

## Excellent Integrated System Limited

Stocking Distributor

Click to view price, real time Inventory, Delivery & Lifecycle Information:

[Lumex, Inc.](#)  
[LCM-S00802DTR](#)

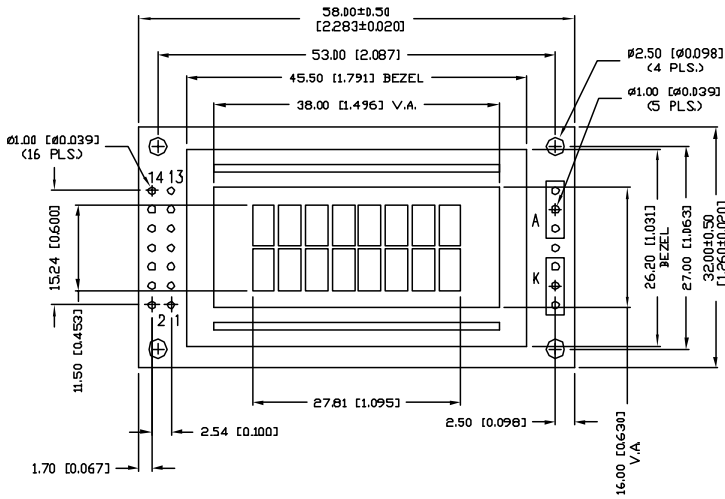
For any questions, you can email us directly:  
[sales@integrated-circuit.com](mailto:sales@integrated-circuit.com)

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  |

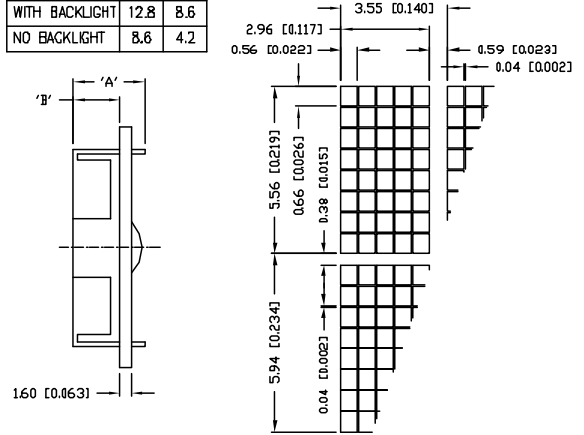
| LCM-X      | DXX | DESCRIPTION                      |
|------------|-----|----------------------------------|
| STANDARD   | S   | STN, REFLECTIVE                  |
|            | SF  | STN, TRANSFLECTIVE(W/ BACKLIGHT) |
| HIGH TEMP. | H   | TN, REFLECTIVE                   |
|            | TF  |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

CHARACTER DETAIL



UNCONTROLLED DOCUMENT

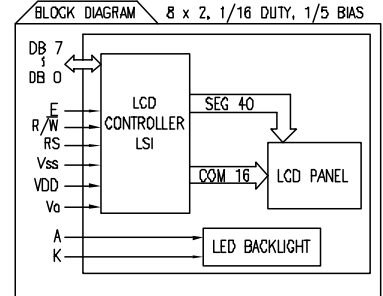
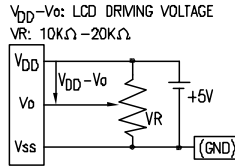
\*UNLESS OTHERWISE SPECIFIED TOLERANCES PER DECIMAL PRECISION ARE: X=±1 (±0.039), XX=±10.5 (±0.020), XXX=±0.25 (±0.010), XXXX=±0.127 (±0.005). LEAD SIZE=±0.05 (±0.002), LEAD LENGTH=±0.75 (±0.030), MIN.=+DECIMAL PRECISION -0.00, MAX.=+0.00 -DECIMAL PRECISION

|   |                              |   |  |
|---|------------------------------|---|--|
| REV.<br>B   | PART NUMBER<br>LCM-X00802DXX | <p><b>CONFIDENTIAL INFORMATION</b><br/>         THE INFORMATION CONTAINED IN THIS DOCUMENT IS THE PROPERTY OF LUMEX INC. EXCEPT AS SPECIALLY 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.</p> <p><b>RELIABILITY NOTE</b><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.</p> | <p>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</p> |
| 5.56mm CHARACTER HEIGHT, 5x8 DOT MATRIX, 8x2,<br>LCD MODULE, 1/16 DUTY, 1/5 BIAS. |                              | DRAWN BY: CT<br>CHECKED BY:<br>APPROVED BY:   | DATE: 9.5.03<br>PAGE: 1 OF 2<br>SCALE: N/A   |

UNCONTROLLED DOCUMENT

|               |                                     |      |
|---------------|-------------------------------------|------|
| PART NUMBER   |                                     | REV. |
| LCM-X00802DXX |                                     | B    |
| REV.          | E.C.N. NUMBER AND REVISION COMMENTS | DATE |
|               | SEE PAGE 1.                         |      |

| 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.                   |



| 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> V   |
|                            |                                  | V <sub>IL</sub>                                     | -                    | 0    | -    | 0.6 V               |
| 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 V               |
|                            | CURRENT                          | I <sub>f</sub>                                      | -                    | -    | 70   | 110 mA              |
|                            | POWER CONSUMPTION                | PD  | -                    | -    | 315  | - mW                |
|                            | LUMINOUS                         | L   | I <sub>f</sub> =70mA | 70   | -    | - cd/m <sup>2</sup> |
| 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   |

UNCONTROLLED DOCUMENT

\*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=+DECIMAL PRECISION MAX=-DECIMAL PRECISION

|  |                              |   |  |
|--|------------------------------|---|--|
| REV.<br>B  | PART NUMBER<br>LCM-X00802DXX | <p>CONFIDENTIAL INFORMATION</p> <p>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.</p> <p>RELIABILITY NOTE</p> <p>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.</p> | <p>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</p> |
| 5.56mm CHARACTER HEIGHT, 5x8 DOT MATRIX, 8x2, LCD MODULE, 1/16 DUTY, 1/5 BIAS. |                              | DRAWN BY: CT<br>CHECKED BY:<br>APPROVED BY:   | DATE: 9.5.03<br>PAGE: 2 OF 2<br>SCALE: N/A   |