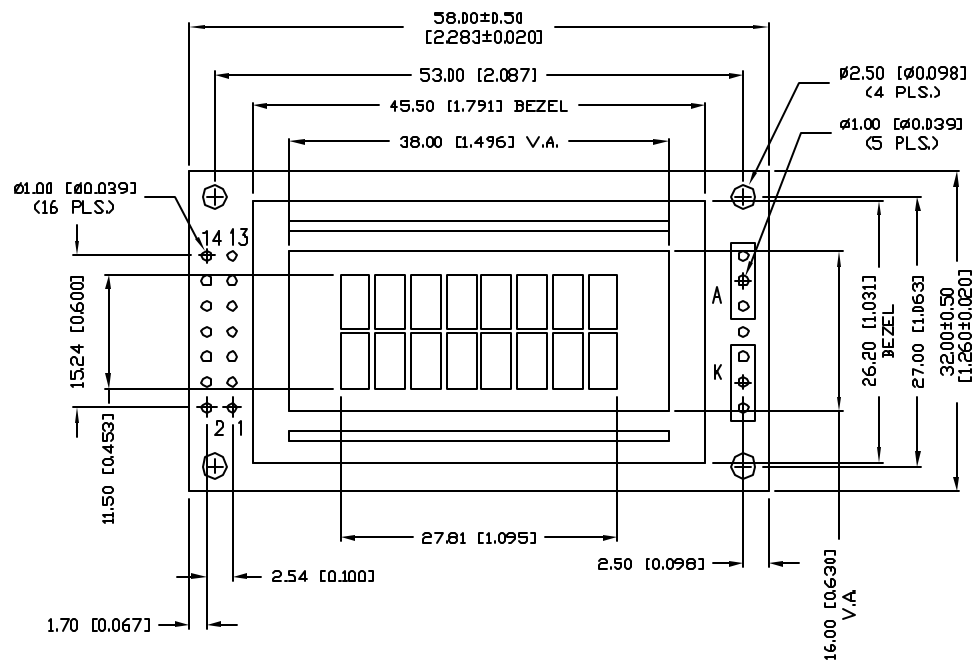


UNCONTROLLED DOCUMENT

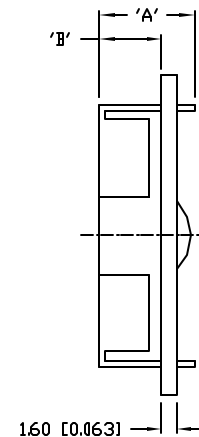
| P/N PREFIX/SUFFIX TABLE |    |                                  |
|-------------------------|----|----------------------------------|
| LCM-X                   | DX | DESCRIPTION                      |
| STANDARD                | SR | STN, REFLECTIVE                  |
|                         | SF | STN, TRANSFLECTIVE(W/ BACKLIGHT) |
| HIGH TEMP.              | TR | TN, REFLECTIVE                   |
|                         | TF | TN, TRANSFLECTIVE(W/ BACKLIGHT)  |

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

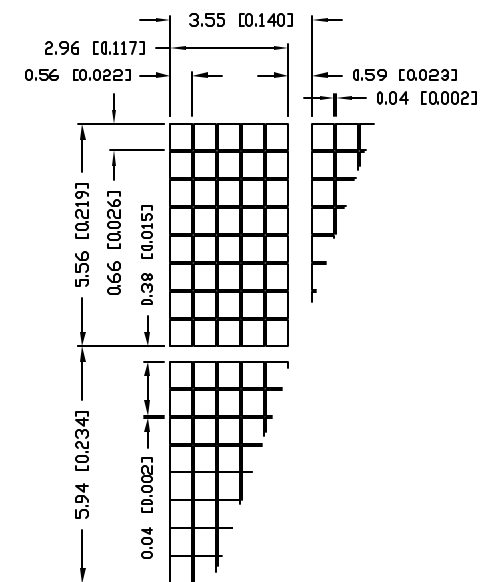
| PART NUMBER   |                                     | REV.    |
|---------------|-------------------------------------|---------|
| LCM-X00802DXX |                                     | B       |
| REV.          | E.C.N. NUMBER AND REVISION COMMENTS | DATE    |
| A             | E.C.N. #10464.                      | 10.9.98 |
| B             | E.C.N. #11031.                      | 9.5.03  |



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



CHARACTER DETAIL



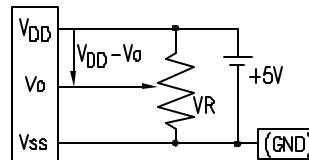
\*UNLESS OTHERWISE SPECIFIED TOLERANCES PER DECIMAL PRECISION ARE: X=±1 (±0.039), X.X=±0.5 (±0.020), X.XX=±0.25 (±0.010), X.XXX=±0.127 (±0.005). LEAD SIZE=±0.05 (±0.002), LEAD LENGTH=±0.75 (±0.030). MIN=+0.00 DECIMAL PRECISION MAX.=+0.00 DECIMAL PRECISION

| REV.                                                                           | PART NUMBER   | CONFIDENTIAL INFORMATION                                                                                                                                                                                                                                                                                                     |  | 290 E. HELEN ROAD<br>PALATINE, IL 60067-6976<br>PHONE: +1.847.359.2790<br>US WEB: www.lumex.com<br>TW WEB: www.lumex.com.tw |              |
|--------------------------------------------------------------------------------|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-----------------------------------------------------------------------------------------------------------------------------|--------------|
| B                                                                              | LCM-X00802DXX | THE INFORMATION CONTAINED IN THIS DOCUMENT IS THE PROPERTY OF LUMEX INC. EXCEPT AS SPECIFICALLY AUTHORIZED IN WRITING BY LUMEX INC., THE HOLDER OF THIS DOCUMENT SHALL KEEP ALL INFORMATION CONTAINED HEREIN CONFIDENTIAL AND SHALL PROTECT SAME IN WHOLE OR IN PART FROM DISCLOSURE AND DISSEMINATION TO ALL THIRD PARTIES. |  |                                        |              |
| 5.56mm CHARACTER HEIGHT, 5x8 DOT MATRIX, 8x2, LCD MODULE, 1/16 DUTY, 1/5 BIAS. |               | RELIABILITY NOTE<br>OUR MANY YEARS OF EXPERIENCE DATA ACCUMULATION INDICATE THAT SOLDER HEAT IS A MAJOR CAUSE OF EARLY AND FUTURE FAILURE. PLEASE PAY ATTENTION TO YOUR SOLDERING PROCESS.                                                                                                                                   |  | DRAWN BY:                                                                                                                   | CHECKED BY:  |
|                                                                                |               |                                                                                                                                                                                                                                                                                                                              |  | APPROVED BY:                                                                                                                | DATE: 9.5.03 |
|                                                                                |               |                                                                                                                                                                                                                                                                                                                              |  |                                                                                                                             | PAGE: 1 OF 2 |
|                                                                                |               |                                                                                                                                                                                                                                                                                                                              |  |                                                                                                                             | SCALE: N/A   |

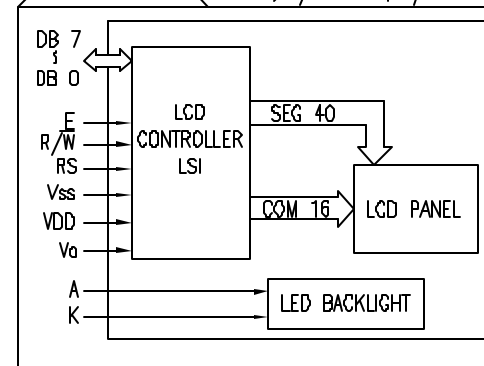
## PIN CONFIGURATION

| PIN NO. | SYMBOL          | LEVEL  | FUNCTION                                                        |
|---------|-----------------|--------|-----------------------------------------------------------------|
| 1       | V <sub>SS</sub> | -      | POWER SUPPLY<br>GND (0V)<br>5V<br>FOR LCD DRIVE                 |
| 2       | V <sub>DD</sub> | -      |                                                                 |
| 3       | V <sub>O</sub>  | -      |                                                                 |
| 4       | RS              | H/L    | REGISTER SELECT SIGNAL<br>H: DATA INPUT<br>L: INSTRUCTION INPUT |
| 5       | R/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<sub>DD</sub>-V<sub>O</sub>: LCD DRIVING VOLTAGE  
VR: 10KΩ-20KΩ



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



## ELECTRICAL CHARACTERISTICS

□ V<sub>DD</sub>=4.7V to 5.3V, T<sub>A</sub>=25°C

| ITEM                     | SYMBOL                           | CONDITION           | STANDARD VALUE       |      |      | UNIT            |
|--------------------------|----------------------------------|---------------------|----------------------|------|------|-----------------|
|                          |                                  |                     | MIN.                 | TYP. | MAX. |                 |
| SUPPLY VOLTAGE FOR LOGIC | V <sub>DD</sub> -V <sub>SS</sub> | -                   | -                    | 5.0  | -    | V               |
| SUPPLY CURRENT FOR LOGIC | I <sub>DD</sub>                  | V <sub>DD</sub> =5V | -                    | 2.0  | 3.0  | mA              |
| INPUT VOLTAGE            | HIGH                             | V <sub>IH</sub>     | -                    | 2.2  | -    | V <sub>DD</sub> |
|                          | LOW                              | V <sub>IL</sub>     | -                    | 0    | -    | 0.6             |
| OUTPUT VOLTAGE           | HIGH                             | V <sub>OH</sub>     | -                    | 2.4  | -    | V               |
|                          | LOW                              | V <sub>OL</sub>     | -                    | -    | 0.4  | V               |
| *LED BACKLIGHT           | VOLTAGE                          | V <sub>f</sub>      | I <sub>f</sub> =70mA | -    | 4.5  | 5.0             |
|                          | CURRENT                          | I <sub>f</sub>      | -                    | -    | 70   | 110             |
|                          | POWER CONSUMPTION                | P <sub>D</sub>      | -                    | -    | 315  | -               |
|                          | LUMINOUS                         | L                   | I <sub>f</sub> =70mA | 70   | -    | -               |
|                          | COLOR                            | -                   | -                    | -    | -    | nm              |

\*ONLY APPLIES TO MODULES WITH BACKLIGHT

## ABSOLUTE MAXIMUM RATINGS

| ITEM                         | SYMBOL                           | TEST CONDITION       | STANDARD VALUE  |                 | UNIT |
|------------------------------|----------------------------------|----------------------|-----------------|-----------------|------|
|                              |                                  |                      | MIN             | MAX             |      |
| SUPPLY VOLTAGE FOR LOGIC     | V <sub>DD</sub> -V <sub>SS</sub> | T <sub>a</sub> =25°C | 4.7             | 5.3             | V    |
| SUPPLY VOLTAGE FOR LCD DRIVE | V <sub>DD</sub> -V <sub>O</sub>  | -                    | 4.2@50°C        | 4.8@0°C         | V    |
| INPUT VOLTAGE                | V <sub>I</sub>                   | T <sub>a</sub> =25°C | V <sub>SS</sub> | V <sub>DD</sub> | V    |
| OPERATING TEMPERATURE        | T <sub>opr</sub>                 | LCM-S                | 0               | 50              | °C   |
|                              |                                  | LCM-H                | -20             | 70              | °C   |
| STORAGE TEMPERATURE          | T <sub>stg</sub>                 | LCM-S                | -20             | 70              | °C   |
|                              |                                  | LCM-H                | -30             | 85              | °C   |

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REV.

B

PART NUMBER

LCM-X00802DXX

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

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290 E. HELEN ROAD  
PALATINE, IL 60067-6976  
PHONE: +1.847.359.2790  
US WEB: www.lumex.com  
TW WEB: www.lumex.com.tw

DRAWN BY:

CT

CHECKED BY:

APPROVED BY:

DATE: 9.5.03

PAGE: 2 OF 2

SCALE: N/A

## Данный компонент на территории Российской Федерации

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### Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: [info@moschip.ru](mailto:info@moschip.ru)

Skype отдела продаж:

moschip.ru

moschip.ru\_4

moschip.ru\_6

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