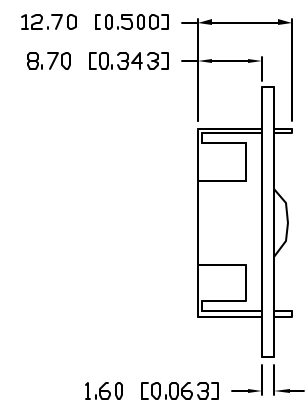
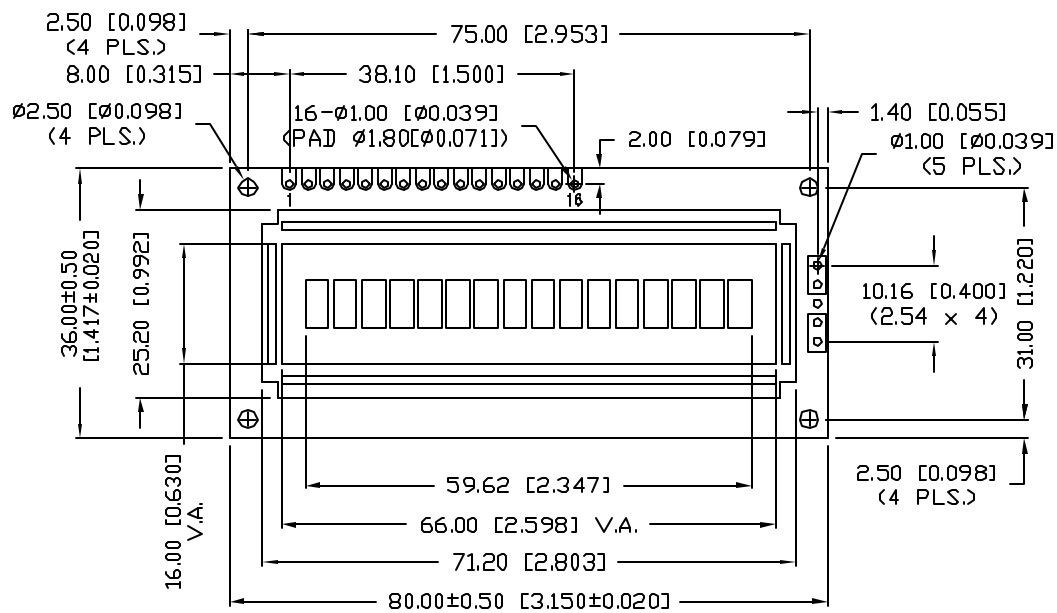
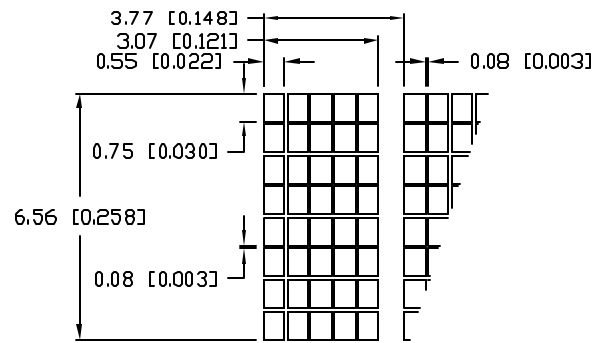


CHARACTER DETAIL

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

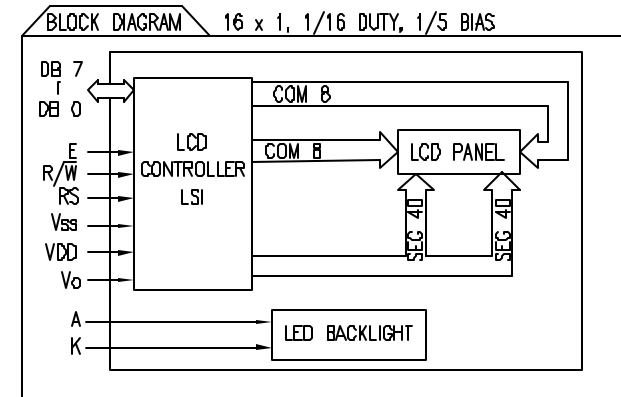
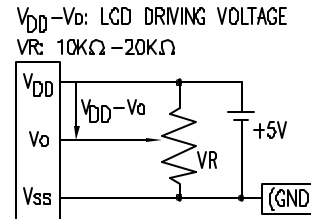
|   |                              |
|---|------------------------------|
| REV.  | PART NUMBER<br>LCM-S01601DSF |
| 6.56mm CHARACTER HEIGHT, 5 x 8 DOT MATRIX,<br>16 x 1 LCD MODULE, 1/16 DUTY, 1/5 BIAS.<br>STN, TRANSFLECTIVE, WITH LED BACKLIGHT |                              |

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**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.

|   |             |   |  |
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| PIN CONFIGURATION |                 |        |   |
|-------------------|-----------------|--------|---|
| PIN NO.           | SYMBOL          | LEVEL  | FUNCTION  |
| 1                 | V <sub>SS</sub> | -      | POWER SUPPLY  |
| 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-->MPLU)<br>L: DATA WRITE (MODULE<--MPLU)   |
| 6                 | E               | H,H->L | ENABLE  |
| 7~14              | DB0~DB7         | H/L    | DATA BUS--SOFTWARE SELECTABLE 4 OR 8 BIT MODE.                  |
| 15                | A               | -      | ANODE   |
| 16                | K               | -      | CATHODE   |



| 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                                 | -                     | 1.6  | 2.5  | 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             |                   |
| LED BACKLIGHT              | VOLTAGE                          | V <sub>f</sub>                                      | I <sub>f</sub> =150mA | -    | 4.2  | 4.6             | V                 |
|                            | CURRENT                          | I <sub>f</sub>                                      | -                     | -    | 150  | 200             | mA                |
|                            | POWER CONSUMPTION                | PD  | -                     | -    | 630  | -               | mW                |
|                            | LUMINOUS                         | L   | I <sub>f</sub> =150mA | 70   | -    | -               | cd/m <sup>2</sup> |
|                            | COLOR                            | -   | -                     | -    | -    | -               | nm                |

| ABSOLUTE MAXIMUM RATINGS     |                                  |                      |                 |                 |      |
|------------------------------|----------------------------------|----------------------|-----------------|-----------------|------|
| ITEM                         | SYMBOL                           | TEST CONDITION       | STANDARD VALUE  |                 | UNIT |
| 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   |

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