SIZE