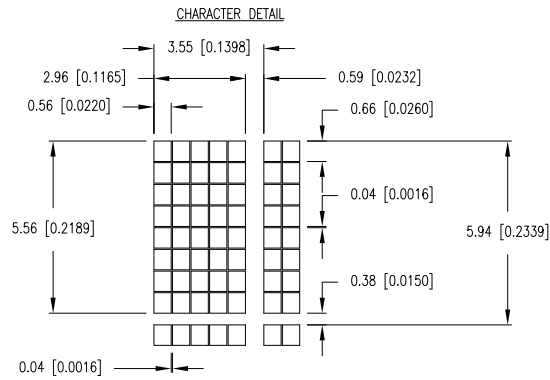


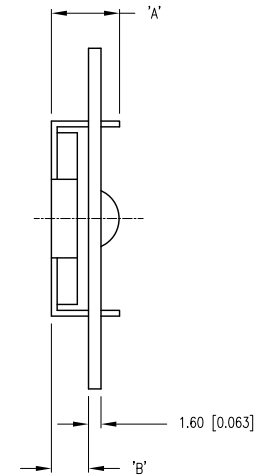
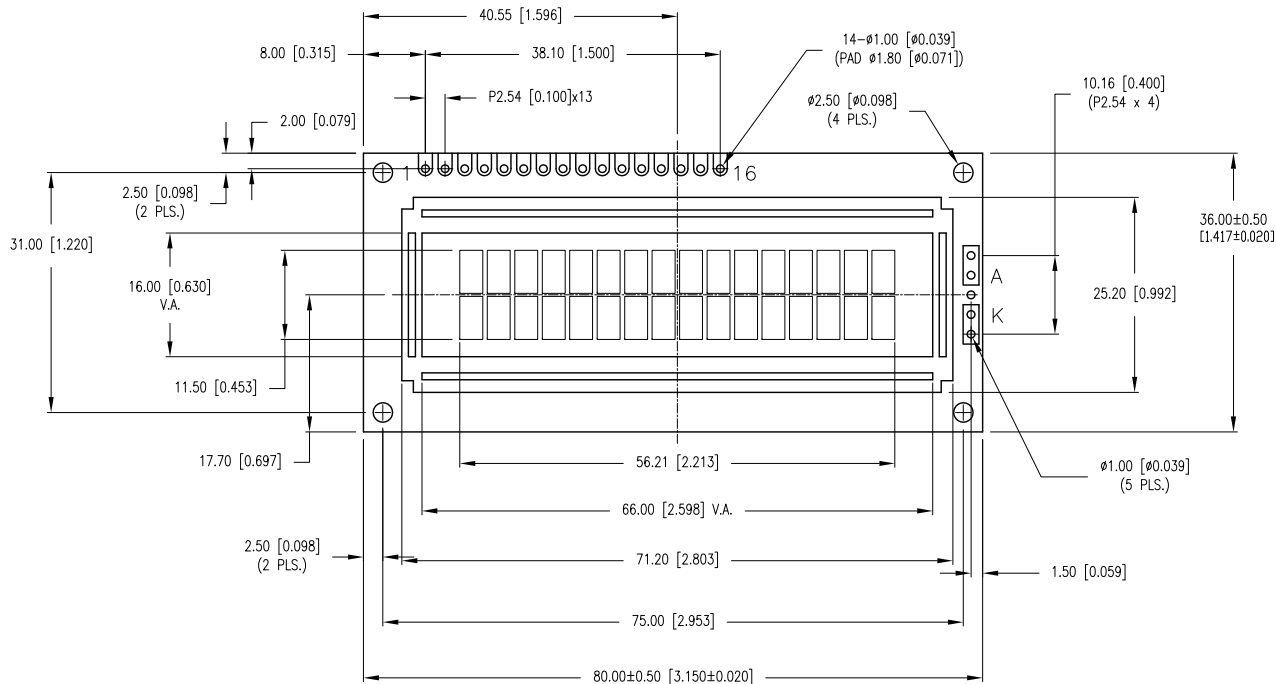
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|-------------|-------------------------------------|------|------|
| PART NUMBER | LCM-S01602DSR/A | REV. | A |
| DATE | E.C.N. NUMBER AND REVISION COMMENTS | | REV. |
| 03.02.11 | E.C.N. #10BRDR. & REDRAWN. | | A |



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

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

| TYPE | DIM. | A | B |
|----------------|------|------|-----|
| WITH BACKLIGHT | | 12.7 | 8.7 |
| NO BACKLIGHT | | 8.8 | 4.8 |



*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

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MEMBER OF ITW PHOTONICS GROUP

5.56mm CHARACTER HEIGHT, 5x8 DOT MATRIX,

THE SPECIFICATIONS MAY CHANGE AT ANY TIME WITHOUT NOTICE DUE TO NEW MATERIALS OR PRODUCT IMPROVEMENT.

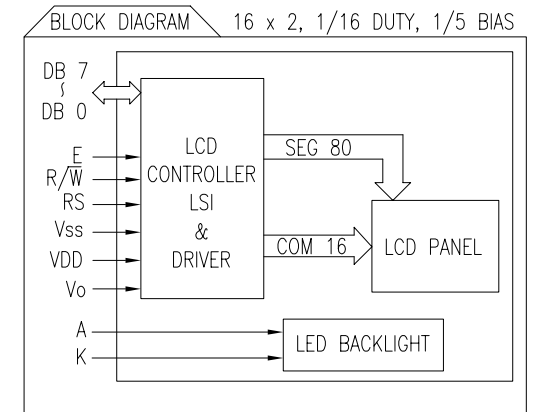
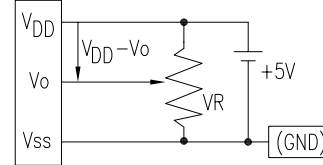
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| | | | |
|--------|-----------|-----------|----|
| DATE: | 03.02.11 | DRAWN BY: | AB |
| PAGE: | 1 OF 2 | CHKD BY: | SS |
| SCALE: | NTS | APRVD BY: | KF |
| UNIT: | mm [INCH] | | Ⓟ |

| | | | |
|-------------|-------------------------------------|------|------|
| PART NUMBER | LCM-S01602DSR/A | REV. | A |
| DATE | E.C.N. NUMBER AND REVISION COMMENTS | | REV. |
| 03.02.11 | E.C.N. #10BRDR. & REDRAWN. | | A |

| PIN CONFIGURATION | | | |
|-------------------|-----------------|--------|---|
| PIN NO. | SYMBOL | LEVEL | FUNCTION |
| 1 | V _{SS} | - | POWER SUPPLY |
| 2 | V _{DD} | - | |
| 3 | V _O | - | |
| | | | GND (0V) |
| | | | 5V |
| | | | FOR LCD DRIVE |
| 4 | RS | H/L | REGISTER SELECT SIGNAL H: DATA INPUT L: INSTRUCTION INPUT |
| 5 | R/ \bar{W} | H/L | H: DATA READ (MODULE-->MPU) 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 |
| 16 | K | - | CATHODE |

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



| ELECTRICAL CHARACTERISTICS | | V _{DD} =4.7V to 5.3V, T _A =25°C | | | | |
|----------------------------|----------------------------------|---|-----------------------|------|------|-----------------|
| ITEM | SYMBOL | CONDITION | STANDARD VALUE | | | UNIT |
| | | | MIN. | TYP. | MAX. | |
| SUPPLY VOLTAGE FOR LOGIC | V _{DD} -V _{SS} | - | - | 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} |
| | LOW | V _{IL} | - | 0 | - | 0.6 |
| OUTPUT VOLTAGE | HIGH | V _{OH} | - | 2.4 | - | V |
| | LOW | V _{OL} | - | - | - | 0.4 |
| *LED BACKLIGHT | VOLTAGE | V _f | I _f =160mA | - | 4.2 | 4.6 |
| | CURRENT | I _f | - | - | 160 | - |
| | POWER CONSUMPTION | PD | - | - | 656 | - |
| | LUMINOUS | L | I _f =160mA | 70 | - | - |
| | COLOR | - | - | - | - | - |

*ONLY APPLIES TO MODULES WITH BACKLIGHT

| ABSOLUTE MAXIMUM RATINGS | | | | | |
|------------------------------|----------------------------------|----------------------|-----------------|-----------------|------|
| ITEM | SYMBOL | TEST CONDITION | STANDARD VALUE | | UNIT |
| | | | MIN | MAX | |
| SUPPLY VOLTAGE FOR LOGIC | V _{DD} -V _{SS} | T _a =25°C | 4.7 | 5.3 | V |
| SUPPLY VOLTAGE FOR LCD DRIVE | V _{DD} -V _O | - | 4.2@50°C | 4.8@0°C | V |
| INPUT VOLTAGE | V _I | T _a =25°C | V _{SS} | V _{DD} | V |
| OPERATING TEMPERATURE | T _{opr} | LCM-S | 0 | 50 | °C |
| | | LCM-H | -20 | 70 | °C |
| STORAGE TEMPERATURE | T _{stg} | LCM-S | -20 | 70 | °C |
| | | LCM-H | -30 | 85 | °C |

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