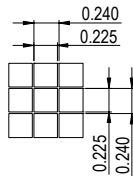
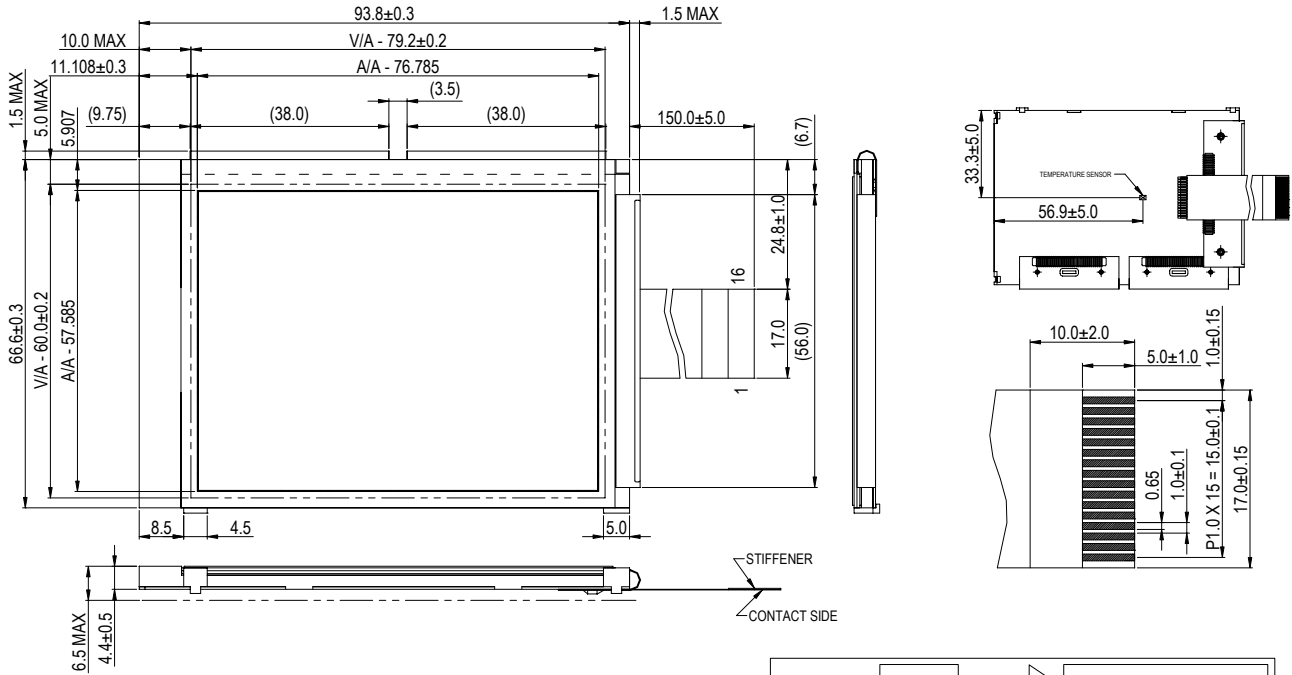


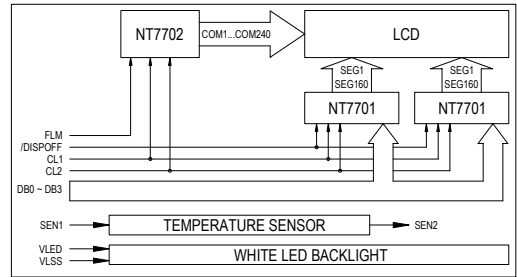


STANDARD GRAPHICS MODULES

G2432x19..... OUTLINE DIMENSION AND BLOCK DIAGRAM



The tolerance unless classified ± 0.3 mm



| PIN ASSIGNMENT | | |
|----------------|-----------|---|
| Pin No. | Symbol | Function |
| 1 | SEN1 | Temp Sensor Pin 1 |
| 2 | SEN2 | Temp Sensor Pin 2 |
| 3 | VDD | Power Supply for Logic Circuit |
| 4 | VSS | Ground |
| 5 | VEE | Power Supply for Led Driving Voltage |
| 6 | FLM | The FLM Signal Indicating The Beginning of Each Display Cycle |
| 7 | NC | No Connection |
| 8 | CL1 | Display Data Latch |
| 9 | CL2 | Display Data Shift |
| 10 | D0 | Display Data |
| 11 | D1 | Display Data |
| 12 | D2 | Display Data |
| 13 | D3 | Display Data |
| 14 | /DISP OFF | Control Led ON/OFF "L" : Display OFF, "H" : Display ON |
| 15 | VLED | Power Supply For Led Backlight |
| 16 | VLSS | Led Ground |

NOTE :
1. ALL BACKLIGHT : SIDE LED BACKLIGHT

| ABSOLUTE MAXIMUM RATING | | | | | |
|---------------------------|-----------|------------|------|------|------|
| Item | Symbol | Conditions | Min. | Max. | Unit |
| Power Supply Voltage | Vdd-Vss | - | 0 | 7.0 | V |
| LCD Driver Supply Voltage | Vee - Gnd | - | - | 26.0 | V |
| OPERATING TEMPERATURE | Topr | Normal | -10 | +60 | °C |
| STORAGE TEMPERATURE | Tstg | Normal | -20 | +70 | °C |

| ELECTRICAL CHARACTERISTIC (Vdd = + 5v, Ta = 25°C) | | | | | | |
|---|------------------|------------|--------|------|--------|------|
| Item | Symbol | Conditions | Min. | Typ. | Max. | Unit |
| Logic Supply Voltage | Vdd | - | 4.5 | 5.0 | 5.5 | V |
| "H" Input Voltage | V _{ih} | - | 0.7Vdd | - | Vdd | V |
| "L" Input Voltage | V _{il} | - | 0 | - | 0.3Vdd | V |
| Module Supply Current | I _{dd} | - | - | 0.1 | - | mA |
| LCD Driving Voltage | V _{com} | Vee - Gnd | 20.9 | 22.0 | 23.1 | V |

| BACKLIGHT OPTION | | | | | |
|------------------|--------|---|------------------------|-----|-----|
| LED COLOR | OPTION | CONDITION | FORWARD CURRENT (mA) | | |
| | | | MIN | TYP | MAX |
| GREEN | NO | - | - | - | - |
| WHITE | YES | V _{led} = 5.0 V R _{led} = 10.0 ohm | - | 80 | 100 |
| BLUE | YES | - | - | - | - |
| AMBER | NO | - | - | - | - |
| RED | NO | - | - | - | - |
| EL | NO | - | - | - | - |

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