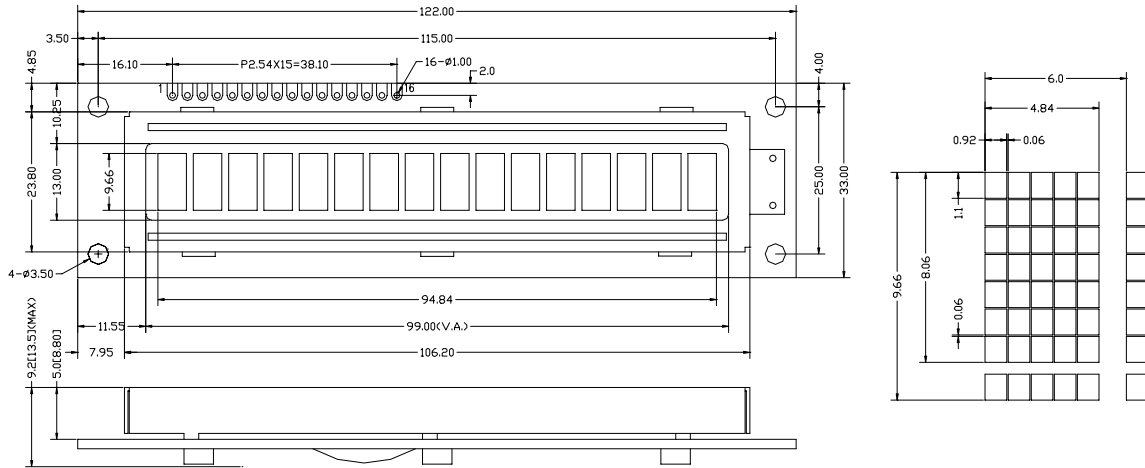


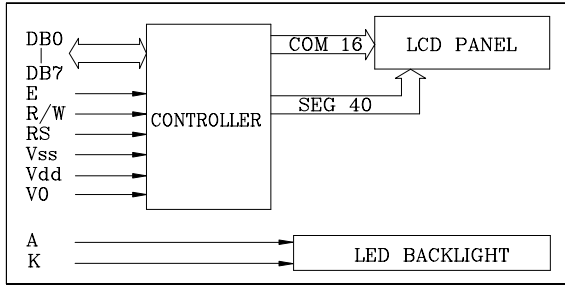


• EXTERNAL DIMENSIONS:

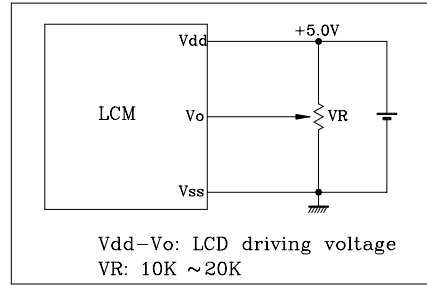
[ ] For LED Backlight



• BLOCK DIAGRAM:



• POWER SUPPLY:



MECHANICAL SPECIFICATIONS

| ITEM                  | SPECIFICATION             | UNIT |
|-----------------------|---------------------------|------|
| Module Size (WxHxT)   | 122.0x33.0x9.2[13.5]      | mm   |
| Viewing Area (WxH)    | 99.0x13.0                 | mm   |
| Character Font (WxH)  | 5x7+cursor                | dots |
| Character Size (WxH)  | 4.84x9.66                 | mm   |
| Character Pitch (WxH) | 6.0x9.66                  | mm   |
| Dot Size (WxH)        | 0.92x1.1                  | mm   |
| Character Type        | Eng/Jap, Eng/Eur, Eng/Rus |      |
| LCD MODE              | STN(Y/G,Gray,Blue),FSTN   |      |

PIN ASSIGNMENT

| PIN  | SYMBOL  | FUNCTION                         |
|------|---------|----------------------------------|
| 1    | VSS     | Power Supply (0V)                |
| 2    | VDD     | Power Supply (+5V)               |
| 3    | Vo      | Contrast Adjust                  |
| 4    | RS      | Data/Instruction Register Select |
| 5    | R/W     | Read/Write                       |
| 6    | E       | Enable Signal                    |
| 7~14 | DB0~DB7 | Data bus Line                    |
| 15   | A       | Power Supply for LED BL (+)      |
| 16   | K       | Power Supply for LED BL (-)      |

ABSOLUTE MAXIMUM RATINGS

| PARAMETER             | SYMBOL  | MIN. | MAX.    | UNIT |
|-----------------------|---------|------|---------|------|
| Power Supply (logic)  | VDD-VSS | -0.3 | 7.0     | V    |
| Power Supply (LCD)    | VDD-VO  | 3.0  | 13.0    | V    |
| Input Voltage         | Vi      | -0.3 | VDD+0.3 | V    |
| Operating Temperature | Topr    | 0    | 50      | °C   |
| Storage Temperature   | Tstg    | -20  | 70      | °C   |

ELECTRICAL CHARACTERISTICS (Ta=25°C)

| ITEM                   | SYMBOL | CONDITION | MIN.         | TYP. | MAX. | UNIT |
|------------------------|--------|-----------|--------------|------|------|------|
| Power Supply (logic)   | VDD    | -         | 4.5          | 5.0  | 5.5  | V    |
| Supply Current (logic) | Idd    | VDD=5.0V  | 0            | 1.5  | -    | mA   |
| Driving Voltage (LCD)  | VDD-VO |           | 4.4          | 4.7  | 5.0  | V    |
| Driving Current (LCD)  | Ilcd   |           | 0            | 0.8  | -    | mA   |
| Input Voltage "H"      | Vih    |           | 2.2          | -    | VDD  | V    |
| Input Voltage "L"      | Vil    |           | -0.3         | -    | 0.6  | V    |
| Output Voltage "H"     | Voh    |           | Ioh=-0.205mA | 2.4  | -    | -    |
| Output Voltage "L"     | Vol    | Iol=1.2mA | -            | -    | 0.4  | V    |

LED BACKLIGHT SPECIFICATIONS

| PARAMETER       | TYP.  | ITEM                | TYP.  |
|-----------------|-------|---------------------|-------|
| Forward Voltage | 4.2V  | Power Dissipation   | 756mW |
| Forward Current | 180mA | Emission Wavelength | 570nm |