SPECIFICATIONS OF
LIQUID CRYSTAL DISPLAY

MODEL NO :   **TDAD106NCRN0**

# CONTENTS :

1. Features :

Item		Feature	Item	Feature
Panel Dimension		50.80 X 25.4/21.4	Viewing Area	47.8 X 18.40
Display Mode		TN	Driving Condition	1/4Duty, 1/3Bias, 3.3V
Display Type		Reflective	Viewing Direction	6H
Color	Display	Black	Operation Temp	0°C~50°C
	Ground	White	Storage Temp	-10°C~60°C
Connector		PIN		

2. Electro-optical Characteristics :

Item		Symbol	Temp(℃)	Rating			Unit	Note
				Min	Typ	Max		
Recommended Driving Voltage		Vop	0	2.9	3.1	3.3	V	Note1
			25	3.1	3.3	3.5		
			50	3.3	3.5	3.7		
Response Time	Rise Time	Tr	0	-	-	-	Ms	Note2
			25	-	-	90		
			50	-	-	-		
	Fall Time	Tf	0	-	-	-		
			25	-	-	120		
			50	-	-	-		
Frame Frequency		fF	25	32	64	200	Hz	
D.C Resistance		R_{LC}	25	-	-	-	MΩ	
Viewing angle Cr≧2	ψ=0°	θ_1	25	-	45	-	Deg	Note4
	ψ=180°	θ_2		-	45	-		
	ψ=90°	θ_3		-	10	-		
	ψ=270°	θ_4		-	40	-		
Viewing Direction			6′CLOCK					
Contrast Ratio		Cr	25	4	-	-	-	Note3

Note1. Definition of operation voltage (Vop)

Positive type

Negative type
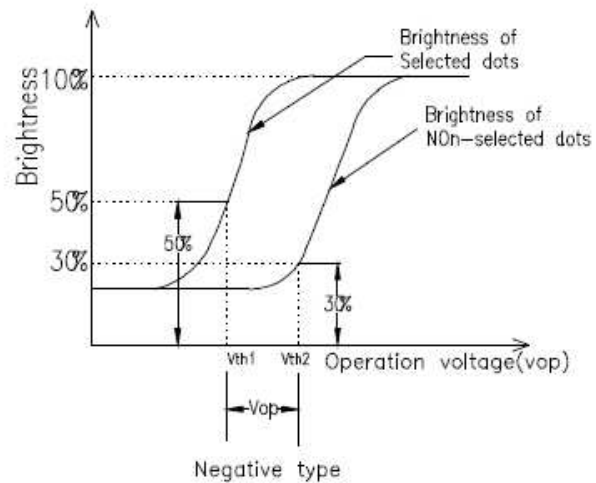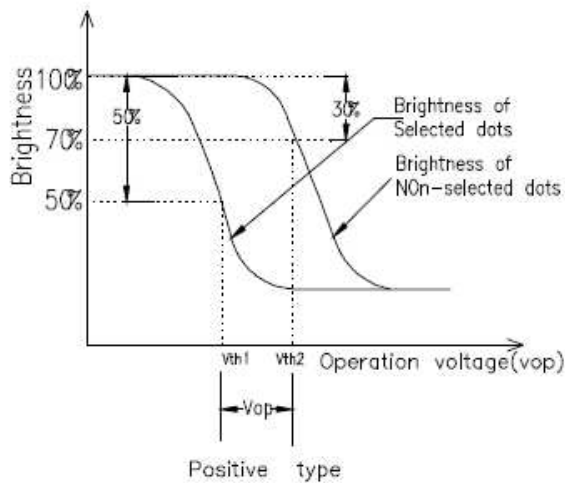
Conditions

Vth1: (1)Temperature: See Individual Specification

   (2)Viewing Angle (θ): Minimum Value Individual Specification

   (3)Driving Frequency: Maximum Value In Individual Specification
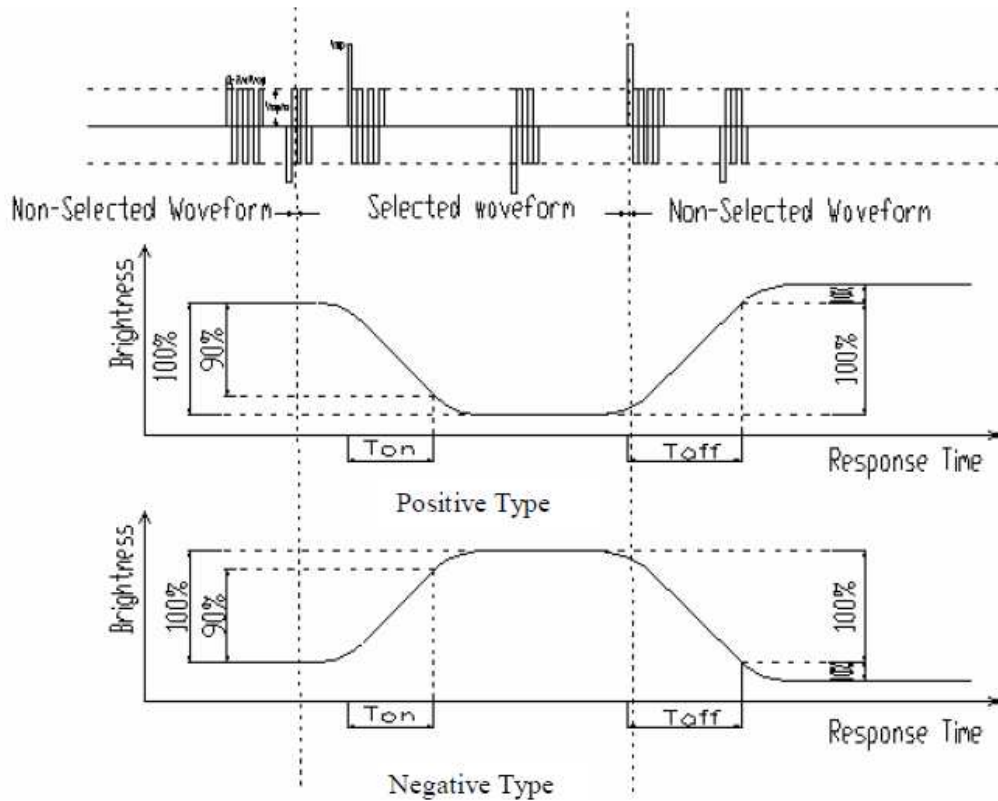
   (4) Waveform: Selected Waveform

Vth2: (1)Temperature: See Individual Specification

   (2)Viewing Angle(θ): Maximum Value In Individual Specification

   (3)Driving Frequency: Maximum Value In Individual Specification

   (4)Waveform: Non-selected Waveform

Note 2.   Definition of response time

Non-Selected Woveform — Selected woveform — Non-Selected Woveform

Positive Type

Negative Type

Conditions:

(1) Viewing Angle(θ):Minimum Value In Individual Specification

(2) Operating Voltage (Vop): See Individual Specification

(3) Driving Frequency: Typical Value In Individual Specification

(4) Driving Waveform: See Individual Specification

(5) Measuring Temperature: See Individual Specification

Note 3   Definition of contrast ratio C.R

Positive type

Negative type
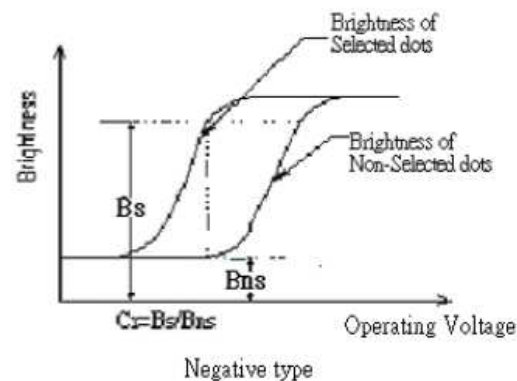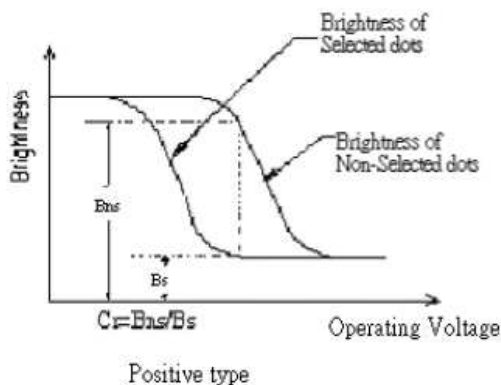
Conditions:

    (1) Operating Voltage: Vop

    (2) Temperature: See Individual Specification

    (3) Viewing Angles: See Individual Specification

    (4) Driving Frequency: Typical value In Individual Specification

    (5) Driving waveform: 1/N Duty, 1/a Bias waveform

$$\text{Positive type: } Cr = \frac{\text{Brightness of Non-Selected dots (Bns)}}{\text{Brightness of Selected dots (Bs)}}$$

$$\text{Negative type: } Cr = \frac{\text{Brightness of Selected dots (Bs)}}{\text{Brightness of Non-Selected dots (Bns)}}$$
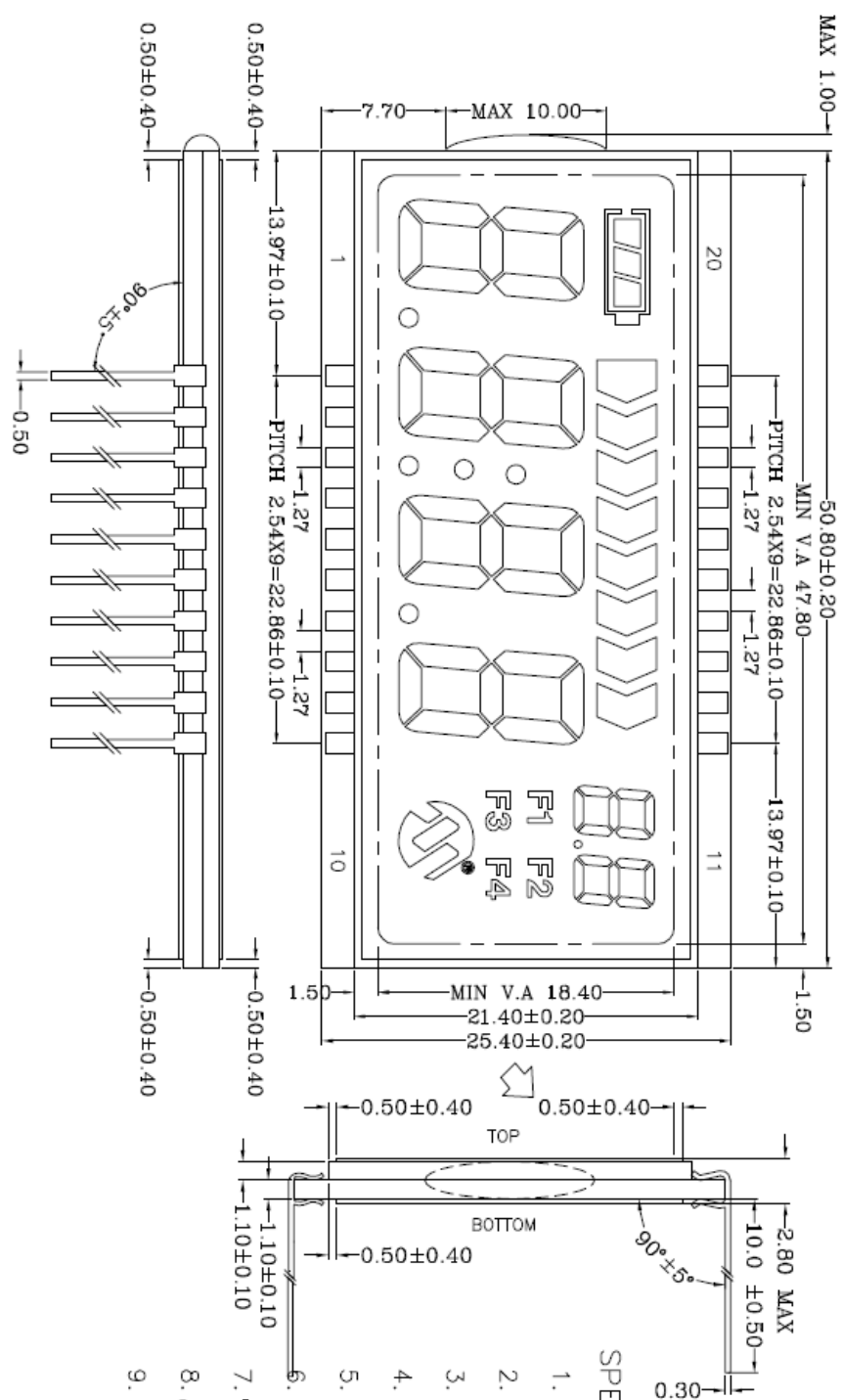
Note 4   Viewing Angle
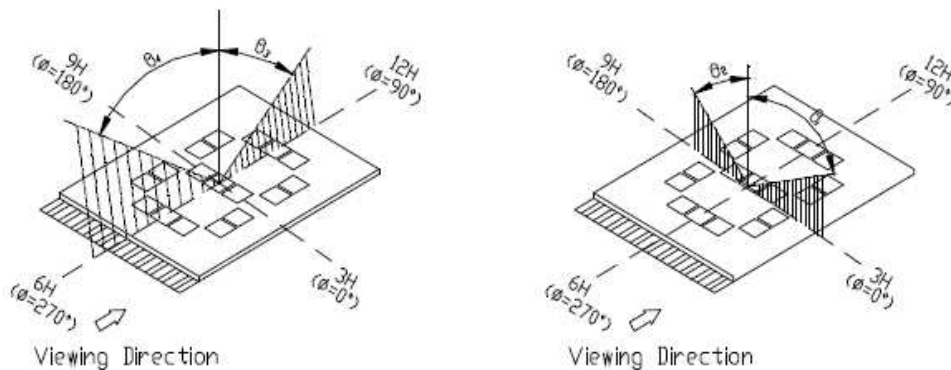
LCD Panel

Viewing Angles (θ_1, θ_2, θ_3, θ_4) measuring conditions:
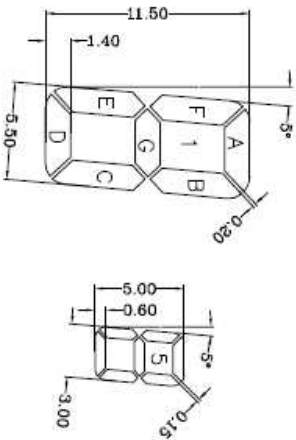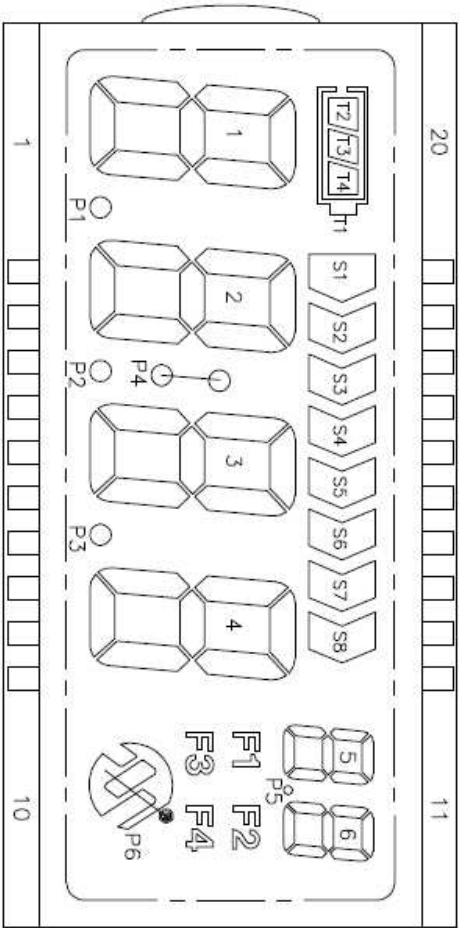
    (1) Temperature :   See Individual Specification

    (2) Operation Voltage (Vop): See Individual Specification

    (3) Contrast Ratio (Cr) Minimum: Cr =2

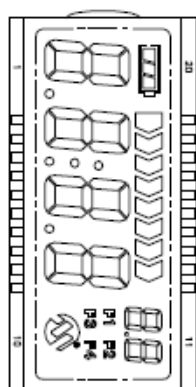   (4) Driving Frequency: See Individual Specification

SPECIFICATION:

1. DISPLAY TYPE:
   TN.POSITIVE
2. VIEWING DIRECTION:
   6H
3. DRIVING VOLTAGE:
   3.3V
4. DRIVE METHOD:
   1/4DUTY.1/3BIAS
5. FRONT POLARIZER:
   TRANSMISSIVE
6. BACK POLARIZER:
   REFLECTIVE
7. OPERATING TEMP:
   0~50°C
8. STORAGE TEMP:
   -10~60°C
9. CONNECTORS:
   PIN

Dimensions: 11.50, 1.40, 5.50, 0.20, 5°

Dimensions: 5.00, 0.60, 3.00, 0.15, 5°

PIN	COM1	COM2	COM3	COM4
1	1A	1F	1E	1D
2	1B	1G	1C	P1
3	2A	2F	2E	2D
4	2B	2G	2C	P2
5	3A	3F	3E	3D
6	3B	3G	3C	P3
7	4A	4F	4E	4D
8	4B	4G	4C	P4
9	F1	F3	F4	P6
10	F2	6G	6C	6B
11	6D	6F	6E	6A
12	P5	5G	5C	5B
13	5D	5F	5E	5A
14	S8	S7	S6	S5
15	S1	S2	S3	S4
16	T1	T3	T2	T4
17	COM1			
18		COM2		
19			COM3	
20				COM4

SCALE 4:1

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