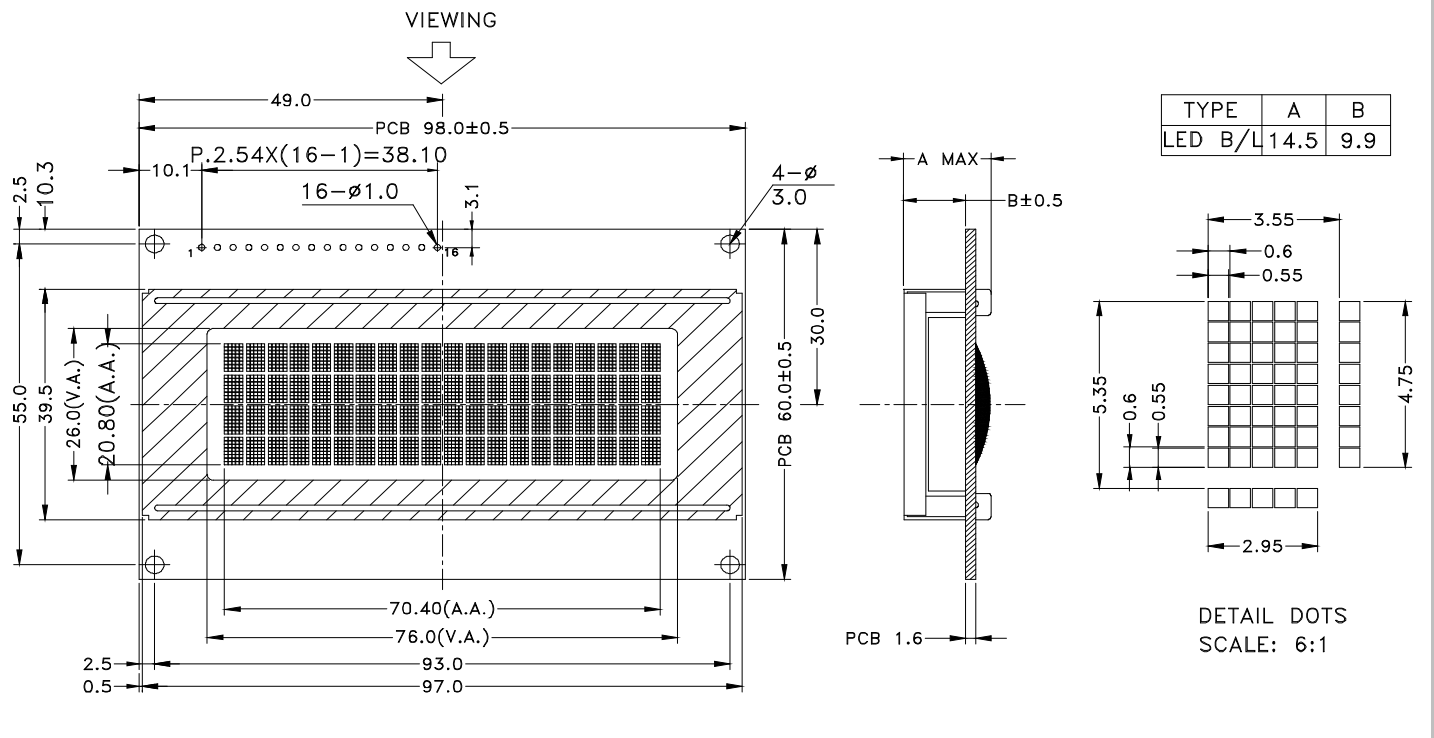


## Outline Dimension



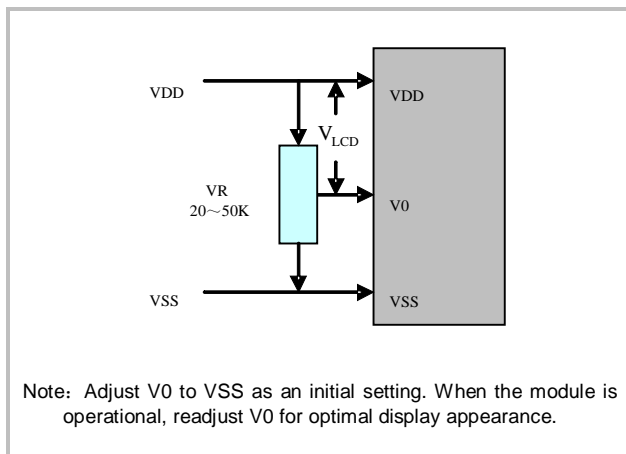
### Feature :

- 1、20x4 Characters
- 2、STN/TRANSMISSIVE/NEGATIVE/BLUE
- 3、White/Side Backlight (LED)
- 4、Operating Temp.: -10°C ~ +60°C
- 5、1/16 duty cycle, 1/5 Bias
- 6、Built-in Controller (SPLC780D1 or equivalent)
- 7、Viewing angle: 6 o'clock

### Absolute Maximum Rating :

| Item                   | Symbol                           | Standard value  |                 |                      | Unit |
|------------------------|----------------------------------|-----------------|-----------------|----------------------|------|
|                        |                                  | M <sub>IN</sub> | T <sub>YP</sub> | M <sub>AX</sub>      |      |
| Power supply for logic | V <sub>DD</sub> -V <sub>SS</sub> | -0.3            | --              | 7.0                  | V    |
| Input voltage          | V <sub>I</sub>                   | -0.3            | --              | V <sub>DD</sub> +0.3 | V    |

### Adjusting Display Contrast :



## Character Type

### Electrical Characteristic :

(V<sub>SS</sub>=0V, T<sub>a</sub> = 25°C)

| Parameter                    | Symbol           | Condition | M <sub>IN</sub> | T <sub>YP</sub> | M <sub>AX</sub> | Unit |
|------------------------------|------------------|-----------|-----------------|-----------------|-----------------|------|
| Supply voltage for logic     | V <sub>DD</sub>  | --        | 4.8             | 5.0             | 5.2             | V    |
| Supply current for logic     | I <sub>DD</sub>  | --        | --              | 3               | --              | mA   |
| Operating voltage for LCD    | V <sub>LCD</sub> | -10°C     | --              | --              | --              | V    |
|                              |                  | +25°C     | --              | 4.7             | --              | V    |
|                              |                  | +60°C     | --              | --              | --              | V    |
| Supply voltage for Backlight | V <sub>BL</sub>  | --        | --              | 5.0             | --              | V    |
| Supply current for Backlight | I <sub>BL</sub>  | --        | --              | 72              | --              | mA   |

### Interface Pin Connections :

| Pin No. | Symbol  | Level | Description  |
|---------|---------|-------|--|
| 1       | VSS     | 0V    | Ground.  |
| 2       | VDD     | +5.0V | Supply voltage for logic operating.  |
| 3       | V0      | --    | Adjusting voltage for LCD driving (variable).  |
| 4       | RS      | H/L   | A signal for selecting registers:<br>1: Data Register (for read and write)<br>0: Instruction Register (for write), Busy flag-Address Counter (for read). |
| 5       | R/W     | H/L   | R/W = "H": Read mode.<br>R/W = "L": Write mode.  |
| 6       | E       | H/L   | An enable signal for writing or reading data.  |
| 7-14    | DB0-DB7 | H/L   | 8-bit bi-directional data bus.   |
| 15      | LED+    | +5.0V | Power supply for Backlight   |
| 16      | LED-    | 0V    | The backlight ground.  |