UNCONTROLLED DOCUMENT

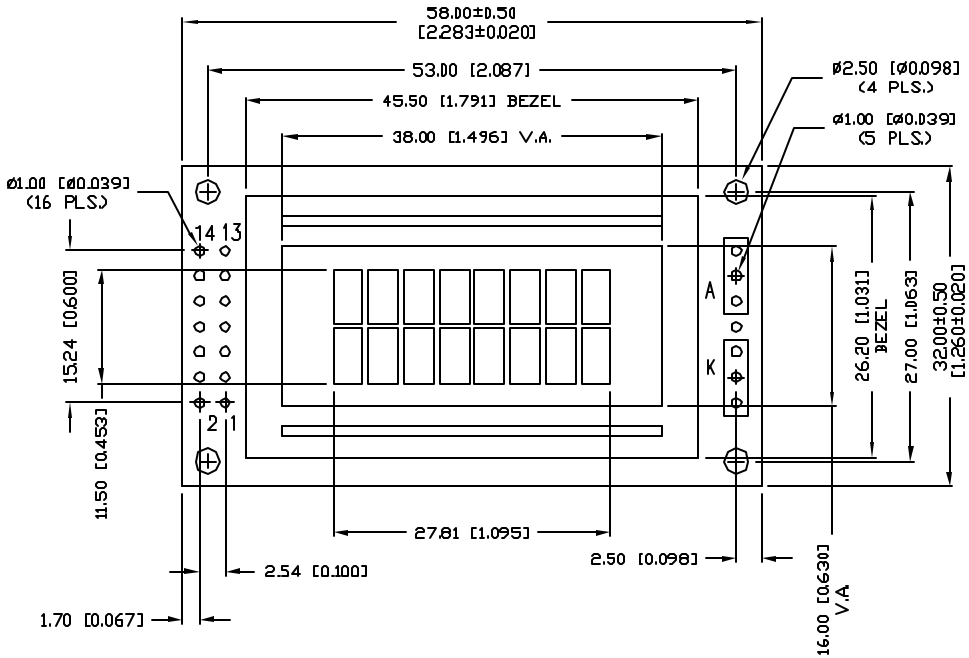
| PART NUMBER | REV. |
|---|---|
| LCM-X00802DXX | B |

| REV. | E.C.N. NUMBER AND REVISION COMMENTS | DATE |
|---|---|---|
| A | E.C.N. #10464. | 10.9.98 |
| B | E.C.N. #11031. | 9.5.03 |

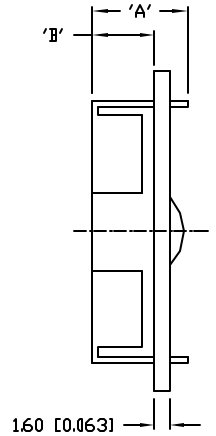
P/N PREFIX/SUFFIX TABLE

| LCM-X | | DXX | DESCRIPTION |
|---|---|---|---|
| STANDARD | S | SR | STN, REFLECTIVE |
| | | SF | STN, TRANSFLECTIVE(W/ BACKLIGHT) |
| HIGH TEMP. | H | TR | TN, REFLECTIVE |
| | | TF | TN, TRANSFLECTIVE(W/ BACKLIGHT) |

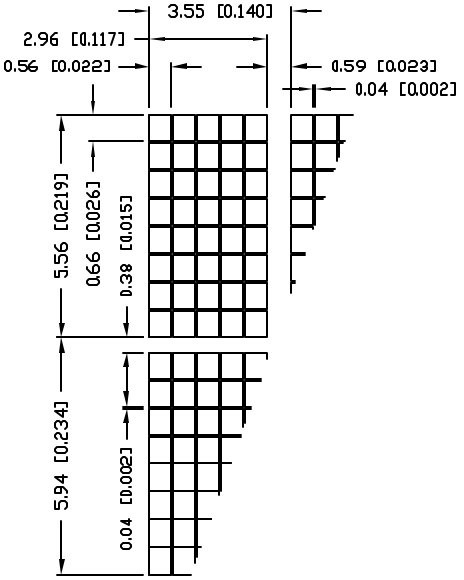
CAUTION: STATIC SENSITIVE DEVICE
FOLLOW PROPER E.S.D. HANDLING PROCEDURES WHEN WORKING WITH THIS PART.




| TYPE DIM. | A | B |
|---|---|---|
| WITH BACKLIGHT | 12.8 | 8.6 |
| NO BACKLIGHT | 8.6 | 4.2 |




CHARCTER DETAIL

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| REV. | PART NUMBER |
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| B | LCM-X00802DXX |

5.56mm CHARACTER HEIGHT, 5x8 DOT MATRIX, 8x2,
LCD MODULE, 1/16 DUTY, 1/5 BIAS.

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RELIABILITY NOTE
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| | | | SCALE: N/A |

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| PART NUMBER | REV. |
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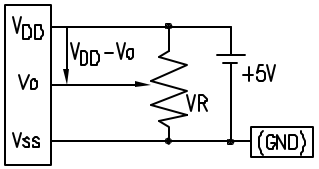
|---|---|---|
| | SEE PAGE 1. | |

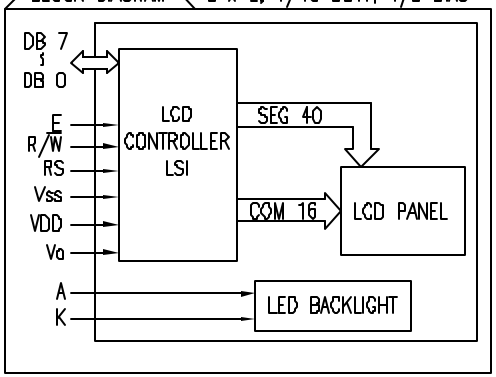
## PIN CONFIGURATION

| PIN NO. | SYMBOL | LEVEL | FUNCTION | |
|---|---|---|---|---|
| 1 | Vss | - | POWER SUPPLY | GND (0V) |
| 2 | $V_{DD}$ | - | | 5V |
| 3 | Vo | - | | FOR LCD DRIVE |
| 4 | RS | H/L | REGISTER SELECT SIGNAL<br>H: DATA INPUT<br>L: INSTRUCTION INPUT | |
| 5 | R/$\overline{W}$ | H/L | H: DATA READ (MODULE-->MPU)<br>L: DATA WRITE (MODULE<--MPU) | |
| 6 | E | H,H->L | ENABLE | |
| 7~14 | DB0~DB7 | H/L | DATA BUS-SOFTWARE SELECTABLE 4 OR 8 BIT MODE. | |

$V_{DD}$-Vo: LCD DRIVING VOLTAGE
VR: 10KΩ-20KΩ




## BLOCK DIAGRAM 8 x 2, 1/16 DUTY, 1/5 BIAS




## ELECTRICAL CHARACTERISTICS

[A] $V_{DD}$=4.7V to 5.3V, $T_A$=25°C

| ITEM | | SYMBOL | CONDITION | STANDARD VALUE MIN. | TYP. | MAX. | UNIT |
|---|---|---|---|---|---|---|---|
| SUPPLY VOLTAGE FOR LOGIC | | $V_{DD}$-Vss | - | - | 5.0 | - | V |
| SUPPLY CURRENT FOR LOGIC | | $I_{DD}$ | $V_{DD}$=5V | - | 2.0 | 3.0 | mA |
| INPUT VOLTAGE | HIGH | $V_{IH}$ | - | 2.2 | - | $V_{DD}$ | V |
| | LOW | $V_{IL}$ | - | 0 | - | 0.6 | V |
| OUTPUT VOLTAGE | HIGH | $V_{OH}$ | - | 2.4 | - | - | V |
| | LOW | $V_{OL}$ | - | - | - | 0.4 | V |
| *LED BACKLIGHT | VOLTAGE | Vf | If=70mA | - | 4.5 | 5.0 | V |
| | CURRENT | If | - | - | 70 | 110 | mA |
| | POWER CUNSUMPTION | PD | - | - | 315 | - | mW |
| | LUMINOUS | L | If=70mA | 70 | - | - | cd/m² |
| | COLOR | - | - | - | - | - | nm |

*ONLY APPLIES TO MODULES WITH BACKLIGHT

## ABSOLUTE MAXIMUM RATINGS

| ITEM | SYMBOL | TEST CONDITION | STANDARD VALUE MIN | MAX | UNIT |
|---|---|---|---|---|---|
| SUPPLY VOLTAGE FOR LOGIC | VDD-Vss | Ta=25°C | 4.7 | 5.3 | V |
| SUPPLY VOLTAGE FOR LCD DRIVE | VDD-Vo | - | 4.2 | 5.0 | V |
| INPUT VOLTAGE | $V_I$ | Ta=25°C | Vss | $V_{DD}$ | V |
| OPERATING TEMPERATURE | Topr | LCM-S | 0 | 50 | °C |
| | | LCM-H | -20 | 70 | °C |
| STORAGE TEMPERATURE | Tstg | LCM-S | -20 | 70 | °C |
| | | LCM-H | -30 | 85 | °C |

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