

SPECIFICATIONS OF LIQUID CRYSTAL DISPLAY

MODEL NO : TDAD106NCRN0

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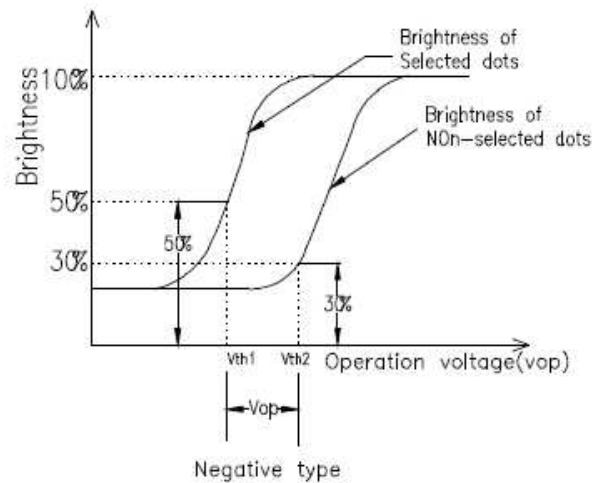
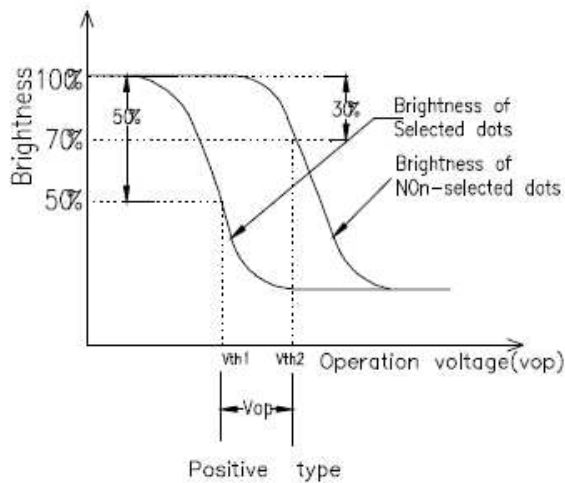
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1. Features :

| 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)**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

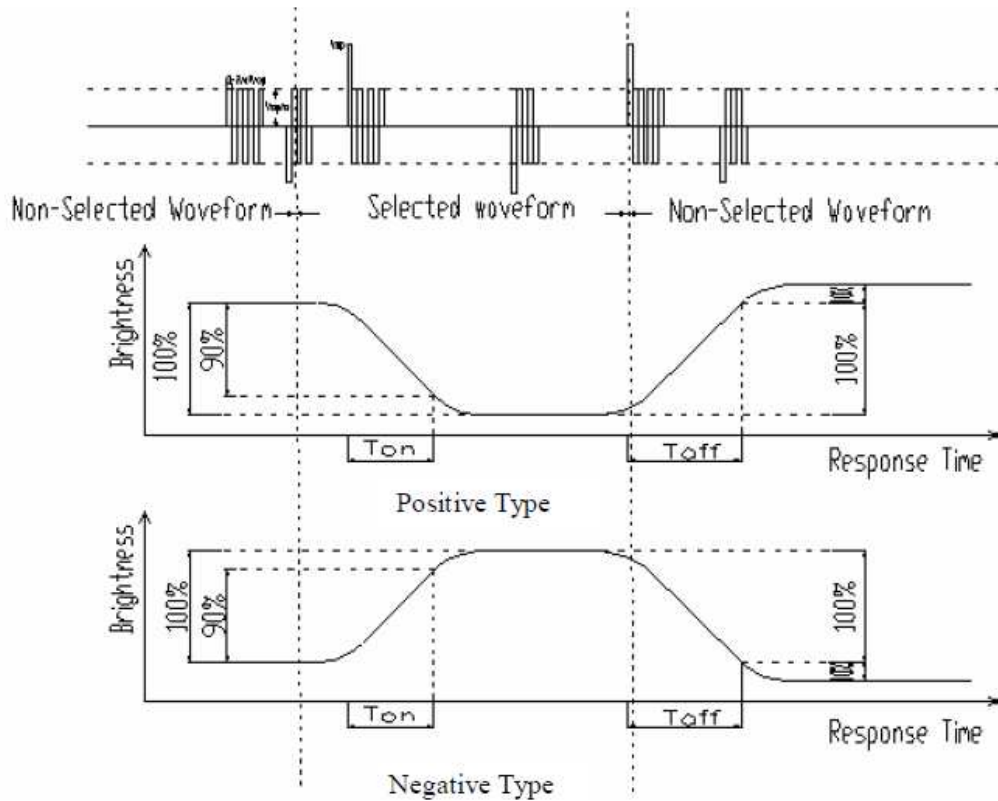
Vth2: (1)Temperature: See Individual Specification

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

(3)Driving Frequency: Maximum Value In Individual Specification

(4)Waveform: Non-selected Waveform

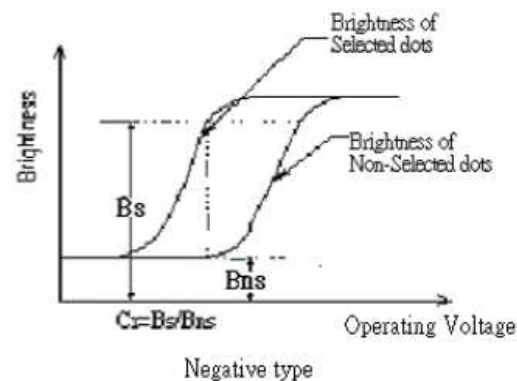
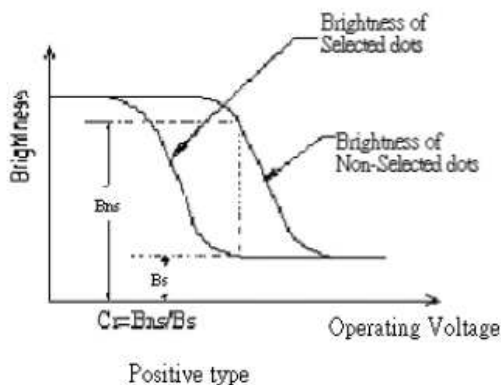
Note 2. Definition of response time



Conditions:

- (1) Viewing Angle(θ): Minimum Value In Individual Specification
- (2) Operating Voltage (V_{op}): 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



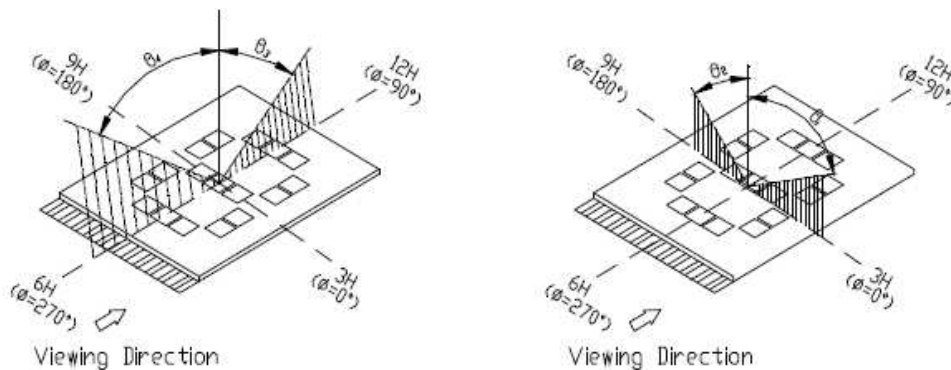
Conditions:

- (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

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

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

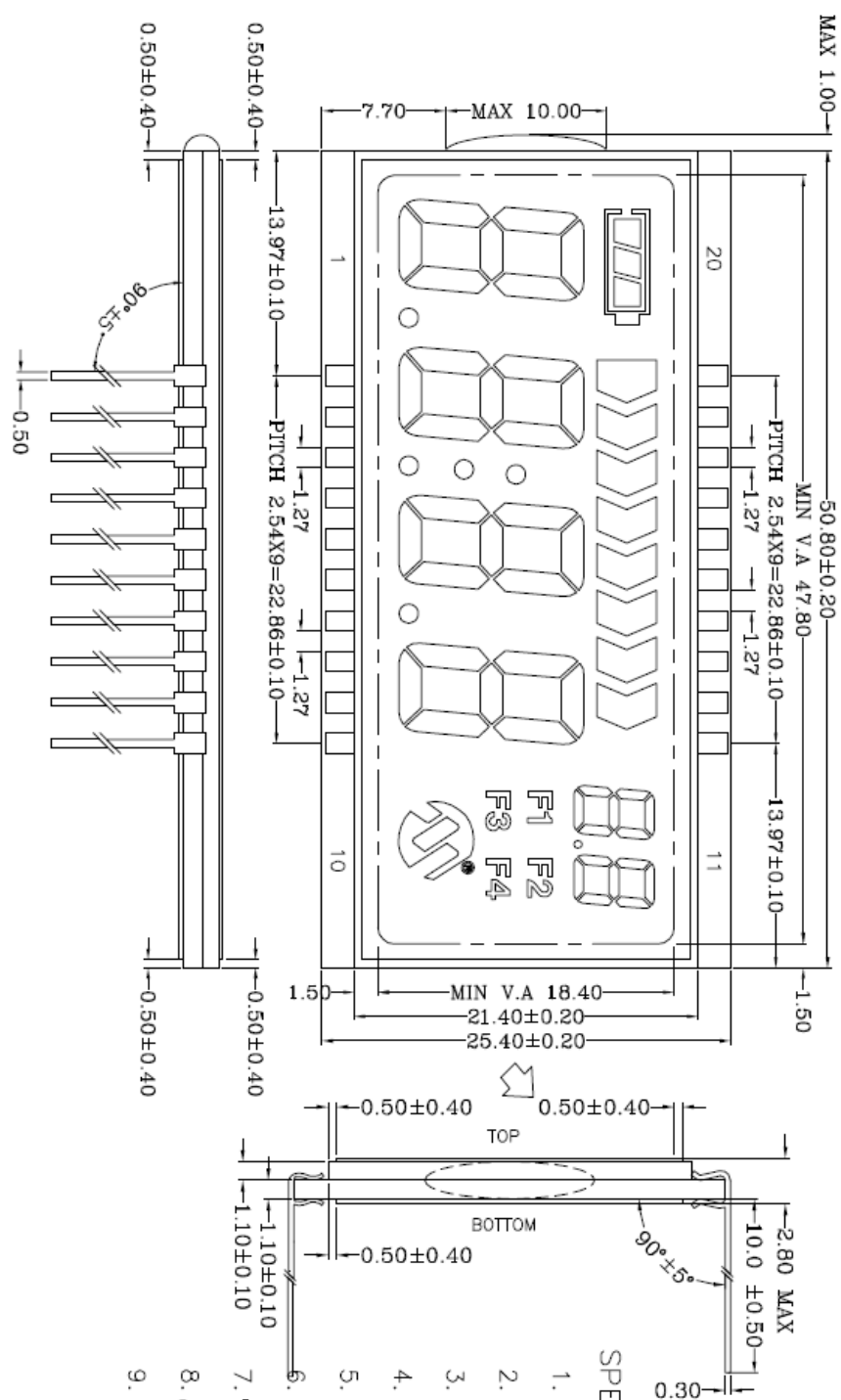
Note 4 Viewing Angle



LCD Panel

Viewing Angles (θ_1 , θ_2 , θ_3 , θ_4) measuring conditions:

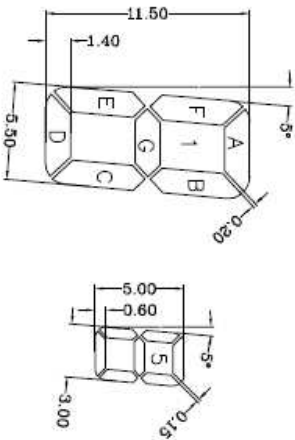
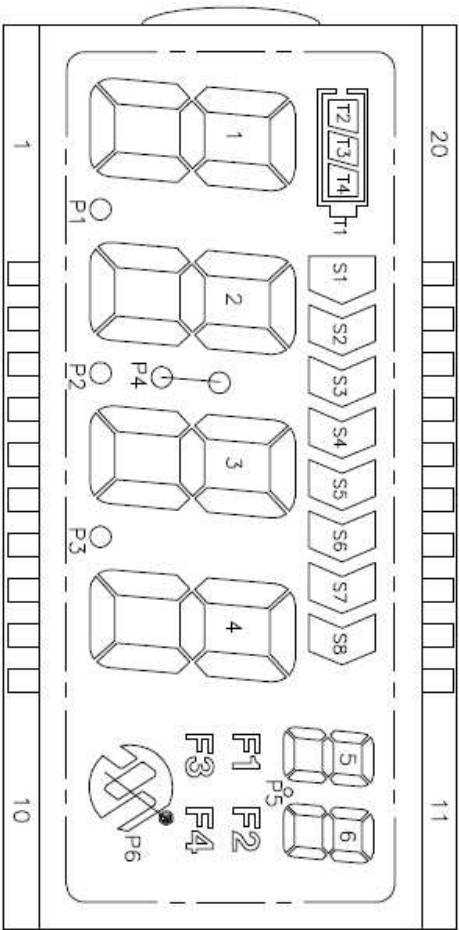
- (1) Temperature : See Individual Specification
- (2) Operation Voltage (Vop): See Individual Specification
- (3) Contrast Ratio (Cr) Minimum: Cr=2
- (4) Driving Frequency: See Individual Specification

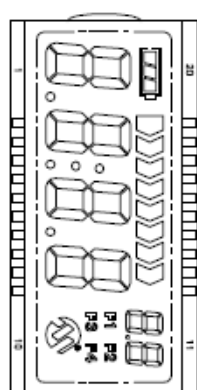


SPECIFICATION:

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

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





1:1

SCALE 4:1

