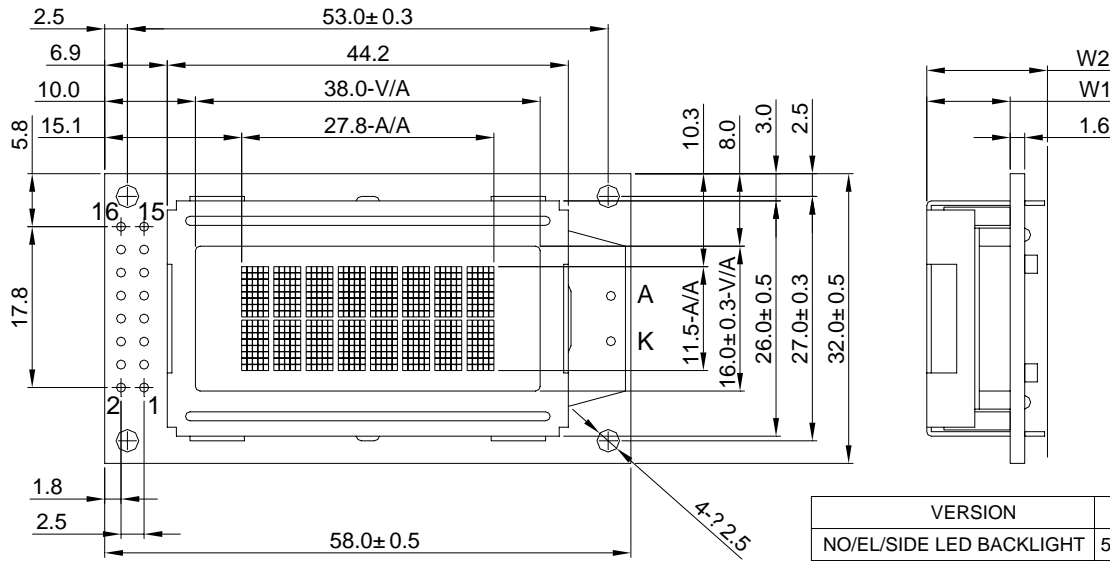


Standard LCD module

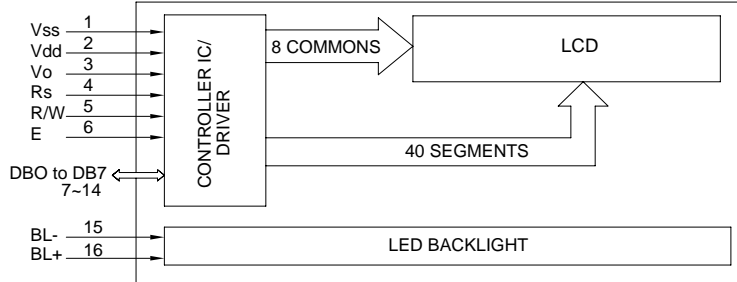
MC0802-04

**OUTLINE DIMENSION**

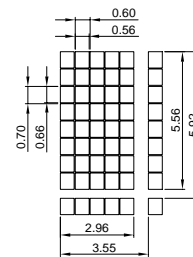


| VERSION                  | W1       | W2       |
|--------------------------|----------|----------|
| NO/EL/SIDE LED BACKLIGHT | 5.20±0.5 | 9.5 MAX  |
| BOTTOM LED BACKLIGHT     | 9.20±0.5 | 13.5 MAX |

**BLOCK DIAGRAM**



**DISPLAY PATTERN**



**MECHANICAL SPECIFICATION**

| Item         | Dimensions(W)X(H) | Unit |
|--------------|-------------------|------|
| Overall Size | 53.0x32.0         | MM   |
| View Area    | 38.0x16.0         | MM   |
| Character    | 2.96x5.56         | MM   |
| Dot Size     | 0.56x0.66         | MM   |
| Dot Pitch    | 0.60x0.70         | MM   |

**PIN ASSIGNMENT**

| Pin no        | Symbol  | Function                 |
|---------------|---------|--------------------------|
| 1             | Vss     | Power Supply(GND)        |
| 2             | VDD     | Power Supply(+)          |
| 3             | VO      | Contrast Adjust          |
| 4             | RS      | Command data input       |
| 5             | R/W     | Data read / write        |
| 6             | E       | Enable signal            |
| 7-14          | DB0~DB7 | Data bus line            |
| 15            | BL-     | Back light power cathode |
| 16            | BL+     | Back light power anode   |
| <b>OPTION</b> |         |                          |
| 15            | BL+     | Back light power anode   |
| 16            | BL-     | Back light power cathode |

**ABSOLUTE MAXIMUM RATING**

| Item                       | Symbol | Condition | Min  | Max     | Unit |
|----------------------------|--------|-----------|------|---------|------|
| Supply for logic voltage   | VDD    | 25°C      | -0.3 | 7.0     | V    |
| LCD driving supply voltage | VDD-Vo | 25°C      | -0.3 | VDD+0.3 | V    |
| Input voltage              | VI     | 25°C      | -0.3 | VDD+0.3 | V    |

**ELECTRICAL CHARACTERISTICS**

| Item                          | Symbol | Condition | Min                          | Typical | Max | Unit |
|-------------------------------|--------|-----------|------------------------------|---------|-----|------|
| Supply voltage for logic      | VDD    | ---       | 4.5                          | 5.0     | 5.5 | V    |
| Supply current for logic      | IDD    | ---       | ---                          | 1.0     | 2.0 | mA   |
| Operation voltage for LCD     | VDD-Vo | 0°C       | ---                          | ---     | --- | V    |
|                               |        | 25°C      | 4.3                          | 4.5     | 4.7 | V    |
|                               |        | 50°C      | ---                          | ---     | --- | V    |
| Input voltage "H" level       | VIH    | ---       | 0.7VDD                       | ---     | VDD | V    |
| Input voltage "L" level       | VIL    | ---       | -0.3                         | ---     | 0.6 | V    |
| Supply voltage for back light | VBL    | ---       | According to back light type |         |     | V    |
| Supply current for back light | IBL    | ---       | According to back light type |         |     | mA   |

**REMARKS:**

- LCD options: STN, TN, FSTN.
- Back light type: LED Back light feature.