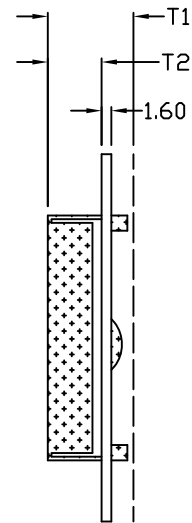
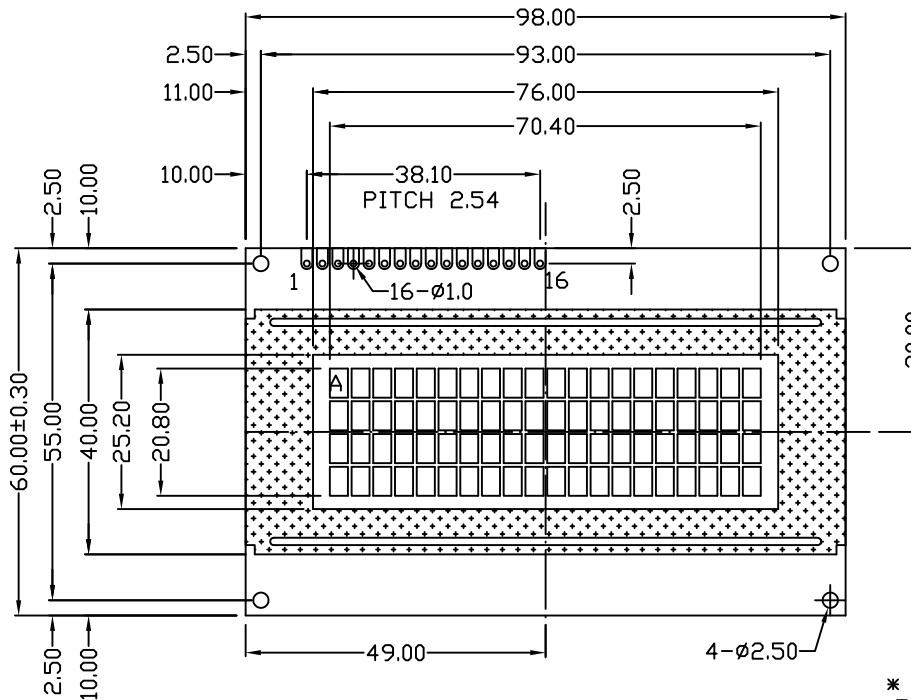
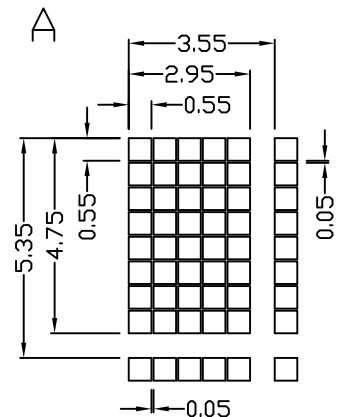
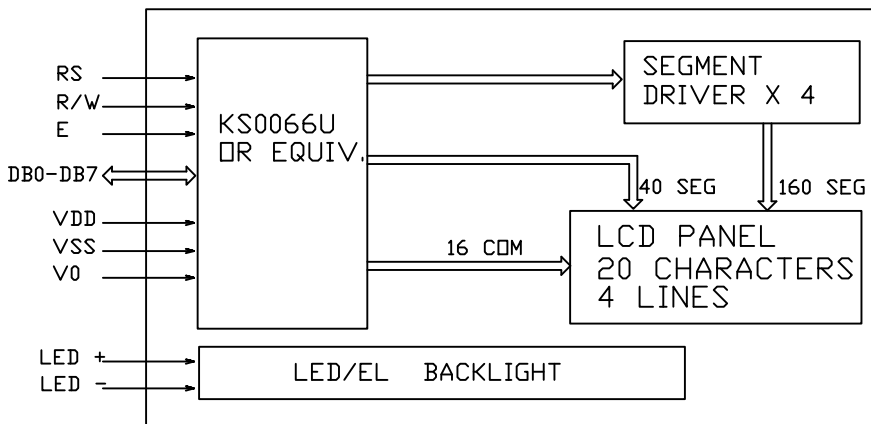


LINK-SUN (HONG KONG) ELECTRONICS LTD

Model No: LSM2004-1



* FOR LED BACKLIGHT
T1=14.0MAX T2=9.0±0.3
* FOR EL OR NO BACKLIGHT
T1=10.0MAX T2=5.0±0.3



| PINS ASSIGNMENT | | |
|-----------------|----------|------------------------------------|
| NO. | SYMBOL | DESCRIPTION |
| 1 | VSS | POWER SUPPLY |
| 2 | VDD | POWER SUPPLY |
| 3 | V0 | OPERATING VOLTAGE FOR LCD |
| 4 | RS | DATA/INSTRUCTION SELECT |
| 5 | R/W | READ/WRITE CONTROL |
| 6 | E | ENABLE SIGNAL |
| 7--14 | DB0--DB7 | DATA BUS |
| 15 | LED + | POWER SUPPLY FOR LED BACKLIGHT (+) |
| 16 | LED - | POWER SUPPLY FOR LED BACKLIGHT (-) |

| ELECTRICAL CHARACTERISTICS (VDD=5.0±0.25V, 25°C) | | | | | |
|--|---------|------|-----|------|------|
| ITEM | SYMBOL | MIN | TYP | MAX | UNIT |
| VOLTAGE FOR LOGIC | VDD-VSS | 4.75 | 5.0 | 5.25 | V |
| SUPPLY CURRENT | IDD | - | 1.0 | 2.2 | mA |
| VOLTAGE FOR LCD | VDD-V0 | - | 4.9 | - | V |
| INPUT VOLTAGE | H VIH | 2.2 | - | VDD | V |
| | L VIL | -0.3 | - | 0.6 | V |
| OUTPUT VOLTAGE | H VoH | 2.4 | - | - | V |
| | L VoL | - | - | 0.4 | V |

| OPTIONS | |
|---------|---|
| 1. | LCD TYPE: Y/G STN; GRAY STN; TN |
| 2. | BACKLIGHT: WITHOUT BACKLIGHT; LED; EL |
| 3. | COLOR OF BACKLIGHT: Y/G; BLUE; WHITE |
| 4. | TEMPERATURE RANGE: NORMAL(0--50C) EXTENDED(-20--70C) |
| 5. | POWER SUPPLY: 5.0V; 3.0V |
| 6. | VIEWING ANGLE: 6H; 12H |
| 7. | CHARACTER TABLE: JAPANESE; EUROPEAN; CYRILLIC |

| MECHANICAL SPECIFICATIONS | | |
|---------------------------|------------------------------|------|
| ITEM | SPECIFICATION | UNIT |
| OVERALL SIZE | 98.0W x 60.0H x 14.0T(10.0T) | MM |
| VIEWING AREA | 76.0W x 25.2H | MM |
| CHARACTERS | 20 CHARACTERS x 4 LINES | |
| CHARACTER SIZE | 2.95W x 4.75H | MM |
| CHARACTER PITCH | 3.55W x 5.35H | MM |

| ABSOLUTE MAXIMUM RATING | | | | |
|-------------------------|---------|------|------|------|
| ITEM | SYMBOL | MIN | MAX | UNIT |
| POWER SUPPLY(LOGIC) | VDD-VSS | -0.3 | 7.0 | V |
| POWER SUPPLY(LCD DRV.) | VDD-V0 | -0.3 | 13.5 | V |
| INPUT VOLTAGE | VI | -0.3 | VDD | V |