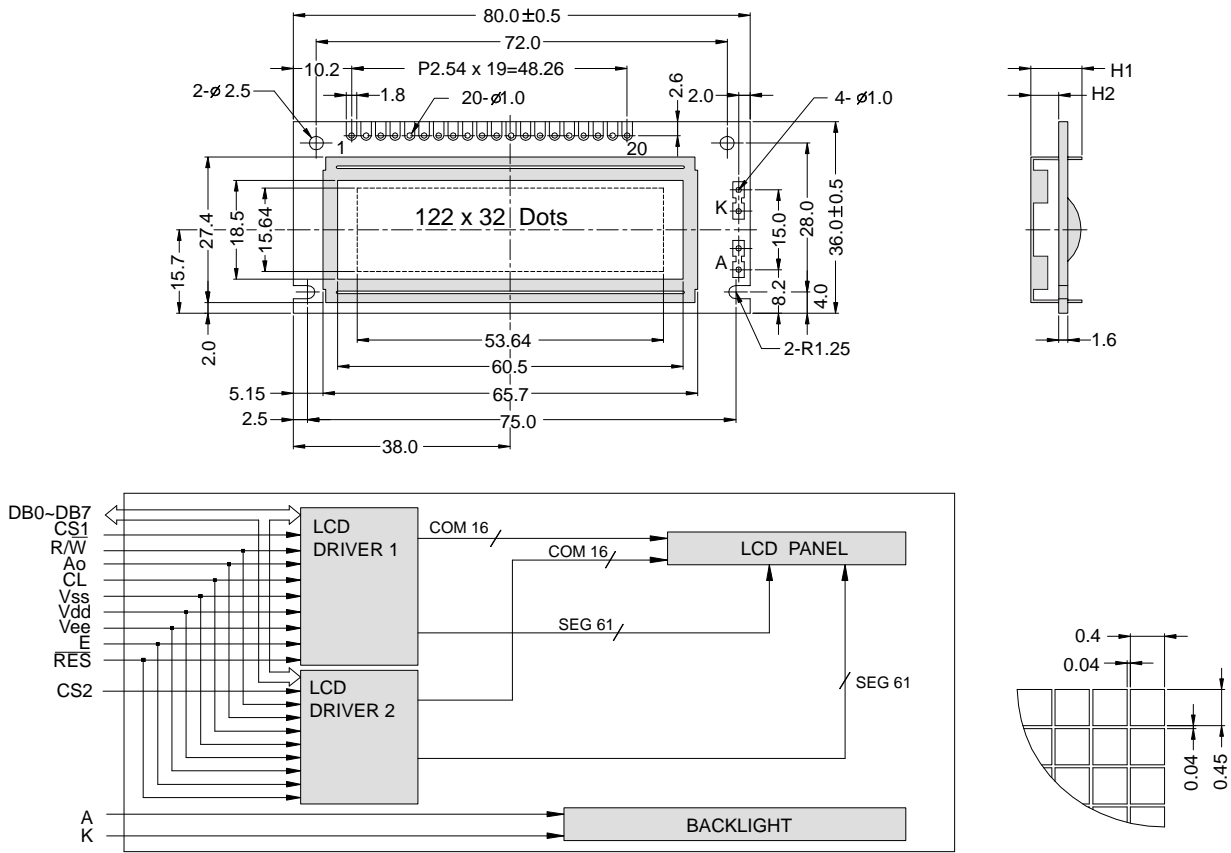




OUTLINE DIMENSION & BLOCK DIAGRAM



The tolerance unless classified $\pm 0.3\text{mm}$

| MECHANICAL SPECIFICATION | | | |
|--------------------------|-------------|---------|------------|
| Overall Size | 80.0 x 36.0 | Module | H2 / H1 |
| View Area | 60.5 x 18.5 | W/O B/L | 4.9 / 9.0 |
| Dot Size | 0.40 x 0.45 | EL B/L | 4.9 / 9.0 |
| Dot Pitch | 0.44 x 0.49 | LED B/L | 8.9 / 13.0 |

| PIN ASSIGNMENT | | |
|----------------|---------|------------------------------|
| Pin no. | Symbol | Function |
| 1 | Vss | Power supply(GND) |
| 2 | Vdd | Power supply(+) |
| 3 | Vo | Contrast Adjust |
| 4 | A0 | Command / data input |
| 5 | CS1 | Chip select driver 1 |
| 6 | CS2 | Chip select driver 2 |
| 7 | CL | External clock input |
| 8 | E | Enable signal |
| 9 | R/W | Data read / write |
| 10-17 | DB0-DB7 | Data bus line |
| 18 | RES | Reset |
| 19 | A | Power supply for LED B/L (+) |
| 20 | K | 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 | 8.0 | V | | | | |
| LCD driving supply voltage | Vdd-Vee | 25°C | -0.3 | 16.5 | V | | | | |
| Input voltage | Vin | 25°C | -0.3 | Vdd+0.3 | V | | | | |
| ELECTRICAL CHARACTERISTICS | | | | | | | | | |
| Item | Symbol | Condition | Min. | Typical | Max. | Units | | | |
| Power supply voltage | Vdd-Vss | 25°C | 2.7 | - | 5.5 | V | | | |
| LCD operation voltage | Vop | Top | N | W | N | W | V | | |
| | | -20°C | - | 8.6 | - | 9.1 | - | 9.6 | V |
| | | 0°C | 6.1 | - | 6.4 | - | 6.7 | - | V |
| | | 25°C | 5.6 | 7.7 | 5.9 | 8.1 | 6.2 | 8.5 | V |
| | | 50°C | 5.1 | - | 5.4 | - | 5.7 | - | V |
| 70°C | - | 7.2 | - | 7.6 | - | 8 | V | | |
| LCM current consumption (No B/L) | Idd | Vdd=5V | - | 1.0 | 2.5 | mA | | | |
| Backlight current consumption | LED/edge | VB/L=4.2V | - | - | - | mA | | | |
| | LED/array | VB/L=4.2V | - | 120 | - | mA | | | |

REMARK

LCD option: STN, TN, FSTN

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

