



## PC1602F-O Series (16x2) Character Display

### Features

- \*16 Character, 2 Line
- \*View Angle 12H or 6H
- \*STN Fluid Yellow, Gray or Blue
- \*Extended Temperature Range available
- \*LED Backlight available
- \*RoHS Compliant



### Absolute Maximum Ratings at T<sub>A</sub> = 25°C

| Item                             | Symbol        | Min   | Max     | Unit |
|----------------------------------|---------------|-------|---------|------|
| Power Supply (Logic)             | Vdd           | -0.3  | 7.0     | V    |
| Power Supply (LCD)               | Vlcd (Vdd-Vo) | -13.5 | 0.3     | V    |
| Input Voltage                    | Vi            | -0.3  | Vdd+0.3 | V    |
| Operating Temperature (Standard) | Topr          | 0     | 50      | °C   |
| Storage Temperature (Standard)   | Tstg          | -10   | 60      | °C   |
| Extended Operating Temperature   | Topr          | -20   | 70      | °C   |
| Extended Storage Temperature     | Tstg          | -30   | 80      | °C   |

### Electrical Characteristics at T<sub>A</sub> = 25°C, Vdd=5V±0.25V

| Item                 | Symbol  | Min | Typ | Max | Unit |
|----------------------|---------|-----|-----|-----|------|
| Power Supply (Logic) | Vdd-Vss | 4.5 | 5.0 | 5.5 | V    |
| Supply Current       | Idd     | 1.0 | 1.3 | 2.2 | mA   |
| LCD Driving Voltage  | Vdd -Vo | 4.0 | 4.6 | 5.0 | V    |
| LCD Driving Current  | Ilcd    | -   | 0.2 | 0.4 | mA   |

### Interface Pin Connection

| No | Symbol | Function                    | No | Symbol | Function                           |
|----|--------|-----------------------------|----|--------|------------------------------------|
| 1  | Vss    | Power Supply (GND)          | 9  | DB2    | Data Bus Line 2                    |
| 2  | Vdd    | Power Supply (+5V)          | 10 | DB3    | Data Bus Line 3                    |
| 3  | Vo     | Contrast Adjust             | 11 | DB4    | Data Bus Line 4                    |
| 4  | RS     | Instruction/Register Select | 12 | DB5    | Data Bus Line 5                    |
| 5  | R/W    | Read/Write                  | 13 | DB6    | Data Bus Line 6                    |
| 6  | E      | Enable Signal               | 14 | DB7    | Data Bus Line 7                    |
| 7  | DB0    | Data Bus Line 0             | 15 | A      | Power Supply for LED Backlight (+) |
| 8  | DB1    | Data Bus Line 1             | 16 | K      | Power Supply for LED Backlight (-) |

### LED Backlight Specifications

| Forward Voltage | Forward Current | Power Dissipation | Peak Wavelength |
|-----------------|-----------------|-------------------|-----------------|
| 4.3V (Max)      | 140mA (Max)     | 574mW (Max)       | 570nm (Typ)     |

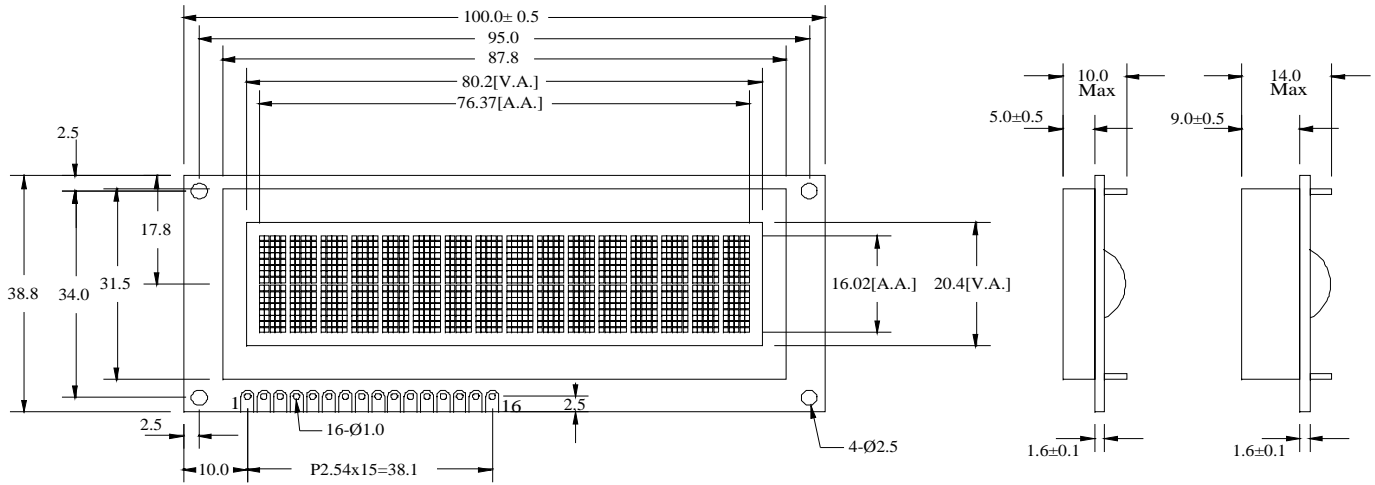
### Mechanical Specifications

| Item           | Overall Size                     | Viewing Area  | Character Size | Character Pitch | Dot Size      |
|----------------|----------------------------------|---------------|----------------|-----------------|---------------|
| Specifications | 100.0W x 95.0H x 10.0T (BL14.0T) | 80.2W x 20.4H | 4.07W x 7.76H  | 4.82 x 8.26     | 0.75W x 0.90H |

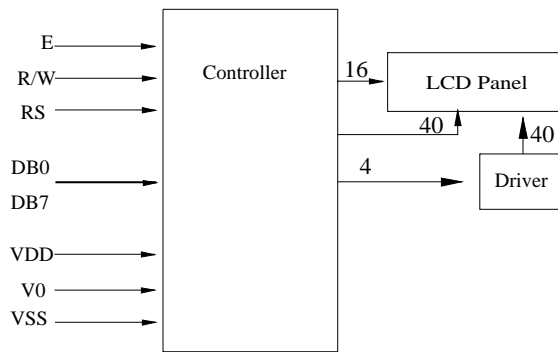
All dimensions are in mm. Tolerance is ± 0.3 Unless otherwise specified



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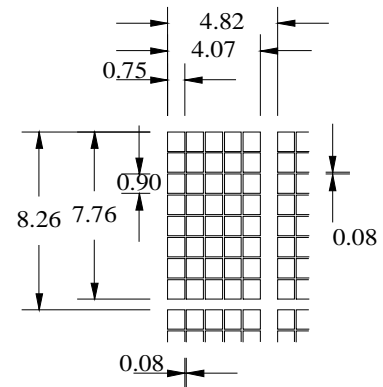


### LCD Block Diagram



S6A0069 or Equivalent

### Dot Layout



All dimensions are in mm. Tolerance is  $\pm 0.3$  Unless otherwise specified