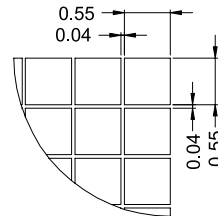
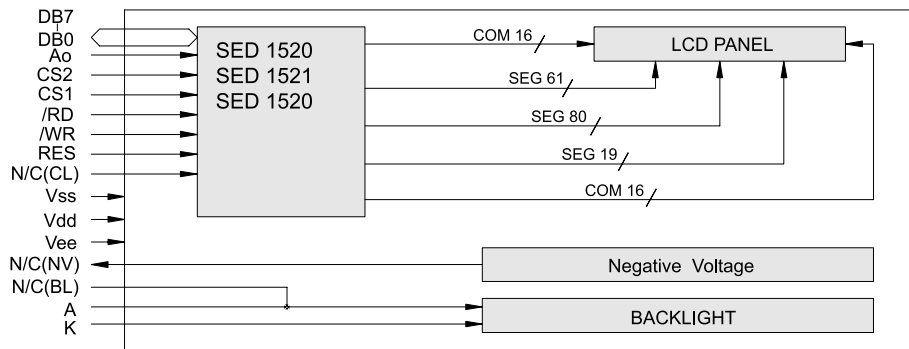
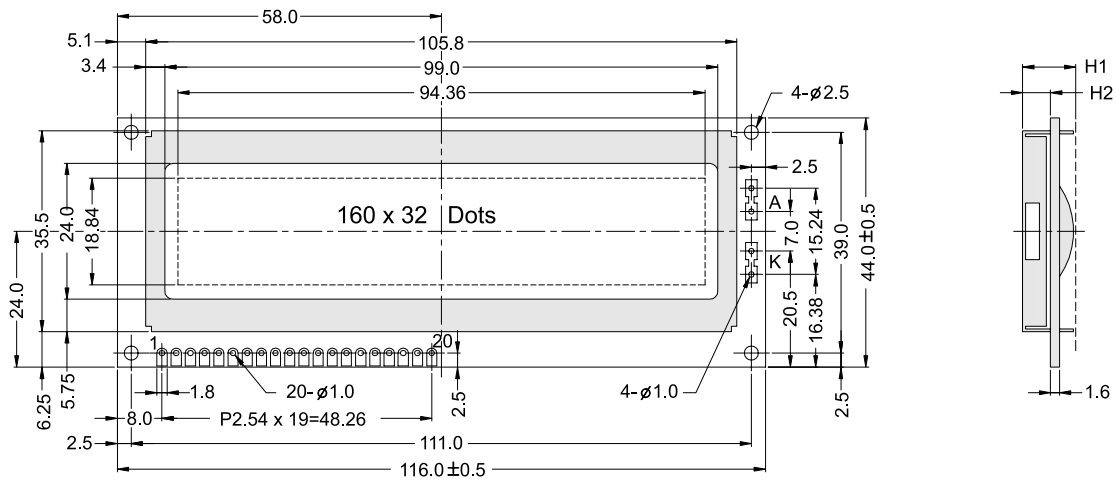


## OUTLINE DIMENSION & BLOCK DIAGRAM



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

| MECHANICAL SPECIFICATION |              |           |           |
|--------------------------|--------------|-----------|-----------|
| Overall Size             | 116.0 x 44.0 | Module    | H2 / H1   |
| View Area                | 99.0 x 24.0  | W / O B/L | 5.0 / 9.5 |
| Dot Size                 | 0.55 x 0.55  | EL B/L    | 5.0 / 9.5 |
| Dot Pitch                | 0.59 x 0.59  | LED B/L   | - / -     |

| PIN ASSIGNMENT |         |                       |
|----------------|---------|-----------------------|
| Pin no.        | Symbol  | Function              |
| 1              | Ao      | Command / data select |
| 2              | CS2     | Chip select driver 2  |
| 3              | CS1     | Chip select driver 1  |
| 4              | RD      | Data read             |
| 5              | WR      | Data write            |
| 6              | Vdd     | Power supply(+)       |
| 7              | Vss     | Power supply(GND)     |
| 8-15           | DB0-DB7 | Data bus line         |
| 16             | RES     | Reset                 |
| 17             | Vee     | Contrast adjust       |
| 18             | N.C     | No Connection         |
| 19             | N.C     | No Connection         |
| 20             | N.C     | No Connection         |

| 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     | -    | 6.4     | -     | 6.8   | - | 7.4 | V |
|                                  |           | 0°C       | -    | -       | -     | -     | - | -   | V |
|                                  |           | 25°C      | -    | 5.8     | -     | 6.2   | - | 6.8 | V |
|                                  |           | 50°C      | -    | -       | -     | -     | - | -   | V |
|                                  |           | 70°C      | -    | 5.3     | -     | 5.7   | - | 6.3 | V |
| LCM current consumption (No B/L) | Idd       | Vdd=5V    | -    | 1       | 2.5   | mA    |   |     |   |
| Backlight current consumption    | LED/edge  | VB/L=4.2V | -    | -       | -     | mA    |   |     |   |
|                                  | LED/array | VB/L=4.2V | -    | -       | -     | mA    |   |     |   |