



## OUTLINE DIMENSION & BLOCK DIAGRAM



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

### MECHANICAL SPECIFICATION

|              |              |           |             |
|--------------|--------------|-----------|-------------|
| Overall Size | 180.0 x 40.0 | Module    | H2 / H1     |
| View Area    | 149.0 x 23.0 | W / O B/L | 5.2 / 9.8   |
| Dot Size     | 1.12 x 1.12  | EL B/L    | 5.2 / 9.8   |
| Dot Pitch    | 1.22 x 1.22  | LED B/L   | 10.7 / 15.3 |

### PIN ASSIGNMENT

| Pin no. | Symbol | Function                     |
|---------|--------|------------------------------|
| 1       | Vss    | Power supply(GND)            |
| 2       | Vdd    | Power supply(+)              |
| 3       | Vo     | Contrast Adjust              |
| 4       | RS     | Register select signal       |
| 5       | R/W    | Data read / write            |
| 6       | E      | Enable signal                |
| 7       | DB0    | Data bus line                |
| 8       | DB1    | Data bus line                |
| 9       | DB2    | Data bus line                |
| 10      | DB3    | Data bus line                |
| 11      | DB4    | Data bus line                |
| 12      | DB5    | Data bus line                |
| 13      | DB6    | Data bus line                |
| 14      | DB7    | Data bus line                |
| 15      | A/Vee  | Power supply for LED B/L (+) |
| 16      | 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 | 7       | V     |
| LCD driving supply voltage | Vdd-Vee | 25°C      | -0.3 | 13      | 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     |
|                                  |           | -20°C     | —    | 5       | —    | 5.6   |
|                                  |           | 0°C       | 4.3  | —       | 4.6  | —     |
|                                  |           | 25°C      | 3.9  | 4.8     | 5.2  | 5.4   |
|                                  |           | 50°C      | 3.7  | —       | 4.0  | —     |
| LCM current consumption (No B/L) | Idd       | 70°C      | —    | 4.3     | —    | 5.1   |
|                                  |           | Vdd=5V    | —    | 2       | 3    | mA    |
| Backlight current consumption    | LED/edge  | VB/L=4.2V | —    | —       | —    | mA    |
|                                  | LED/array | VB/L=4.2V | —    | 360     | —    | mA    |

## REMARK

LCD option: STN, TN, FSTN

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

