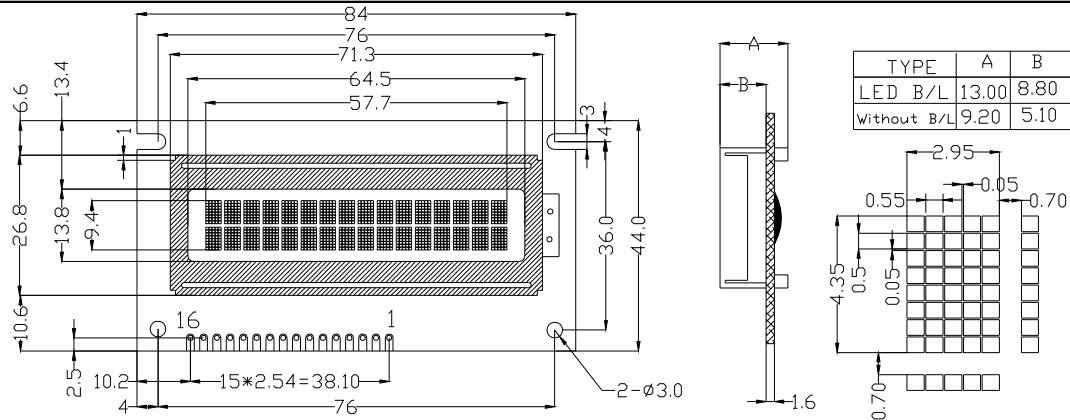


### EXTERNAL DIMENSIONS AND DISPLAY PATTERN



### MECHANICAL DATA (Nominal dimensions)

| ITEM                   | SPECIFICATION     | UNIT |
|------------------------|-------------------|------|
| Module Size( WxH )     | 84. 0x44. 0       | mm   |
| Viewing Area( WxH )    | 64. 5x13. 8       | mm   |
| Internel Area( WxH )   | 57. 7x9. 40       | mm   |
| Dot pitch( WxH )       | 0. 60x0. 55       | mm   |
| Dot Size(WxH )         | 0. 55x0. 50       | mm   |
| Character Pitch( WxH ) | 3. 65x5. 05       | mm   |
| Character Size( WxH )  | 2. 95x4. 35       | mm   |
| Number of character    | 16characterx2line | char |

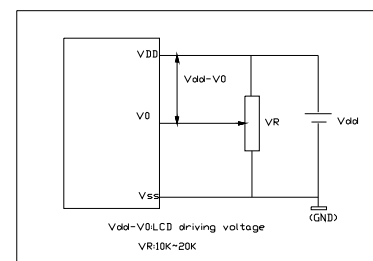
### PIN CONFIGURATION

| ITEM | SYMBOL  | DESCRIPTION                    |
|------|---------|--------------------------------|
| 1    | VSS     | Ground                         |
| 2    | VDD     | Power supply for logic and LCD |
| 3    | V0      | Operating voltage for LCD      |
| 4    | RS      | Register select                |
| 5    | R/W     | Read/Write Select              |
| 6    | E       | Read/Write Enable              |
| 7-14 | DB0-DB7 | Data Bus                       |
| 15   | A       | Anode of LED                   |
| 16   | K       | Cathode of LED                 |

### ELECTRICAL CHARACTERISTICS

| Item                     | Symbol           | Test Condition  | Standard value |      |          | Unit |
|--------------------------|------------------|-----------------|----------------|------|----------|------|
|                          |                  |                 | min.           | typ. | max.     |      |
| Supply Voltage for Logic | $V_{DD}-V_{SS}$  | -               | 4.5            | 5.0  | 5.5      | V    |
| Supply Voltage for LCD   | $V_{DD}-V_0$     | -               | 0              | -    | 5.0      | V    |
| Input high Voltage       | $V_{IH}$         | -               | 2.2            | -    | $V_{DD}$ | V    |
| Input low Voltage        | $V_{IL}$         | -               | -0.3           | -    | 0.6      | V    |
| Output high Voltage      | $V_{OH}$         | $-I_{OH}=0.2mA$ | 2.4            | -    | -        | V    |
| Output low Voltage       | $V_{OL}$         | $I_{OL}=1.2mA$  | -              | -    | 0.4      | V    |
| Power Supply Current     | $I_{DD}$         | $V_{DD}=5.0V$   | -              | 1.3  | 3.0      | mA   |
| With B/L                 | $I_{led}$        | $V_{DD}=5.0V$   | -              | 110  | -        | mA   |
| Drive method             | 1/16Duty 1/5Bias |                 |                |      |          |      |

### Power supply



### Block diagram

