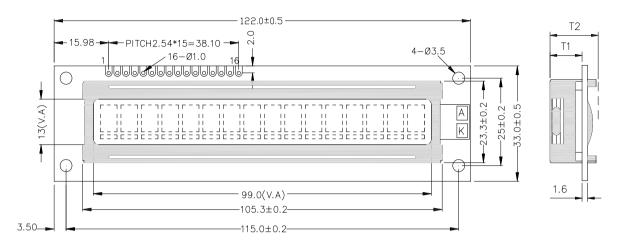
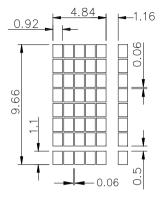
## LONGTECH OPTICS

# LCM1601D

## **DOTS DETAIL**





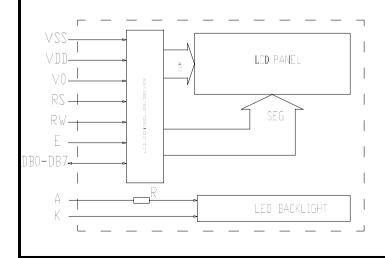
#### Pin connections

| Pin   | Symbol  |
|-------|---------|
| 1     | VSS     |
| 2     | VDD     |
| 3     | V0      |
| 4     | RS      |
| 5     | RW      |
| 6     | E       |
| 7~10  | DB0~DB3 |
| 11~14 | DB4~DB7 |
| 15    | A       |
| 16    | K       |

## Display character address code

| Display position | 01 | 02 | 08      | 09 | 15     | 16  |
|------------------|----|----|---------|----|--------|-----|
| DDRAM address    | 00 | 01 | <br>07H | 40 | <br>46 | 47H |

## **Block diagram**



#### **Feature**

- 1. 16 character \* 1 lines display
- 2. Built-in controller(S6A0069 or compliant)
- 3. with 4-bit or 8-bit parallel interface
- 4. 1/16 Duty cycle, 1/5 Bias.
- 5. Display Mode & Backlight Variations.
- 6. ROHS Compliant

#### **Mechanical thickness**

| LCD module       | T1  | T2   | Unit |
|------------------|-----|------|------|
| Without or EL    | 4.5 | 9.5  | mm   |
| Edge backlight   | 7.0 | 11.0 | mm   |
| Bottom backlight | 8.5 | 13.5 | mm   |

## Mechanical data

| Item           | Standard   | Unit |
|----------------|------------|------|
| Module size    | 122.0X33.0 | mm   |
| View area      | 99.0X13.0  | mm   |
| Dot size       | 0.92X1.10  | mm   |
| Character size | 4.84X9.66  | mm   |

### **Maximum Absolute Power Ratings**

| Item          | Symbol | Sta  | Heit |     |      |  |
|---------------|--------|------|------|-----|------|--|
|               | Symbol | Min  | Тур  | Max | Unit |  |
| Input voltage | Vdd    | -0.3 |      | 5.5 | V    |  |
| Power supply  | Vin    | -0.3 |      | VDD | 1 v  |  |

## **Electronical characteristics**

| Item   | Symbol             | Condition              | S   | Unit |     |    |
|--|--------------------|------------------------|-----|------|-----|----|
|  | Syllibol           | Condition              | Min | Тур  | Max |    |
| Operating voltage  | $V_{DD}$           | V <sub>DD</sub> =5.0V  | 4.5 |      | 5.5 | V  |
|  |                    | $V_{DD}$ =3.3 $V$      | 2.7 | 3.3  | 5.5 |    |
| Operating current  | I <sub>DD</sub>    | V <sub>DD</sub> =5.0V  |     | 1.5  |     | mA |
| Recommended LCD driving<br>voltage for normal temp<br>module |                    | $T_A = +25$            |     | 4.3  |     |    |
|  |                    | $T_A=0$                |     | 4.5  |     | V  |
|  |                    | T <sub>A</sub> =-20    |     | 4.8  |     |    |
| Backlight voltage  | $V_{\mathit{LED}}$ | Y-G                    |     | 4.2  |     | V  |
| Backlight current  | I <sub>LED</sub>   | V <sub>LED</sub> =4.2V |     | 180  |     | mA |
| Operating temperature  | $T_o$              |                        | -20 |      | 70  |    |
| Storage temperature  | Ts                 |                        | -30 |      | 80  |    |