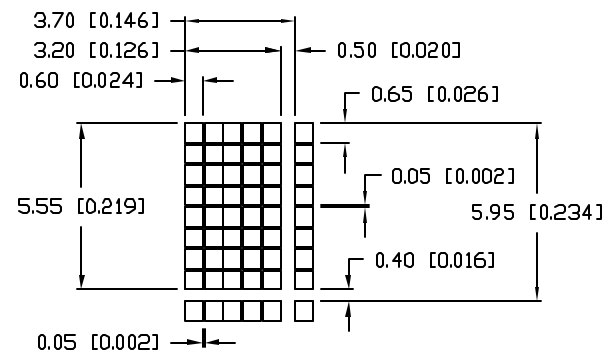
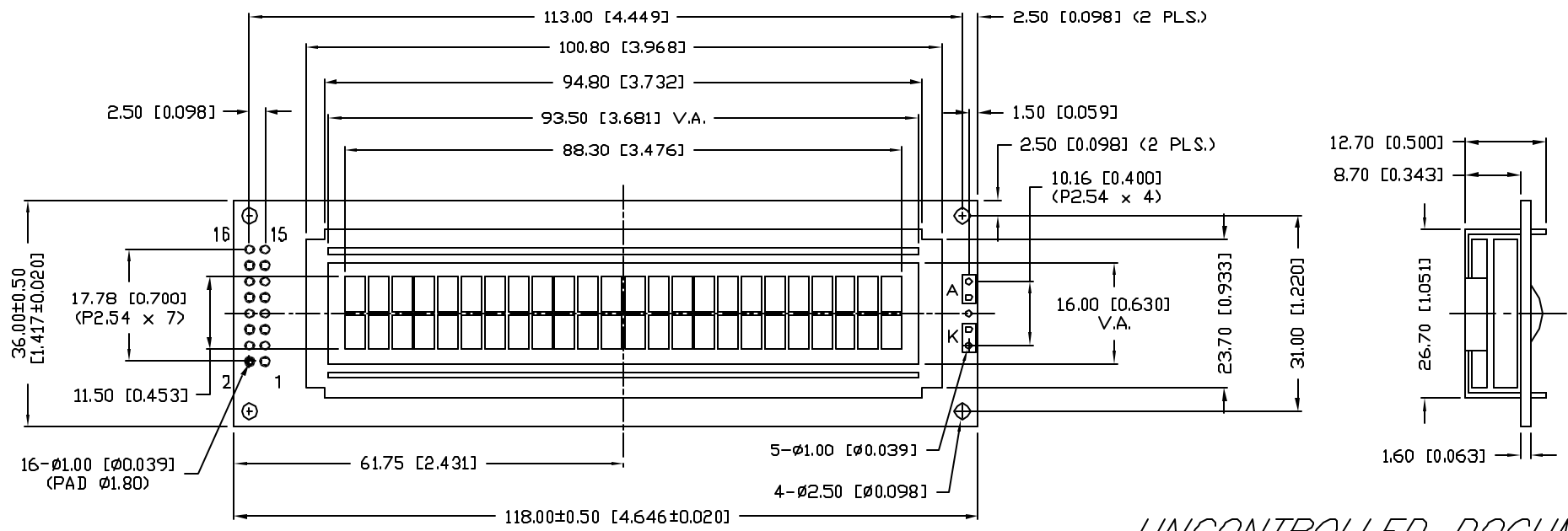


CHARACTER DETAIL



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



\*UNLESS OTHERWISE SPECIFIED TOLERANCES PER DECIMAL PRECISION ARE: X=±1 (±0.039), XX=±0.5 (±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.   | PART NUMBER<br>LCM-S02402DSF |
| 5.55mm CHARACTER HEIGHT, 24 x 2 CHARACTER LCD,<br>5 x 8 DOT MATRIX, STN, TRANSFLECTIVE,<br>LED BACKLIGHT, 1/16 DUTY. |                              |

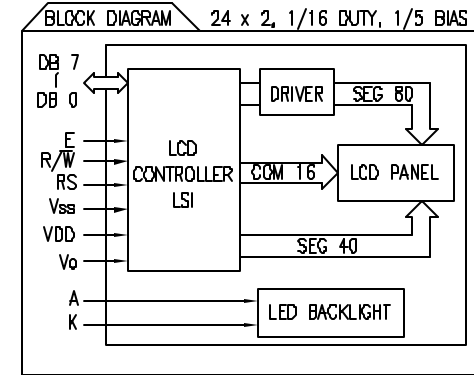
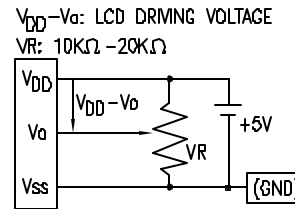
**CONFIDENTIAL INFORMATION**  
THE INFORMATION CONTAINED IN THIS DOCUMENT IS THE PROPERTY OF LUMEX INC. EXCEPT AS SPECIFICALLY AUTHORIZED IN WRITING BY LUMEX INC., THE HOLDER OF THIS DOCUMENT SHALL KEEP ALL INFORMATION CONTAINED HEREIN CONFIDENTIAL AND SHALL PROTECT SAME IN WHOLE OR IN PART FROM DISCLOSURE AND DISSEMINATION TO ALL THIRD PARTIES.

**RELIABILITY NOTE**  
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.

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:<br>SA/CT | CHECKED BY: | APPROVED BY: | DATE: 8.17.01 |
|                    |             |              | PAGE: 1 OF 2  |
|                    |             |              | SCALE: N/A    |

| PIN CONFIGURATION |                 |        |   |
|-------------------|-----------------|--------|---|
| PIN NO.           | SYMBOL          | LEVEL  | FUNCTION  |
| 1                 | V <sub>SS</sub> | -      | POWER SUPPLY<br>GND (OV)<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.                   |
| 15                | A               | -      | ANODE<br>LED BACKLIGHT  |
| 16                | K               | -      | CATHODE<br>LED BACKLIGHT  |




| 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  | -    | 4.7  | V                 |
|                            | LOW                              | 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> =160mA | -    | 4.2  | 4.5  | V                 |
|                            | CURRENT                          | I <sub>f</sub>                                      | -                     | -    | 160  | 400  | mA                |
|                            | POWER CONSUMPTION                | PD  | -                     | -    | 660  | -    | mW                |
|                            | LUMINOUS                         | L   | I <sub>f</sub> =160mA | 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   |
| STORAGE TEMPERATURE          | T <sub>stg</sub>                 | LCM-S                | -20             | 70              | °C   |

\*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.=+0.00 -DECIMAL PRECISION

|  |                              |  |   |
|--|------------------------------|--|---|
| REV.   | PART NUMBER<br>LCM-S02402DSF | CONFIDENTIAL INFORMATION<br>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. | 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 |
| 5.55mm CHARACTER HEIGHT, 24 x 2 CHARACTER LCD,<br>5 x 8 DOT MATRIX, STN, TRANSFLECTIVE,<br>LED BACKLIGHT, 1/16 DUTY. |                              | 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:<br>SA/GT   | CHECKED BY:                  | APPROVED BY:   | DATE: 8.17.01<br>PAGE: 2 OF 2<br>SCALE: N/A   |

## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [LCD Character Display Modules & Accessories](#) category:*

*Click to view products by [Lumex](#) manufacturer:*

Other Similar products are found below :

[HG9Z-AC501](#) [HG9Z-SCI25B](#) [LCM-S01602DTRA-3](#) [HG9Z-XC213](#) [EA FL-10P](#) [MDLS-81809-LV-GLED4G](#) [MDLS-20265-LV-GLED4G](#)  
[NMTC-S16205DFYHSAY-22](#) [NHD-0420AZ-FSW-GBW-33V33-0](#) [CM1644-SGR1](#) [162A BC BW](#) [LCM-S02002DSM-Y](#) [162D BA BC](#)  
[HDM24216H-2-P9XS](#) [DEM 16207 SYH-PY](#) [RC0802A1-LLG-JWVE](#) [RC0802A1-LLR-JWVE](#) [RC0802A-TIW-ESV](#) [RC1202A-BIY-CSX](#)  
[RC1202A-BIY-ESX](#) [RC1602A-BIW-CSV](#) [RC1602A-YHW-CSV](#) [RC1602B-GHY-CSXD](#) [RC1602B-TIW-CSV](#) [RC1602B-YHY-CSVD](#)  
[RC1602D-GHY-ESX](#) [RC2002A2-LLB-JSVE](#) [RC2002A-GHG-CSV](#) [RC2004A-BIW-ESX](#) [RC2004A-GHW-CSV](#) [RC2004A-LLB-JSVE](#)  
[RC2004A-LLH-JSV](#) [RC2004A-LLR-JSVE](#) [DEM 08171 SYH-LY](#) [DEM 08172 SYH-PY](#) [DEM16101SYH-LY](#) [DEM 16209 SBH-PW-N](#)  
[DEM 16210 SGH](#) [DEM 16214 FGH-PW](#) [DEM 16216 FDH-P\(RGB\)-N](#) [DEM16216SYH-LY](#) [DEM 16217 SYH-PY](#) [DEM 16221 SYH](#) [DEM](#)  
[16221 SYH \(FFCF/TR\)/V](#) [DEM 16227 FGH-PW](#) [DEM 16227 SBH-PW-N](#) [DEM 16227 SYH-LY](#) [DEM 20231 SYH-PY-CYR22](#) [DEM 20232](#)  
[SBH-PW-N](#) [DEM 20233 SYH-LY](#)