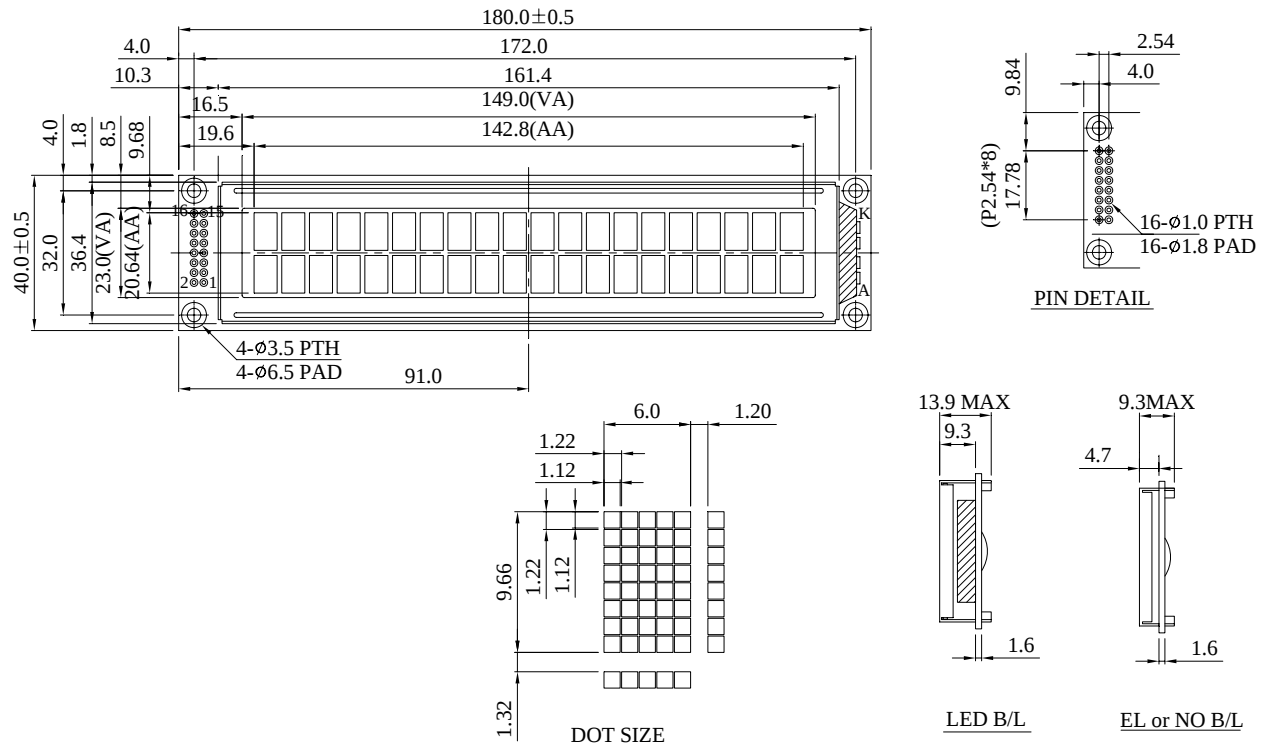




### Feature

1. 120x2 characters includes cursor
2. Built-in controller (ST7066 or Equivalent)
3. +5V power supply (Also available for +3V)
4. 1/16 duty cycle
5. LED can be driven by pin1, pin2, or A and K

### Terminal Function

| Pin No. | Symbol            | Function                               |
|---------|-------------------|----------------------------------------|
| 1       | V <sub>SS</sub>   | GND                                    |
| 2       | V <sub>DD</sub>   | Supply voltage for logic               |
| 3       | V <sub>0</sub>    | Contrast Adjustment                    |
| 4       | RS                | Register select signal                 |
| 5       | R/W               | Read / write signal                    |
| 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/V <sub>ee</sub> | Backlight LED+/Negative Voltage output |
| 16      | K                 | Backlight LED-                         |

### Mechanical Data

| Item         | Value         | Unit |
|--------------|---------------|------|
| Outline      | 180.0 x 40.0  | mm   |
| Viewing Area | 149.0 x 23.0  | mm   |
| Active Area  | 142.8 x 20.64 | mm   |
| Dot Size     | 1.12 x 1.12   | mm   |
| Dot Pitch    | 1.22 x 1.22   | mm   |

### Electrical Characteristics

| Item                   | Symbol                           | Min             | Typ | Max             |
|------------------------|----------------------------------|-----------------|-----|-----------------|
| Operating Voltage(V)   | V <sub>DD</sub>                  | 4.7             | 5.0 | 5.3             |
| Supply Voltage For LCD | V <sub>DD</sub> - V <sub>0</sub> | —               | 4.5 | —               |
| Input High Voltage(V)  | V <sub>IH</sub>                  | 0.7             | —   | V <sub>DD</sub> |
| Input Low Voltage(V)   | V <sub>IL</sub>                  | V <sub>SS</sub> | —   | 0.6             |
| Operating Current(mA)  | I <sub>DD</sub>                  | —               | 1.2 | 1.5             |

### Backlight Characteristics

| Item            | Symbol                 | Min | Typ | Max | Unit |
|-----------------|------------------------|-----|-----|-----|------|
| Forward Voltage | V <sub>f</sub> (edge)  | 3.4 | 3.5 | 3.6 | V    |
| Forward Current | I <sub>f</sub> (edge)  | 28  | 32  | 40  | mA   |
| Forward Voltage | V <sub>f</sub> (array) | -   | 4.2 | 4.4 | V    |
| Forward Current | I <sub>f</sub> (array) | -   | 360 | -   | mA   |

### Absolute Maximum

| Item                      | Symbo           | Min  | Max |
|---------------------------|-----------------|------|-----|
| Operating Voltage(V)      | V <sub>dd</sub> | -0.3 | 5.5 |
| Operating Temperature(°C) | Top             | -20  | +70 |
| Storage Temperature (°C)  | T <sub>st</sub> | -30  | +80 |