Version :1.0

TECHNICAL SPECIFICATION

MODEL NO. : PD035VX2

☐Customer's Confirmation

Customer

By

☐PVI's Confirmation

Confirmed By

Prepared By

Date: Jan. 26 , 2005

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TECHNICAL SPECIFICATION

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1. Application

This data sheet applies to a color TFT LCD module , PD035VX2. PD035VX2 module applies to projector , and other media application which require high quality flat panel display.

2. Features

. Amorphous silicon TFT LCD panel
. Pixel in stripe configuration
. Display Colors：262,144 colors
. Optimum Viewing Direction：6 o'clock
. TTL transmission interface

3.Mechanical Specifications

Parameter	Specifications	Unit
Screen Size	3.5 (diagonal)	inch
Display Format	640×(R, G, B)×480	dot
Display Colors	262,144	
Active Area	72 (H)×52.56 (V)	mm
Pixel Pitch	0.1125 (H)×0.1095 (V)	mm
Pixel Configuration	Stripe	
Outline Dimension	84.25 (W)×65.40 (H)×3.45 (D) (Typ.)	mm
Weight	40±5	g
Surface treatment	AG	
Display mode	Normally white	

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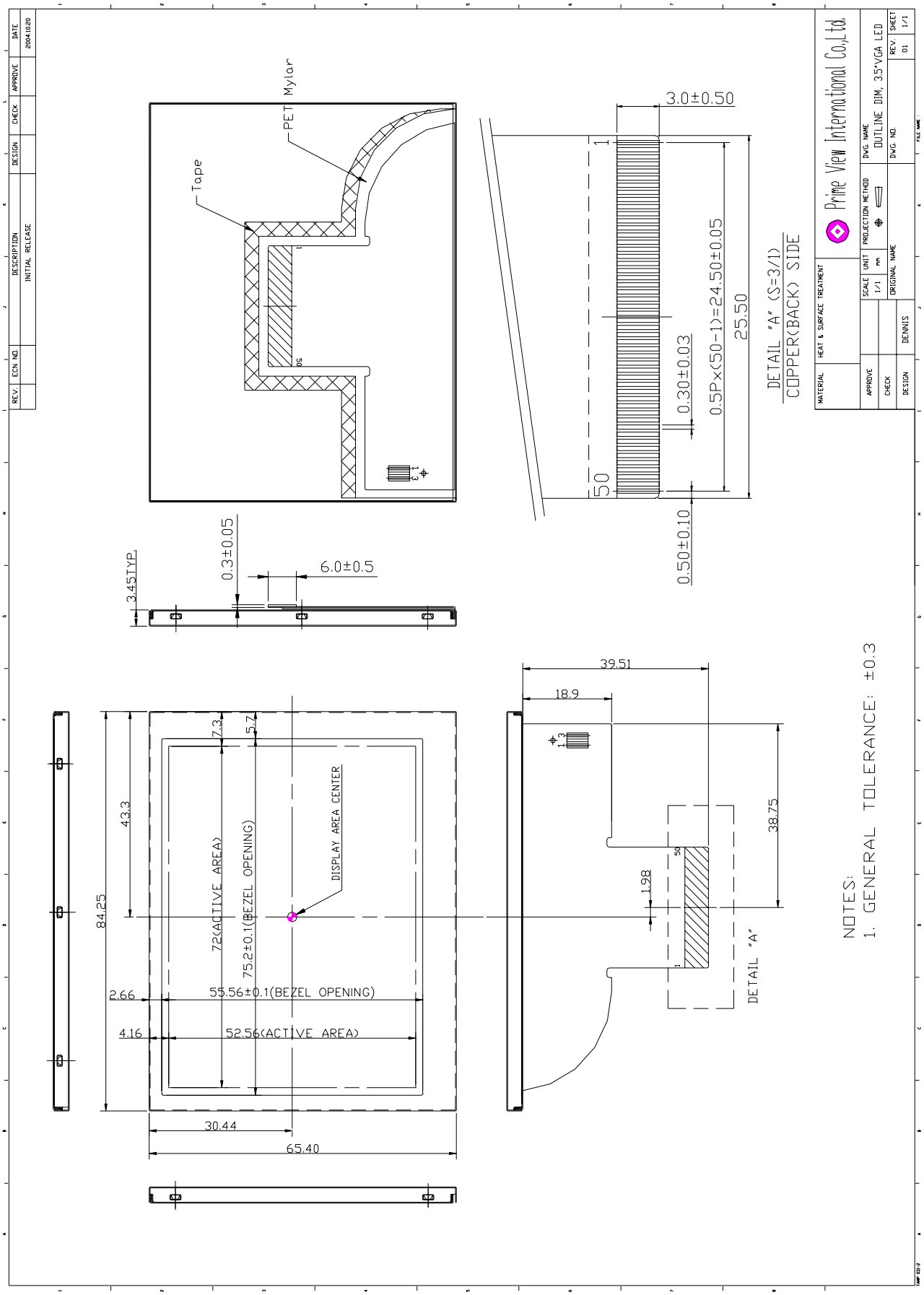
4.Mechanical Drawing of TFT-LCD Module



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5.Input / Output Terminals

TFT-LCD Panel Driving

Pin No.	Symbol	I/O	Function	Remark
1	DIO1	I/O	Horizontal Start Pulse Signal Input or Output 1	Note5-1
2	VSS2	I	Ground	
3	VDD1	I	Power Supply	
4	CLK	I	Horizontal Shift Clock	
5	R/L	I	Left/Right Selection	Note 5-1
6	R0	I	Red Data (LSB)	
7	R1	I	Red Data	
8	R2	I	Red Data	
9	R3	I	Red Data	
10	R4	I	Red Data	
11	R5	I	Red Data (MSB)	
12	VSS2	I	Ground	
13	G0	I	Green Data (LSB)	
14	G1	I	Green Data	
15	G2	I	Green Data	
16	G3	I	Green Data	
17	G4	I	Green Data	
18	G5	I	Green Data (MSB)	
19	B0	I	Blue Data (LSB)	
20	B1	I	Blue Data	
21	B2	I	Blue Data	
22	B3	I	Blue Data	
23	B4	I	Blue Data	
24	B5	I	Blue Data (MSB)	
25	LD	I	Load output signal	Note5-2
26	REV	I	Data invert control	Note5-3
27	POL	I	Polarity selection	Note5-4
28	DIO2	I/O	Horizontal Start Pulse Signal Input or Output	Note5-1
29	VSS2	I	Ground	
30	V3	I	Gamma Voltage 3	Note5-5
31	V5	I	Gamma Voltage 5	Note5-5
32	V7	I	Gamma Voltage 7	Note5-5
33	V8	I	Gamma Voltage 8	Note5-5
34	V10	I	Gamma Voltage 10	Note5-5
35	V12	I	Gamma Voltage 12	Note5-5
36	VSS2	I	Ground	
37	VDD2	I	Voltage for analog circuit	Note5-5
38	VCOM	I	Common Voltage	
39	OE	I	Output Enable	Note5-6
40	U/D	I	Up/Down Selection	Note 5-7
41	CKV	I	Vertical Shift Clock	Note5-8
42	STVU	I/O	Vertical Shift Pulse Signal Input or Output	Note5-7
43	STVD	I/O	Vertical Shift Pulse Signal Input or Output	Note5-7
44	VGG	I	Gate On Voltage	Note5-9
45	VSS1	I	Ground	
46	VCC	I	Voltage for logic circuit	
47	VEE	I	Gate Off Voltage	Note5-10
48	VLED	-	Supply voltage for LED backlight	Note5-11
49	GLED2	-	Ground for LED backlight	
50	GLED1	-	Ground for LED backlight	

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Note 5-1: Select left or right shift

R/L	DIO1	DIO2	Shift
1	Input	Hi-Z	Left to right
0	Hi-Z	Input	Right to left

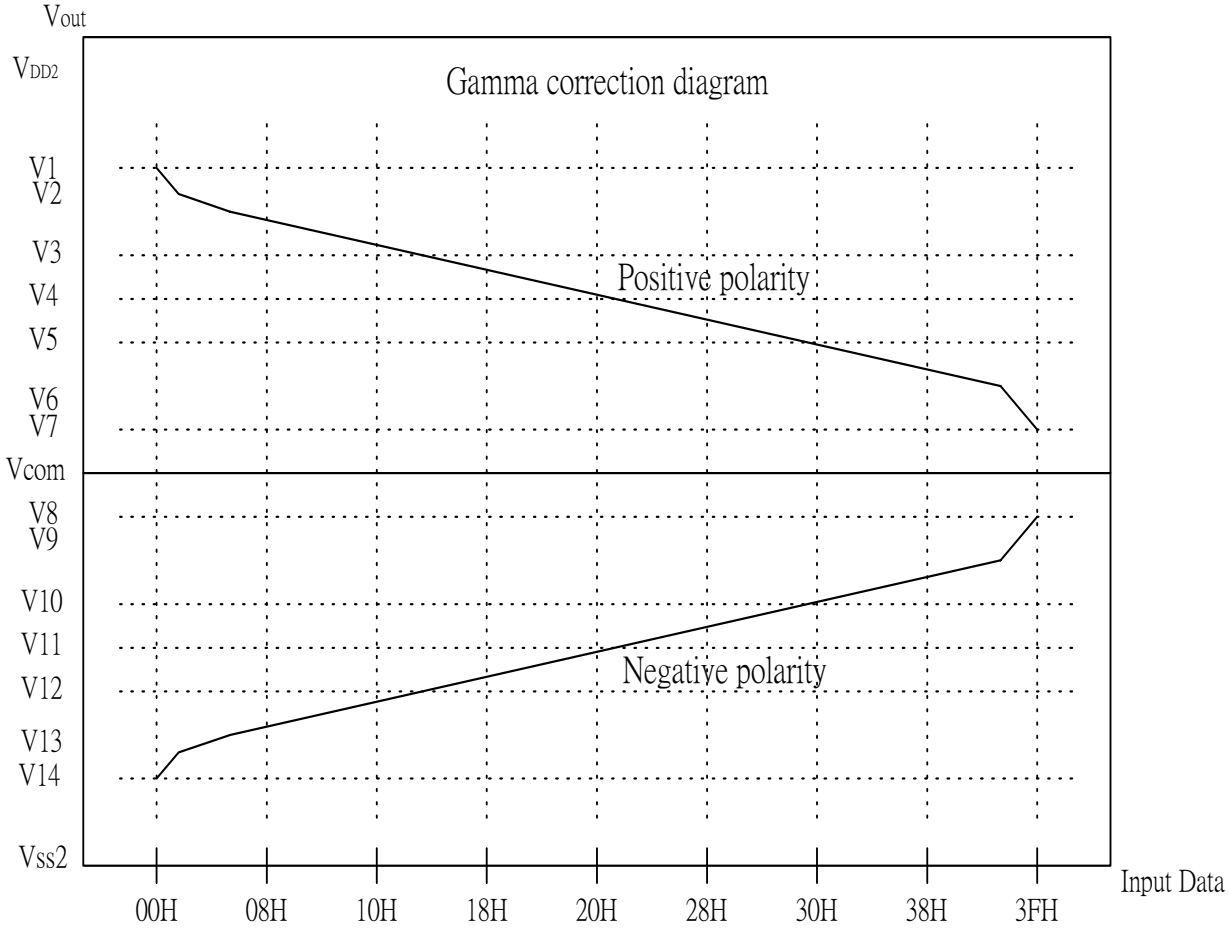
Note 5-2: Latch the polarity of outputs and switch the new data to outputs
At the rising edge (LD), latch the "POL" signal to control the polarity of the outputs.

Note 5-3: Control whether the Data R0~G5 are inverted or not. (PVI suggests connecting to GND)
When "REV=1", these data will be inverted.
EX: "00"→"3F", "07"→"38", "15"→"2A"

Note 5-4: Polarity selector for dot-inversion control. Available at the rising edge of LD.
When POL=1: Even outputs range from V1~V7, and Odd outputs range from V8~V14;
When POL=0: Even outputs range from V8~V14, and Odd outputs range from V1~V7.

Note 5-5:
1) Relationship between input data and output voltage

The figure below shows the relationship between the input data and the output voltage with the polarity. The range of V1~V7 is for positive polarity, and V8~V14 for negative polarity. Please refer to the following pages to get the related resister values and voltage calculation method.



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2) Output voltage and input data

Output Voltage to Panel VS Input Data

Data	Positive polarity Output Voltage	Negative polarity Output Voltage
00H	V1	V14
01H	V2=V3+(V1-V3) × 58 / 64.4	V13=V14+(V12-V14) × 6.4 / 64.4
02H	V3+(V1-V3) × 52 / 64.4	V14+(V12-V14) × 12.4 / 64.4
03H	V3+(V1-V3) × 46.4 / 64.4	V14+(V12-V14) × 18 / 64.4
04H	V3+(V1-V3) × 41.2 / 64.4	V14+(V12-V14) × 23.2 / 64.4
05H	V3+(V1-V3) × 36.4 / 64.4	V14+(V12-V14) × 28 / 64.4
06H	V3+(V1-V3) × 32 / 64.4	V14+(V12-V14) × 32.4 / 64.4
07H	V3+(V1-V3) × 27.6 / 64.4	V14+(V12-V14) × 36.8 / 64.4
08H	V3+(V1-V3) × 23.6 / 64.4	V14+(V12-V14) × 40.8 / 64.4
09H	V3+(V1-V3) × 19.6 / 64.4	V14+(V12-V14) × 44.8 / 64.4
0AH	V3+(V1-V3) × 16.4 / 64.4	V14+(V12-V14) × 48 / 64.4
0BH	V3+(V1-V3) × 13.2 / 64.4	V14+(V12-V14) × 51.2 / 64.4
0CH	V3+(V1-V3) × 10.4 / 64.4	V14+(V12-V14) × 54 / 64.4
0DH	V3+(V1-V3) × 7.6 / 64.4	V14+(V12-V14) × 56.8 / 64.4
0EH	V3+(V1-V3) × 4.8 / 64.4	V14+(V12-V14) × 59.6 / 64.4
0FH	V3+(V1-V3) × 2.4 / 64.4	V14+(V12-V14) × 62 / 64.4
10H	V3	V12
11H	V4+(V3-V4) × 19.6 / 22	V12+(V11-V12) × 2.4 / 22
12H	V4+(V3-V4) × 17.6 / 22	V12+(V11-V12) × 4.4 / 22
13H	V4+(V3-V4) × 15.6 / 22	V12+(V11-V12) × 6.4 / 22
14H	V4+(V3-V4) × 13.6 / 22	V12+(V11-V12) × 8.4 / 22
15H	V4+(V3-V4) × 12 / 22	V12+(V11-V12) × 10 / 22
16H	V4+(V3-V4) × 10.4 / 22	V12+(V11-V12) × 11.6 / 22
17H	V4+(V3-V4) × 8.8 / 22	V12+(V11-V12) × 13.2 / 22
18H	V4+(V3-V4) × 7.6 / 22	V12+(V11-V12) × 14.4 / 22
19H	V4+(V3-V4) × 6.4 / 22	V12+(V11-V12) × 15.6 / 22
1AH	V4+(V3-V4) × 5.2 / 22	V12+(V11-V12) × 16.8 / 22
1BH	V4+(V3-V4) × 4 / 22	V12+(V11-V12) × 18 / 22
1CH	V4+(V3-V4) × 3.2 / 22	V12+(V11-V12) × 18.8 / 22
1DH	V4+(V3-V4) × 2.4 / 22	V12+(V11-V12) × 19.6 / 22
1EH	V4+(V3-V4) × 1.6 / 22	V12+(V11-V12) × 20.4 / 22
1FH	V4+(V3-V4) × 0.8 / 22	V12+(V11-V12) × 21.2 / 22

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Output Voltage to Panel VS Input Data(continued)

Data	Positive polarity Output Voltage	Negative polarity Output Voltage
20H	V4	V11
21H	V5+(V4-V5) × 12 / 12.8	V11+(V10-V11) × 0.8 / 12.8
22H	V5+(V4-V5) × 11.2 / 12.8	V11+(V10-V11) × 1.6 / 12.8
23H	V5+(V4-V5) × 10.4 / 12.8	V11+(V10-V11) × 2.4 / 12.8
24H	V5+(V4-V5) × 9.6 / 12.8	V11+(V10-V11) × 3.2 / 12.8
25H	V5+(V4-V5) × 8.8 / 12.8	V11+(V10-V11) × 4 / 12.8
26H	V5+(V4-V5) × 8 / 12.8	V11+(V10-V11) × 4.8 / 12.8
27H	V5+(V4-V5) × 7.2 / 12.8	V11+(V10-V11) × 5.6 / 12.8
28H	V5+(V4-V5) × 6.4 / 12.8	V11+(V10-V11) × 6.4 / 12.8
29H	V5+(V4-V5) × 5.6 / 12.8	V11+(V10-V11) × 7.2 / 12.8
2AH	V5+(V4-V5) × 4.8 / 12.8	V11+(V10-V11) × 8 / 12.8
2BH	V5+(V4-V5) × 4 / 12.8	V11+(V10-V11) × 8.8 / 12.8
2CH	V5+(V4-V5) × 3.2 / 12.8	V11+(V10-V11) × 9.6 / 12.8
2DH	V5+(V4-V5) × 2.4 / 12.8	V11+(V10-V11) × 10.4 / 12.8
2EH	V5+(V4-V5) × 1.6 / 12.8	V11+(V10-V11) × 11.2 / 12.8
2FH	V5+(V4-V5) × 0.8 / 12.8	V11+(V10-V11) × 12 / 12.8
30H	V5	V10
31H	V7+(V5-V7) × 26.8 / 27.6	V10+(V8-V10) × 0.8 / 27.6
32H	V7+(V5-V7) × 26 / 27.6	V10+(V8-V10) × 1.6 / 27.6
33H	V7+(V5-V7) × 25.2 / 27.6	V10+(V8-V10) × 2.4 / 27.6
34H	V7+(V5-V7) × 24.4 / 27.6	V10+(V8-V10) × 3.2 / 27.6
35H	V7+(V5-V7) × 23.6 / 27.6	V10+(V8-V10) × 4 / 27.6
36H	V7+(V5-V7) × 22.4 / 27.6	V10+(V8-V10) × 5.2 / 27.6
37H	V7+(V5-V7) × 21.2 / 27.6	V10+(V8-V10) × 6.4 / 27.6
38H	V7+(V5-V7) × 20 / 27.6	V10+(V8-V10) × 7.6 / 27.6
39H	V7+(V5-V7) × 18.4 / 27.6	V10+(V8-V10) × 9.2 / 27.6
3AH	V7+(V5-V7) × 16.8 / 27.6	V10+(V8-V10) × 10.8 / 27.6
3BH	V7+(V5-V7) × 14.8 / 27.6	V10+(V8-V10) × 12.8 / 27.6
3CH	V7+(V5-V7) × 12.8 / 27.6	V10+(V8-V10) × 14.8 / 27.6
3DH	V7+(V5-V7) × 10.4 / 27.6	V10+(V8-V10) × 17.2 / 27.6
3EH	V7+(V5-V7) × 6.4 / 27.6	V10+(V8-V10) × 21.2 / 27.6
3FH	V7	V8

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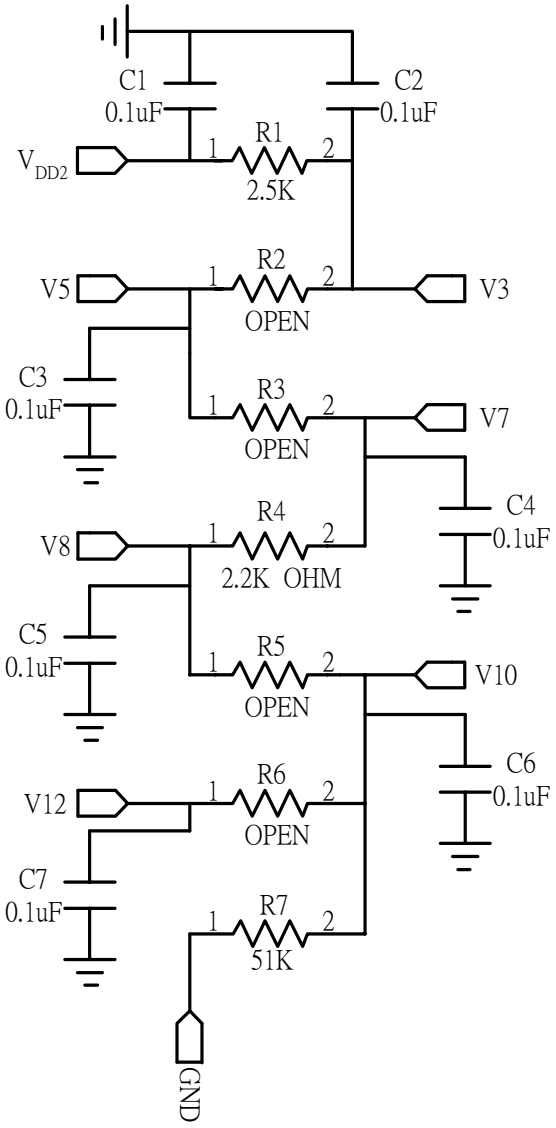
3) Typical Application Circuit



Note 5-6: When OE is connected to high "1", the driver outputs are disabled (Gate output = V_{EE}). Under this condition, the operation of registers will not be affected.

Note 5-7: Select up or down shift

U/D	STVU	STVD	Shift
1	Hi-Z	Input	Down to Up
0	Input	Hi-Z	Up to Down

Note 5-8: Gate driver shift clock

Note 5-9: Gate on voltage, V_{GG}= +17V.

Note 5-10: Gate off voltage, V_{EE}= -10V.

Note 5-11: I_{LED} TYP.=20mA.

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6.Absolute Maximum Ratings:

Vss1=Vss2=GND=0V, Ta=25℃

Parameters	Symbol	MIN.	MAX.	Unit	Remark
Supply Voltage	V_{DD1}	-0.3	2	V	
	V_{CC}	-0.3	5	V	
	V_{DD2}	-0.5	12.0	V	
	V_{GG}	-0.3	40.0	V	
	V_{GG}-V_{EE}	-	40.0	V	
	V_{EE}	-20	0.3	V	
Storage Temperature	T_{ST}	-20	70	℃	
Operating Temperature	T_{OP}	0	60	℃	Notes 6-1

Notes 6-1 : Operating Temperature define that contrast, response time, other display optical character are Ta=+25.

7.Electrical Characteristics

7-1) Recommended Operating Conditions: Vss1=Vss2=GND = 0V，Ta = 25℃

Item	Symbol	Min.	Typ.	Max.	Unit	Remark
Supply Voltage for Source Driver	V_{DD1}	3.0	3.3	3.6	V	
	V_{DD2}	9.5	10	10.5		
Supply Voltage for Gate Driver	V_{GG}	-	17	-	V	
	V_{EE}	-	-10	-	V	
	V_{CC}	3.0	3.3	3.6	V	
Digital Input Voltage	V_{IH}	$0.8V_{DD1}$	-	V_{DD1}	V	
	V_{IL}	0	-	$0.2V_{DD1}$	V	

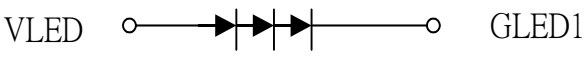
7-2) Recommended driving condition for LED backlight

GND = 0 V， Ta = 25℃

Parameter	Symbol	Min	TYP	MAX	Unit	Remark
Supply voltage of LED backlight	VLED	9	9.6	11.4	V	I_L = 20 mA
Supply current of LED backlight	ILED1		20		mA	Note 7-1
	ILED2					
Backlight Power Consumption	PLED	360	384	456	mW	Note 7-2

Note 7-1 : LED B/L applied information , please refer to the appendix at the end .

Note 7-2 : PLED = VLED * ILED1 + VLED * ILED2 .



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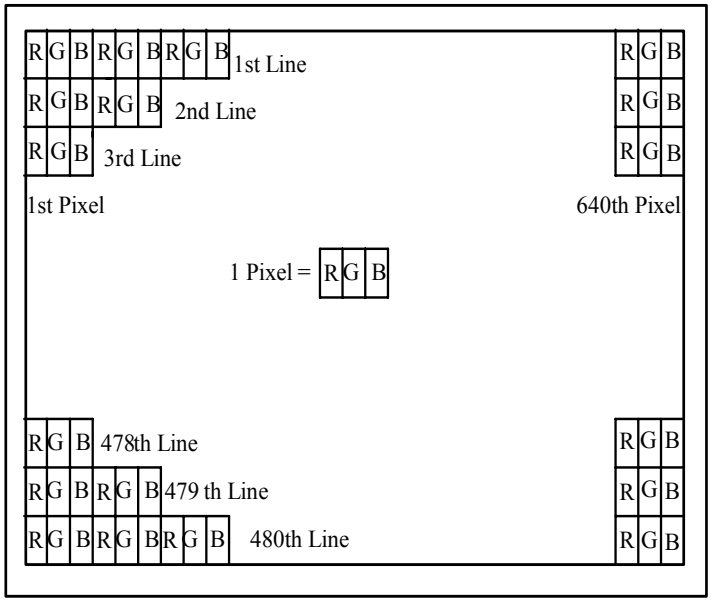
7-3) Power Consumption

Parameter	Symbol	Condition	Typ.	Max.	Unit	Remark
Supply Current for Gate Driver (Hi level)	I_{GG}	V_{GG}=+17V	0.12	0.15	mA	
Supply Current for Gate Driver (Low level)	I_{EE}	V_{EE}=-10V	0.15	0.19	mA	
Supply Current for Source Driver (Digital)	I_{DD1}	V_{DD1}=+3.3V	4.8	8.0	mA	
Supply Current for Source Driver (Analog)	I_{DD2}	V_{DD2}=+10V	16.0	30.0	mA	
Supply Current for Gate Driver (Digital)	I_{CC}	V_{CC}=+3.3V	0.17	0.21	mA	
LCD Panel Power Consumption			180	332	mW	
Backlight Power Consumption	P_{LED}		384	456	mW	
Total Power Consumption			564	788	mW	

8. Pixel Arrangement

The LCD module pixel arrangement is the stripe.



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9. Display Color and Gray Scale Reference

Color		Input Color Data																	
		Red						Green						Blue					
		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
	Red (63)	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0
	Green (63)	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0
	Blue (63)	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1
	Cyan	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1
	Magenta	1	1	1	1	1	1	0	0	0	0	0	0	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	Red (00)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Red (01)	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
	Red (02)	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
	Darker																		
	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
	Brighter																		
	Red (61)	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
	Red (62)	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
	Red (63)	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Green	Green (00)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Green (01)	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
	Green (02)	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
	Darker																		
	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
	Brighter																		
	Green (61)	0	0	0	0	0	0	1	1	1	1	0	1	0	0	0	0	0	0
	Green (62)	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0
	Green (63)	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0
Blue	Blue (00)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Blue (01)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	Blue (02)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
	Darker																		
	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
	Brighter																		
	Blue (61)	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	1
	Blue (62)	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0
	Blue (63)	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1

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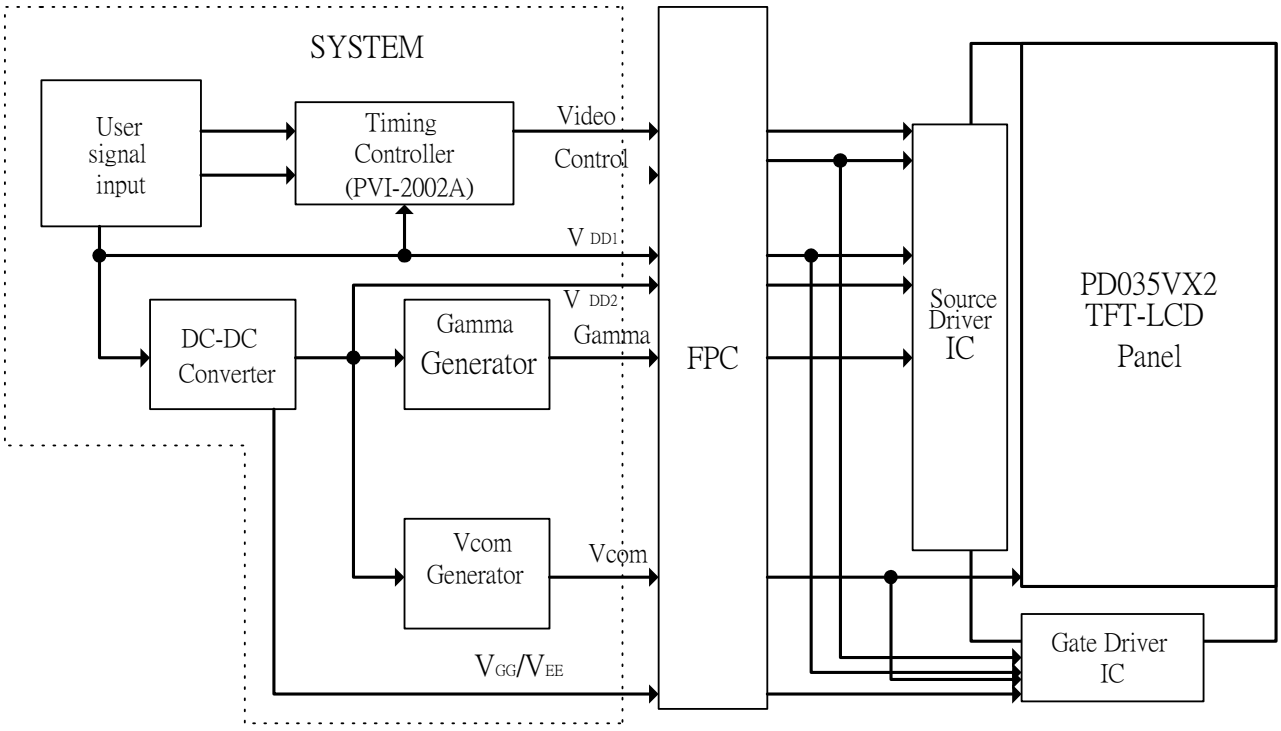
10. Block Diagram

10-1) TFT-module Block Diagram



If you use PD035VX2, you must apply PVI-2002A(Timing controller) which Will gernerate signal to support PD035VX2.

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11. Interface Timing

11.1) Timing Parameters

AC Electrical Characteristics (V_{CC}=V_{DD1}=3.3V, V_{DD2}=10V, GND=V_{SS1}=V_{SS2}=0V, Ta=25℃)

Parameter	Symbol	Min.	Typ.	Max.	Unit
CLK Frequency	Fclk	-	25	40	MHz
CLK Pulse Width	T_{CPH}	25	-	-	ns
Data Set-up Time	Tsu	4	-	-	ns
Data Hold Time	Thd	2	-	-	ns
Propagation Delay of DIO2/1	Tphl	6	10	15	ns
Time That The Last Data to LD	Tld	1	-	-	T_{CPH}
Pulse width of LD	Twld	2	-	-	T_{CPH}
Time That LD to DIO1/2	Tlds	5	-	-	T_{CPH}
POL Set-up Time	Tpsu	6	-	-	ns
POL Hold Time	Tphd	6	-	-	ns
OE Pulse Width	T_{OEV}	1	-	-	μs
CKV Pulse Width	T_{CKV}	500	-	-	ns
STV Set-up Time	T_{SUV}	400	-	-	ns
STV Hold Time	T_{HDV}	400	-	-	ns
Horizontal Display Period	T_{HDP}	-	640	-	T_{CPH}
Horizontal Period Timing Range	T_{HP}	-	800	-	T_{CPH}
Horizontal Lines Per Field	T_V	520	525	640	T_{HP}
Vertical Display Timing Range	T_{DV}	-	480	-	T_{HP}

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11.2) Timing Diagram

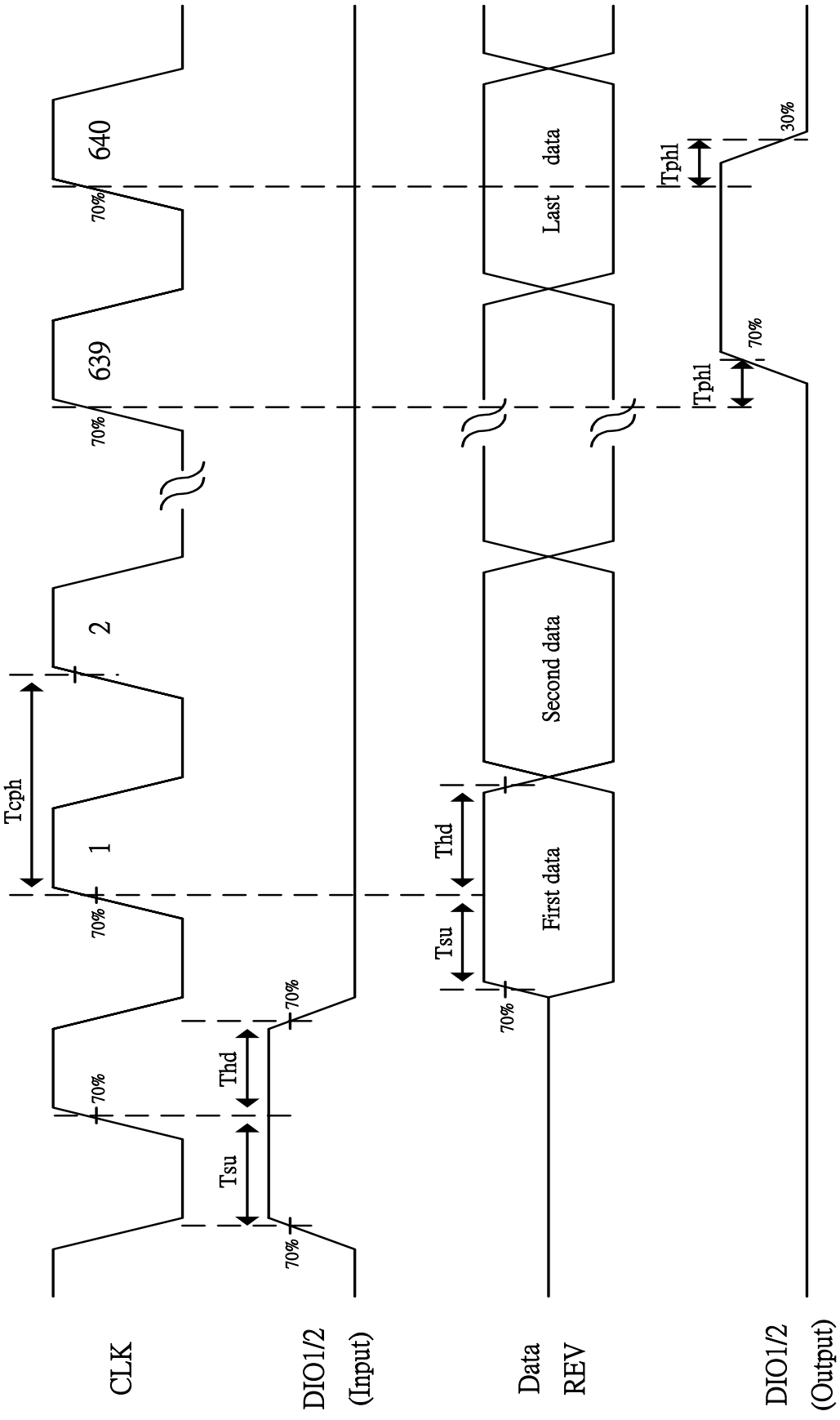

Fig. 11-1 Horizontal timing(1)

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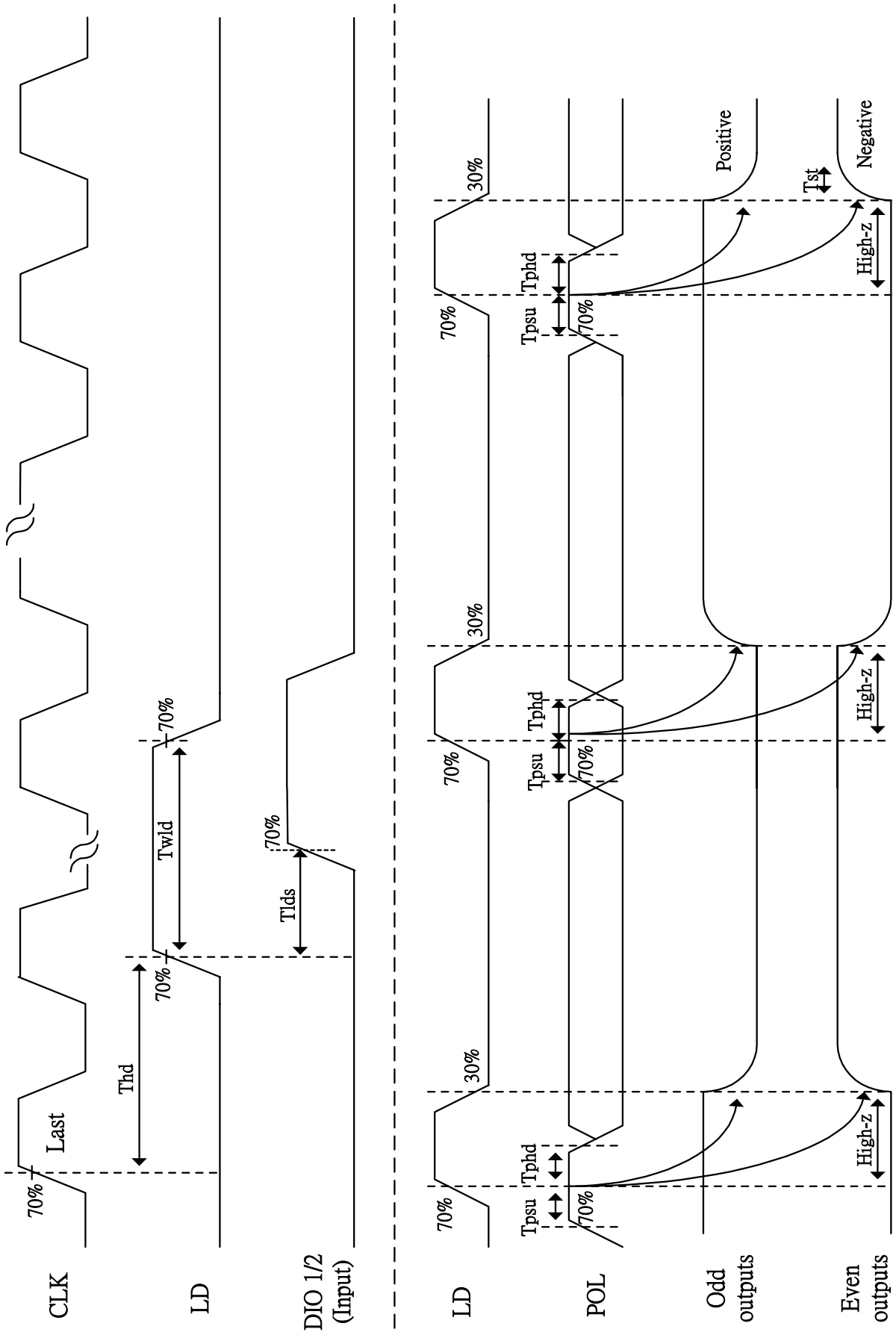

Fig. 11-2 Horizontal timing(2)

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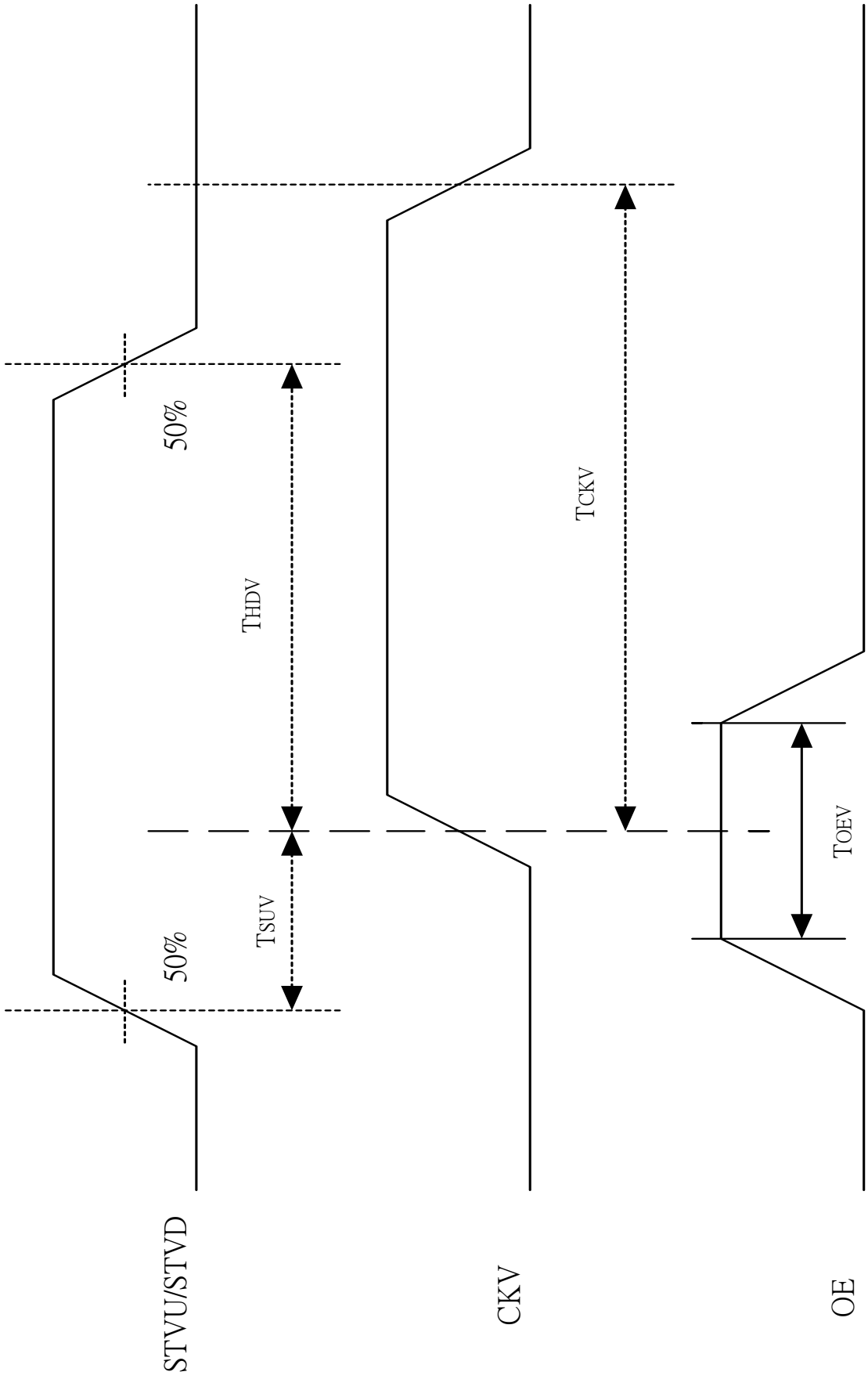

Fig. 11-3 Vertical shift clock timing

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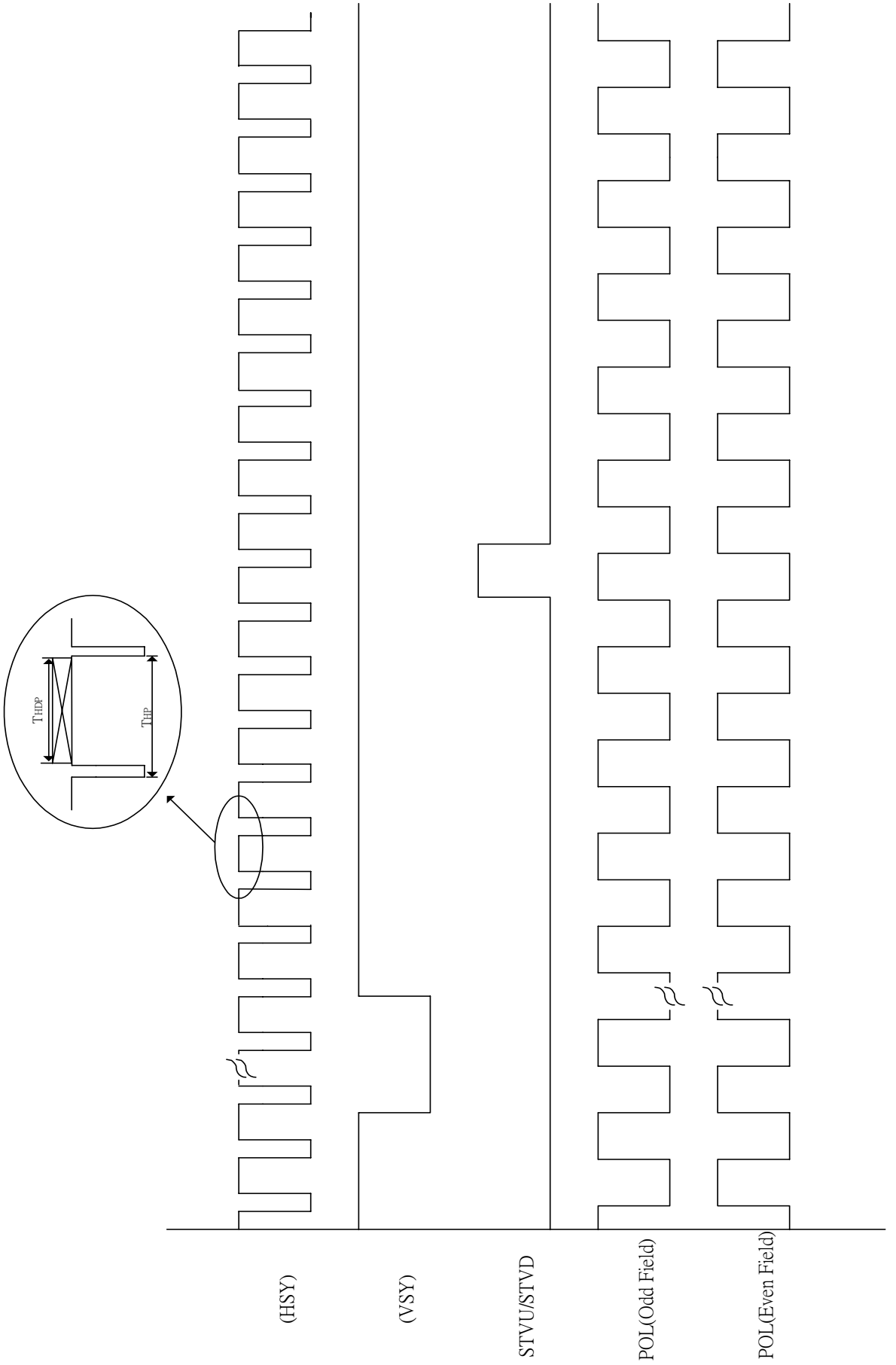

Fig. 11-4 Vertical timing

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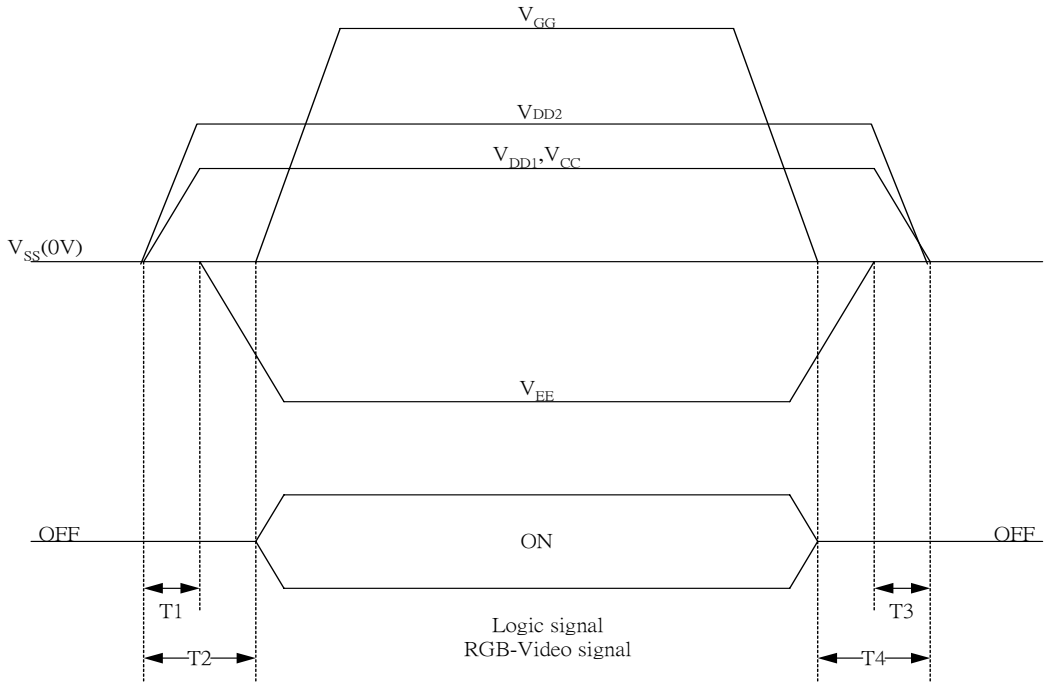
12. Power On Sequence



1) 10ms≦T1＜T2
2) 0ms＜T3≦T4≦10ms

13. Optical Characteristics

13-1) Specification:

Ta=25℃

Parameter		Symbol	Condition	MIN.	TYP.	MAX.	Unit	Remarks
Viewing Angle	Horizontal	θ	CR＞10	±45	±50		deg	Note 13-2
	Vertical	θ 12(to 12 o'clock)		10	15	-	deg	
		θ 11(to 6 o'clock)		30	35	-	deg	
Contrast Ratio		CR		200	400	-	-	Note 13-4
Response time	Rise	Tr	θ=0°	-	15	30	ms	Note 13-3
	Fall	Tf		-	25	50	ms	
Brightness			θ=0°	200	250		cd/㎡	Note 13-1
Uniformity		U	θ=0°	70	75		%	Note 13-5
Cross Talk			θ=0°	-	-	3	%	Note 13-6
White Chromaticity		x		0.28	0.310	0.34	-	Note 13-1
		y		0.30	0.330	0.36	-	
LED Life Time	Ta=25℃			-	10000	-	hrs	

All the optical measurement shall be executed 1 minute after backlight being turn-on. 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.

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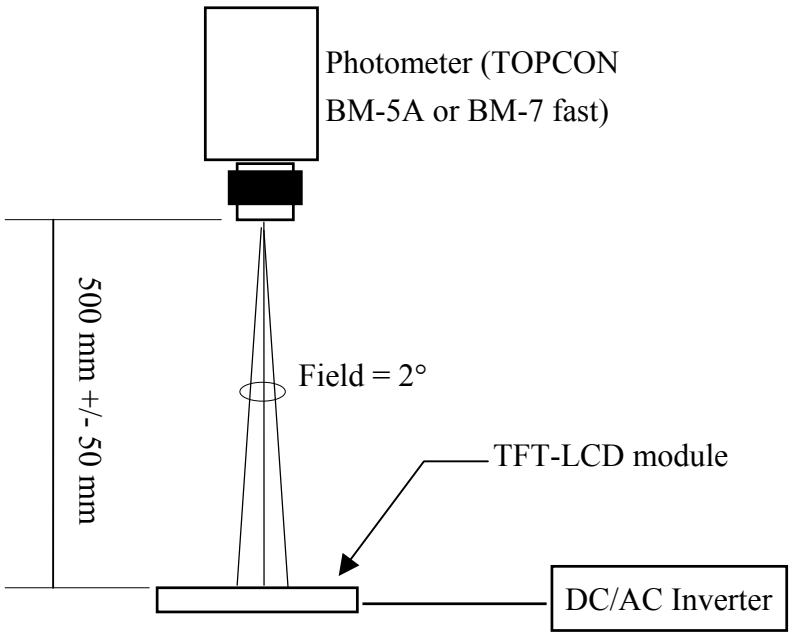
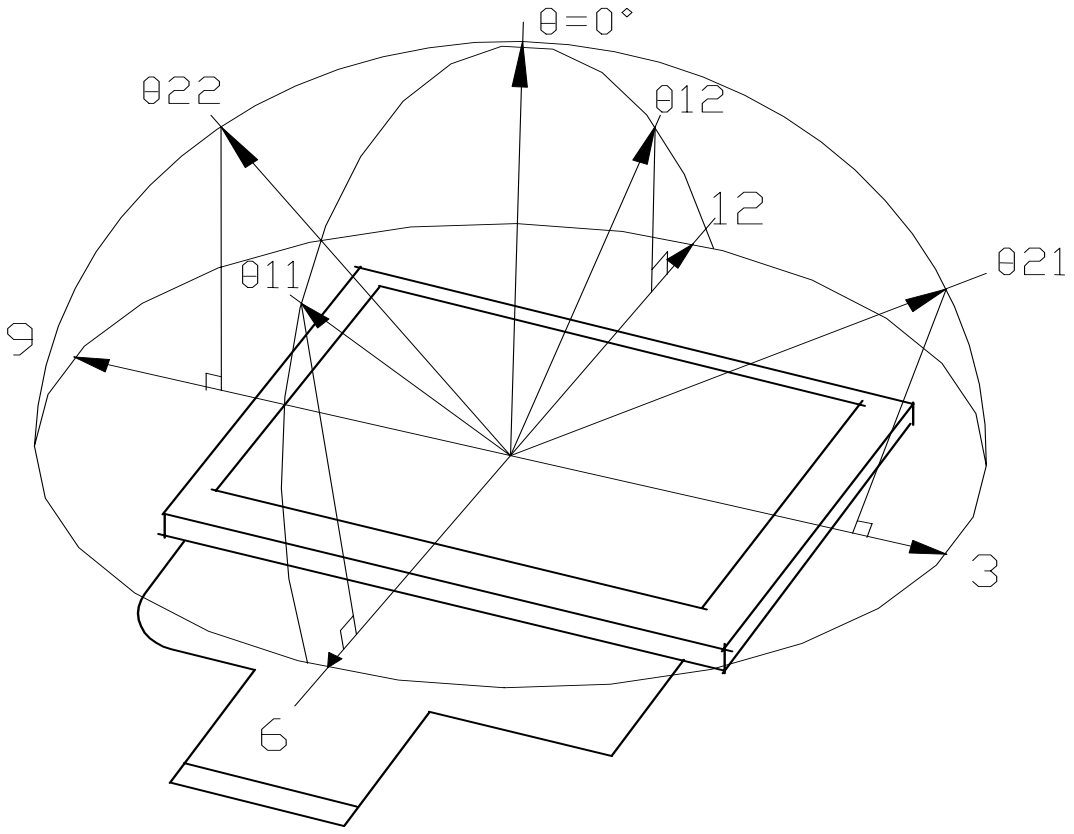


Optical characteristics measuring configuration

Note 13-1: 1.Topcon BM-5A or BM-7 fast luminance meter 1° field of view is used in the testing (after 1 minute operation).

Note 13-2: The definitions of viewing angles are as follow



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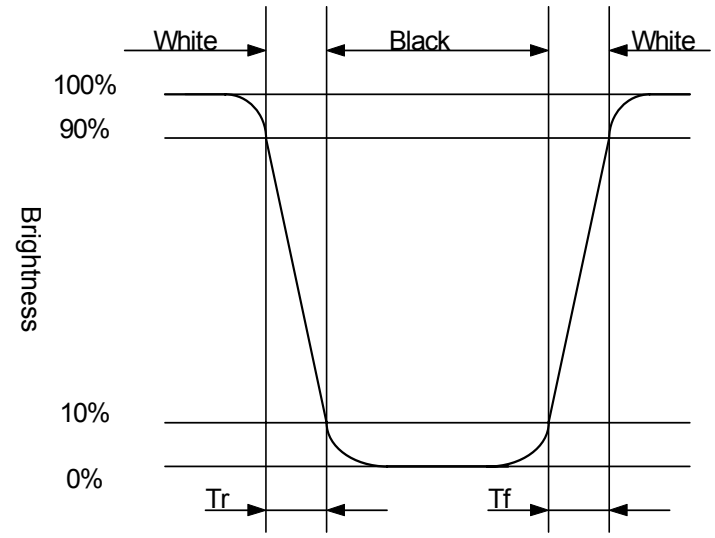
Note 13-3: Definition of Response Time T_r and T_f:



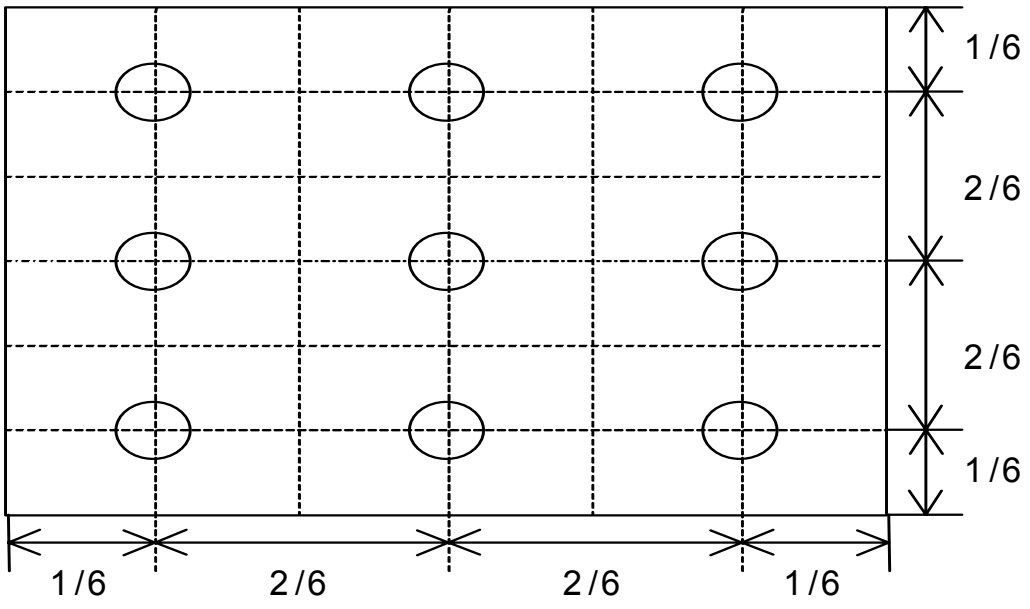
Note 13-4: The definition of contrast ratio $CR = \frac{\text{Luminance at gray level 63}}{\text{Luminance at gray level 0}}$

Note 13-5 : 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 (Gray Level 63).



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Note 13-6 : Cross Talk (CTK) = $\frac{|YA-YB|}{YA} \times 100\%$

YA : Brightness of Pattern A

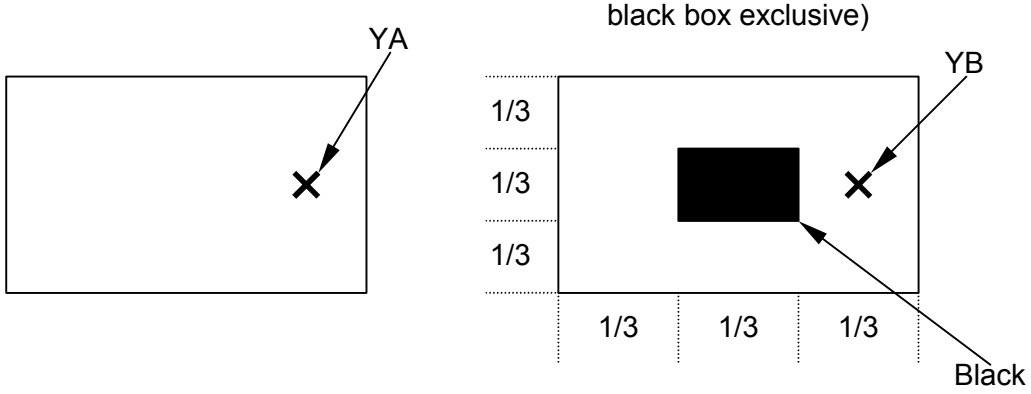
YB : Brightness of Pattern B

Pattern A

(Gray Level 31)

Pattern B

(Gray Level 31, central black box exclusive)



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

(Gray Level 0)

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14. Handling Cautions

14-1) 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 dirt. It is recommended to peel off the laminator before use and taking care of static electricity.

14-2) Precautions in mounting

a) Wipe off water drops or finger grease immediately. Long contact with water may cause discoloration or spots.

b) TFT-LCD module uses glass which breaks or cracks easily if dropped or bumped on hard surface. Please handle with care.

c) Since CMOS LSI is used in the module. So take care of static electricity and earth yourself when handling.

14-3) 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.

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15. Reliability Test

No	Test Item	Test Condition
1	High Temperature Storage Test	Ta = +70℃, 240 hrs
2	Low Temperature Storage Test	Ta = -20℃, 240 hrs
3	Low Temperature Operation Test	Ta = 0℃, 240 hrs
4	High Temperature & High Humidity Operation Test	Ta = +60℃, 90%RH, 240 hrs (No Condensation)
5	Thermal Cycling Test (non-operating)	-20℃→+70℃, 200 Cycles 30min 30min
6	Vibration Test (non-operating)	Frequency : 10 ~ 55 H_Z Amplitude : 1.0 mm Sweep time : 11 mins Test Period : 6 Cycles for each direction of X, Y, Z
7	Shock Test (non-operating)	100G , 6ms Direction : ±X , ±Y , ±Z Cycle : 3 times
8	Electrostatic Discharge Test (non-operating)	200pF, 0Ω ±200V 1 time / each terminal

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

[Judgement Criteria]
Under the display quality test conditions with normal operation state , there should be no change which may affect practical display function.

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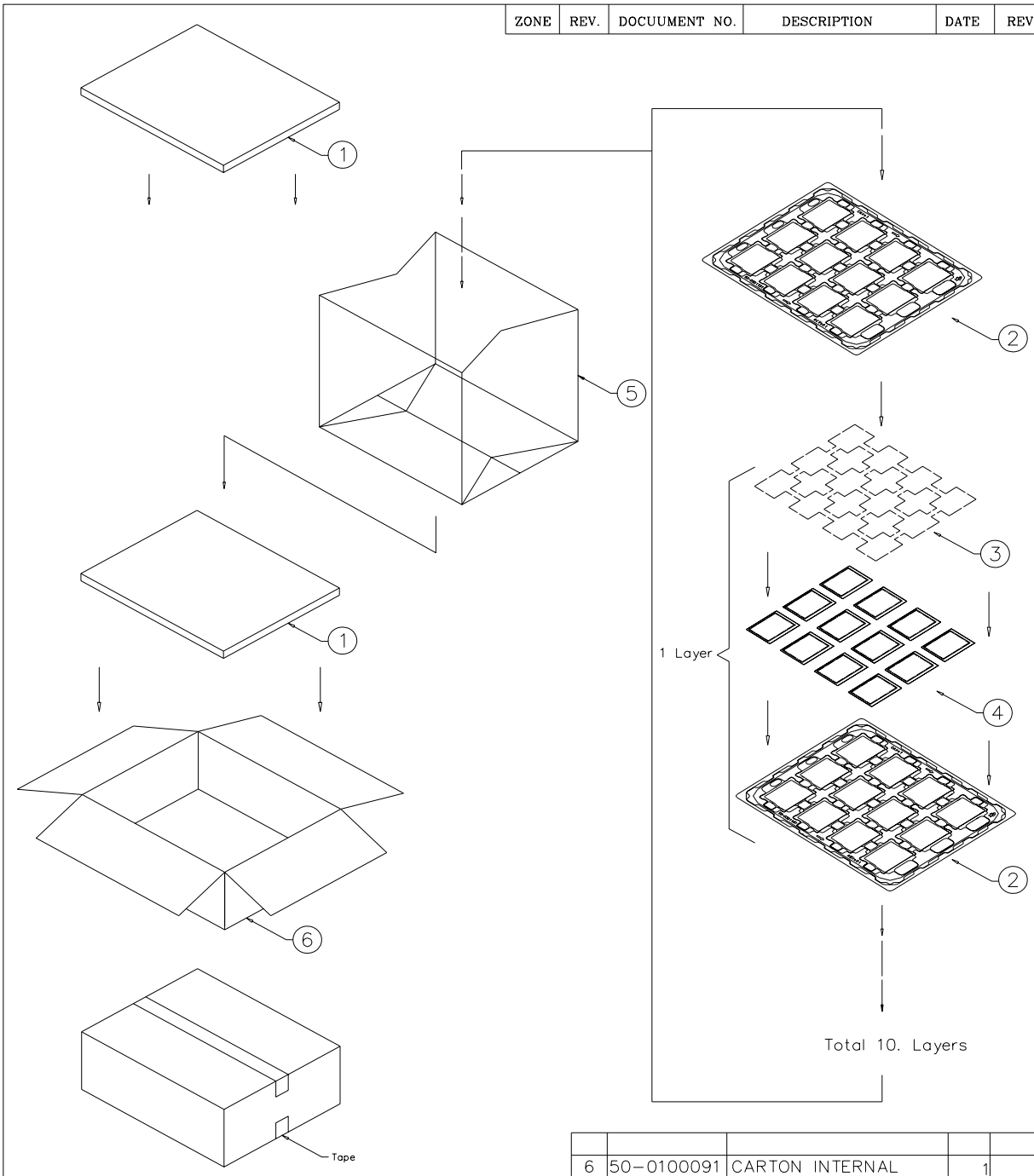
16. Packing

ZONE	REV.	DOCUUMENT NO.	DESCRIPTION	DATE	REV.BY



NOTE:

1. One layer include: 1 piece of cushion sheet, 12pcs panel & 1 piece of tray.
2. Q'TY: 120 pcs panel/carton.
3. Dimension: 455*375*190mm
4. Weight: 7.7 KG

ITEM	PART NO.	DESCRIPTION	QTY	REMARK
6	50-0100091	CARTON INTERNAL	1	
5	50-0500041	摺口袋450*380*700mm	1	抗靜電
4		PD035VX2	120	
3	50-0200059	EPE CUSHION SHEET	10	抗靜電
2	50-0301181	TRAY	11	抗靜電
1	50-0300491	EPE FOAM	2	

MTL.SPEC.	UNSPECIFIED TOL'S ANGLE ROUGHNESS	REMARK	元太科技股份有限公司 Prime View Internation Co.,ltd.

APPROVE		. .	SCALE	UNIT	SHEET 1 OF 2	DWG.TITLE PA035VX2 PACKING Dim
CHECK		. .				
DESIGN	Dennis	'05.01.21	MTL.NO.	DWG.NO.	REV. 01	A4 SIZE

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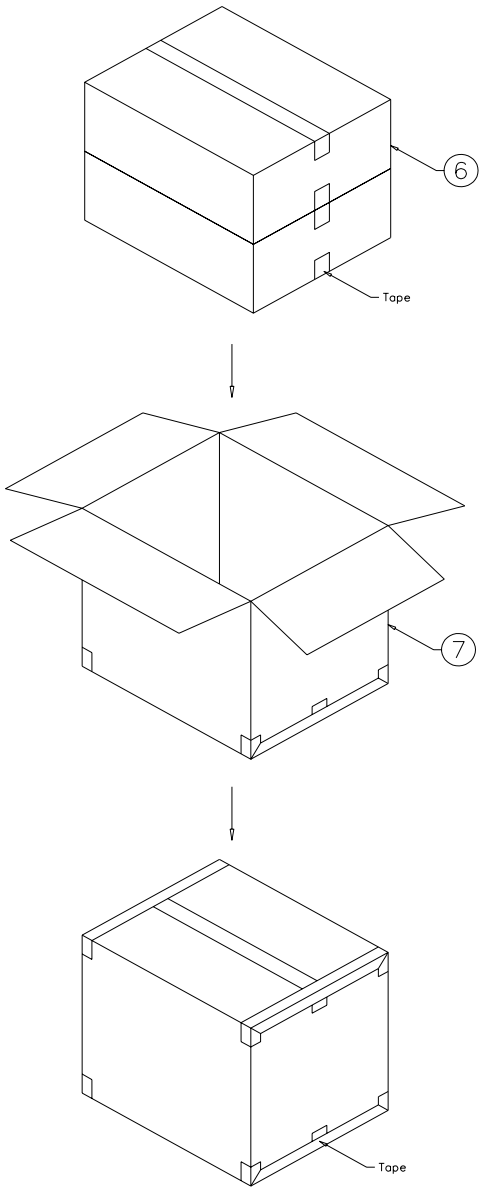
ZONE	REV.	DOCUUMENT NO.	DESCRIPTION	DATE	REV.BY



NOTE:

1. Q'TY: 240 pcs panel/carton.
2. Dimension: 480*396*405mm
3. Weight: 16.3 KG

ITEM	PART NO.	DESCRIPTION	QTY	REMARK
7	50-0100101	CARTON EXTERNAL	1	

MTL.SPEC.	UNSPECIFIED TOL'S ANGLE ROUGHNESS	REMARK	元太科技股份有限公司 Prime View Internation Co.,ltd.

APPROVE		. .	SCALE	UNIT	SHEET 2 OF 2	DWG.TITLE PA035VX2 PACKING Dim
CHECK		. .				
DESIGN	Dennis	'05.01.21	MTL.NO.		DWG.NO.	REV. 01 / A4 SIZE

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Revision History

Rev.	Issued Date	Revised Contents
0.1	Oct. 21 , 2004	New
1.0	Jan. 26 , 2005	Removed Page 24 : Indication of Lot Number Label Add Page 24 : Reliability (Note : The protective film must be removed before temperature test.)

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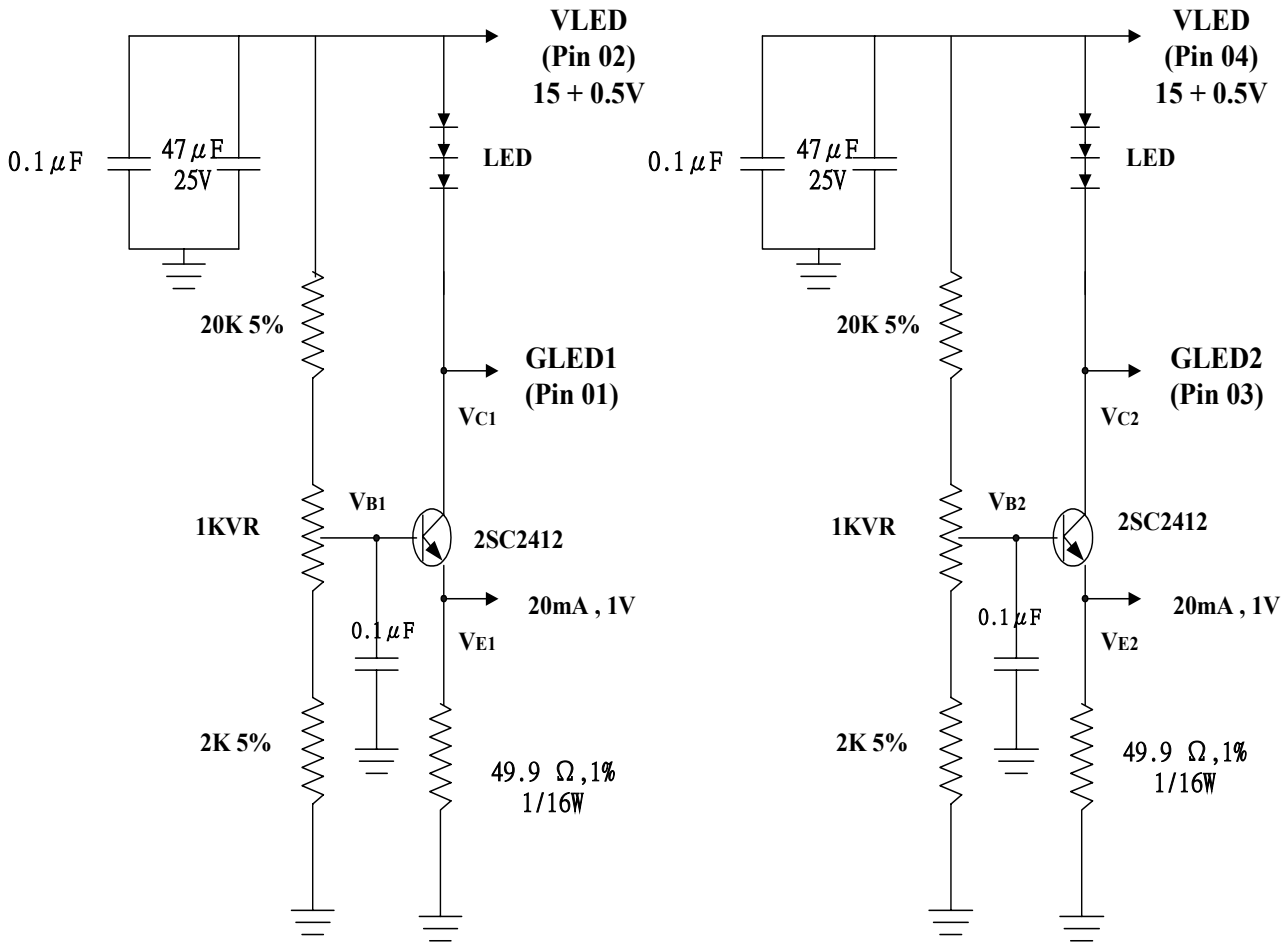
Appendix



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