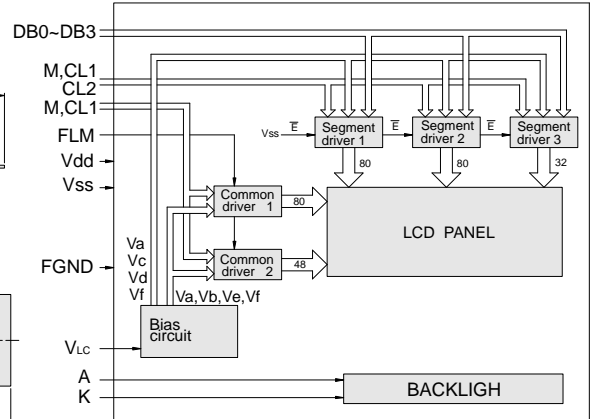
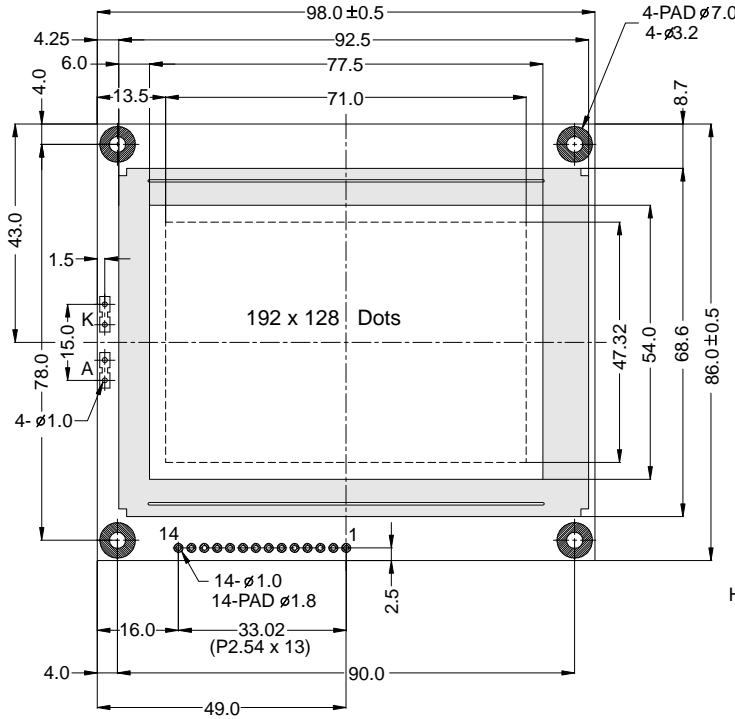




OUTLINE DIMENSION & BLOCK DIAGRAM



The tolerance unless classified ± 0.3mm

| MECHANICAL SPECIFICATION | | | |
|--------------------------|-------------|-----------|------------|
| Overall Size | 98.0 x 86.0 | Module | H2 / H1 |
| View Area | 75.0 x 54.0 | W / O B/L | 5.0 / 10.4 |
| Dot Size | 0.33 x 0.33 | EL B/L | 5.0 / 10.4 |
| Dot Pitch | 0.37 x 0.37 | LED B/L | 8.0 / 13.4 |

| PIN ASSIGNMENT | | |
|----------------|-----------------|------------------------------|
| Pin no. | Symbol | Function |
| 1,2 | D3,D2 | Data line |
| 3 | FLM | Shift direction select |
| 4 | M | Alternation control signal |
| 5 | CL1 | Display data input colock |
| 6 | CL2 | Display data input colock |
| 7,8 | D1,D0 | Data line |
| 9 | Vdd | Power supply(+) |
| 10 | Vss | Power supply(GND) |
| 11 | V _{Lc} | Contrast adjust |
| 12 | FGND | Frame adjust |
| 13 | K | Power supply for LED B/L (+) |
| 14 | A | Power supply for LED B/L (-) |

| ABSOLUTE MAXIMUM RATING | | | | | | | | | |
|----------------------------------|-----------------|-----------|------|---------|-------|-------|------|------|---|
| Item | Symbol | Condition | Min. | Max. | Units | | | | |
| Supply for logic voltage | Vdd-Vss | 25°C | -0.3 | 7.0 | V | | | | |
| LCD driving supply voltage | Vdd-Vee | 25°C | 0 | 22.0 | V | | | | |
| Input voltage | V _{in} | 25°C | -0.3 | Vdd-0.3 | V | | | | |
| ELECTRICAL CHARACTERISTICS | | | | | | | | | |
| Item | Symbol | Condition | Min. | Typical | Max. | Units | | | |
| Power supply voltage | Vdd-Vss | 25°C | 4.5 | — | 5.5 | V | | | |
| LCD operation voltage | V _{op} | Top | N | W | N | W | V | | |
| | | -25°C | — | 19.5 | — | 20.6 | — | V | |
| | | 0°C | 19.4 | — | 20.4 | — | 21.4 | — | V |
| | | 25°C | 18.0 | 17.0 | 18.9 | 17.9 | 19.8 | 18.8 | V |
| | | 50°C | 16.1 | — | 16.9 | — | 17.7 | — | V |
| 70°C | — | 15.4 | — | 16.3 | — | 17.2 | V | | |
| LCM current consumption (No B/L) | I _{dd} | Vdd=5V | — | 2.5 | — | mA | | | |
| Backlight current consumption | LED/edge | VB/L=4.2V | — | 85 | — | mA | | | |
| | LED/array | VB/L=4.2V | — | — | — | mA | | | |

REMARK

LCD option: STN, TN, FSTN

Backlight Option: LED,EL Backlight feature, other Specs not available on catalog is under request.

