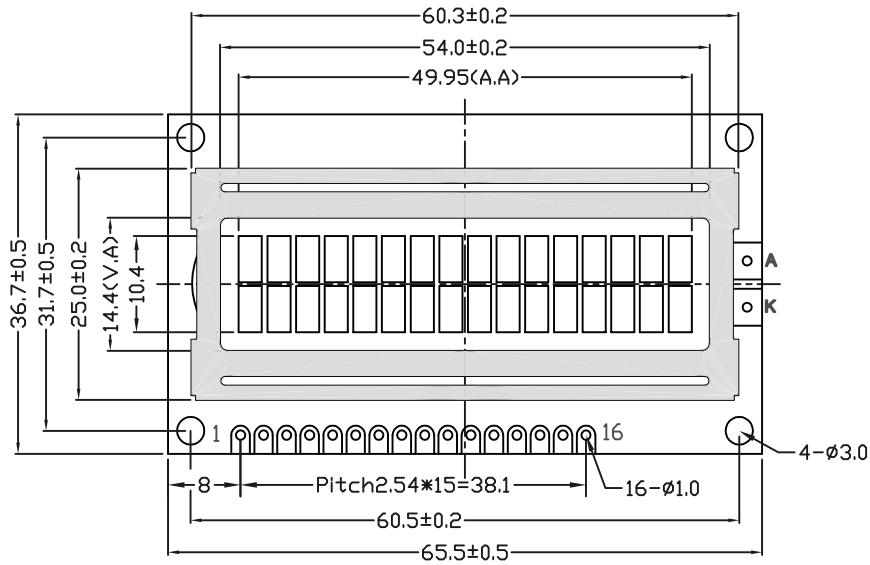
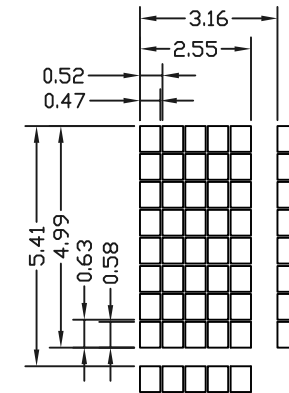


DOTS DETAIL



SCALE=5:1

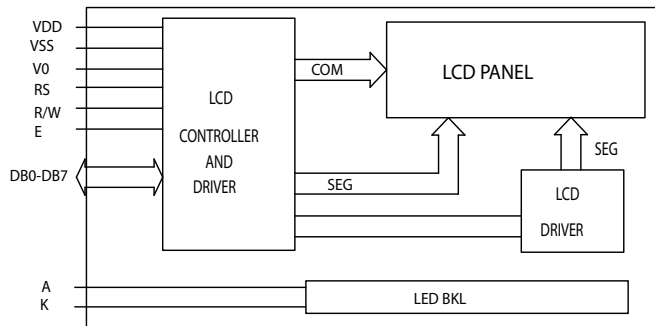
Pin connections

| PIN NO | Symbol |
|--------|--------|
| 1      | VSS    |
| 2      | VDD    |
| 3      | V0     |
| 4      | RS     |
| 5      | R/W    |
| 6      | E      |
| 7      | DB0    |
| 8      | DB1    |
| 9      | DB2    |
| 10     | DB3    |
| 11     | DB4    |
| 12     | DB5    |
| 13     | DB6    |
| 14     | DB7    |
| 15     | A      |
| 16     | K      |

### Feature

- 2-line x16 characters display; 5x8 dots with cursor
- Built-in controller (KS0066U or Equivalent)
- +5V power supply(Also available for +3.0V)
- 1/16 duty cycle;1/5bias;
- TN, HTN, STN or FSTN mode
- BKL to be driven by pin1,pin2,or pin15,pin16,or A,K

### Block diagram:



### Display character address code:

Display position

|               |    |    |    |     |     |     |     |     |     |     |     |    |
|---------------|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|----|
|               | 1  | 2  | 3  | 4   | 5   | --- | --- | --- | --- | 14  | 15  | 16 |
| DDRAM address | 00 | 01 | 02 | --- | --- | --- | --- | --- | --- | 0EH | 0FH |    |
| DDRAM address | 40 | 41 | 42 | --- | --- | --- | --- | --- | --- | 4EH | 4FH |    |

### Mechanical Thickness

| LCD module thickness      | T1  | T2   | UNIT |
|---------------------------|-----|------|------|
| Without or EL backlight   | 4.5 | 9.5  | mm   |
| With LED edge backlight   | --- | ---  | mm   |
| With LED bottom backlight | 8.5 | 13.5 | mm   |

### Mechanical Data

| Item             | Standard  | Unit |
|------------------|-----------|------|
| Module dimension | 65.5x36.7 | mm   |
| Viewing area     | 54.0x14.4 | mm   |
| Dot size         | 0.47x0.58 | mm   |
| Character size   | 2.55x4.99 | mm   |

### Absolute Maximum Rating

| Item          | Symbol  | Standard |       |     | Unit |
|---------------|---------|----------|-------|-----|------|
|               |         | Min      | Typ   | Max |      |
| Input voltage | VI      | -0.3     | ----- | 5.5 | V    |
| Power supply  | VDD-VSS | -0.3     | ----- | VDD |      |

### Electronical characteristics

| Item                                                           | Symbol | Condition            | Standard |       |       | Unit |
|----------------------------------------------------------------|--------|----------------------|----------|-------|-------|------|
|                                                                |        |                      | Min      | Typ   | Max   |      |
| Input voltage                                                  | VDD    | +5V                  | 4.7      | 5.0   | 5.5   | V    |
|                                                                |        | +3.3V                | 2.7      | 3.0   | 5.3   | V    |
| Supply current                                                 | IDD    | VDD=5V               | -----    | 1.5   | 4     | mA   |
| Recommended LCD driving voltage for normal temp version module | VDD-V0 | -20°C                | 4.8      | 5.0   | 5.3   | V    |
|                                                                |        | 0 °C                 | 4.6      | 4.8   | 5.0   |      |
|                                                                |        | 25°C                 | 4.3      | 4.5   | 4.7   |      |
|                                                                |        | 50°C                 | 4.2      | 4.3   | 4.5   |      |
|                                                                |        | 70°C                 | 4.1      | 4.2   | 4.3   |      |
| LED forward voltage                                            | VF     | 25°C                 | -----    | 4.2   | 5.0   | V    |
| LED forward current                                            | IF     | 25°C                 | -----    | 120   | ----- | mA   |
| EL power supply current                                        | IEL    | VEL=110V<br>AC 400Hz | -----    | ----- | ----- | mA   |