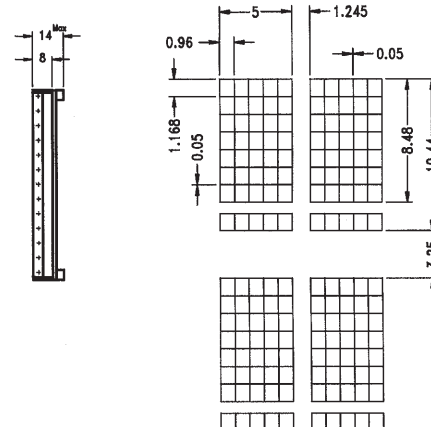
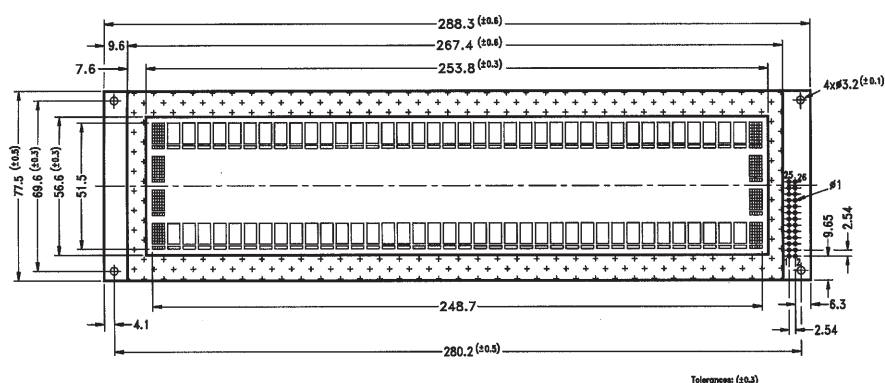




### Dimensions [mm]

Dot Size

Character  
LCD Modules

### MECHANICAL DATA

| Parameter              | Width x Height x Depth           | Unit |
|------------------------|----------------------------------|------|
| Outline Dimensions     | 288.3 x 77.5 x 13 (with LED: 14) | mm   |
| Effective viewing area | 253.7 x 56.6                     | mm   |
| Dot Size               | 0.96 x 1.168                     | mm   |
| Dot Pitch              | 1.01 x 1.218                     | mm   |
| Character Matrix       | 5 x 7                            | dots |
| Character Size         | 5 x 8.5                          | mm   |
| Character Pitch        | 6.245                            | mm   |
| Weight                 | Approximate 247 (with LED: 290)  | g    |

### ABSOLUTE MAXIMUM RATINGS

| Parameter                   | Symbol                   | Min.        | Max.     | Unit |
|-----------------------------|--------------------------|-------------|----------|------|
| Supply Voltage (Logic)      | $V_{DD} (V_{DD}-V_{SS})$ | 0           | 7.0      | V    |
| Supply Voltage (LCD Driver) | $V_{EE} (V_{DD}-V_0)$    | 0           | ---      | V    |
| Input Voltage               | $V_I$                    | $V_{SS}$    | $V_{DD}$ | V    |
| Operating Temperature       | $T_{OP}$                 | See Page 11 |          | °C   |
| Storage Temperature         | $T_{ST}$                 | See Page 11 |          | °C   |

### ELECTRICAL CHARACTERISTICS

Condition:  $T_a = 25^\circ\text{C}$ ,  $V_{DD} = 5.0 \pm 0.25 \text{ V}$

| Parameter                   | Symbol    | Min. | Typ    | Max. | Unit |
|-----------------------------|-----------|------|--------|------|------|
| Input Voltage HIGH          | $V_{INH}$ | 2.2  | ---    | ---  | V    |
| Input Voltage LOW           | $V_{INL}$ | ---  | ---    | 0.6  | V    |
| Output Voltage HIGH         | $V_{OH}$  | 2.4  | ---    | ---  | V    |
| Output Voltage LOW          | $V_{OL}$  | ---  | ---    | 0.4  | V    |
| Supply Current (Logic)      | $I_{DD}$  | ---  | 3.0    | ---  | mA   |
| Supply Current (LCD Driver) | $I_0$     | ---  | 1.0    | ---  | mA   |
| Duty Ratio                  | ---       | ---  | 1 / 16 | ---  | ---  |

### LED BACKLIGHT (STANDARD COLOR GREEN)

| Parameter      | Symbol                         | Min. | Typ | Max. | Unit |
|----------------|--------------------------------|------|-----|------|------|
| Supply Voltage | $V_F$                          | 3.8  | 4.1 | 4.4  | V    |
| Supply Current | $I_F$ [at $25^\circ\text{C}$ ] | ---  | 420 | 600  | mA   |
| Lamp Style     | ---                            | ---  | 03  | ---  | ---  |
| LED Segments   | ---                            | ---  | 25  | ---  | pcs  |

### PIN TABLE

| Pin                   | Symbol           | Signal Description                                  |
|-----------------------|------------------|-----------------------------------------------------|
| 1, 6                  | NC               | Not Connected                                       |
| 2                     | TP1              | Test Point 1                                        |
| 3                     | E2               | Enable Signal of Controller No. 2                   |
| 4                     | TP2              | Test Point 2                                        |
| 5                     | R / W            | Read / Write<br>LOW = MPU to LCM, HIGH = LCM to MPU |
| 7                     | RS               | Register Select - LOW = Instruction, HIGH = Data    |
| 8, 10, 12, 14, 16, 18 | $V_{SS}$         | GND (0V)                                            |
| 9                     | E1               | Enable Signal of HD Controller No. 1                |
| 11, 13, 15, 17        | $DB_0$ to $DB_7$ | Data Bus - Software selectable 4 or 8 Bit Mode      |
| 19, 21, 23, 25        |                  |                                                     |
| 22, 24                | $V_{DD}$         | Power Supply (5V)                                   |
| 26                    | $+V_{LED}$       | Anode of LED Unit                                   |

### ADDITIONAL INFORMATION

- ◆ Display Connector Type - See Drawing
- ◆ Display Connector Type - with LED: See Drawing
- ◆ Controller Type - SPLC 780 (2) or compatible
- ◆ Temperature compensated

### BLOCK DIAGRAM

