



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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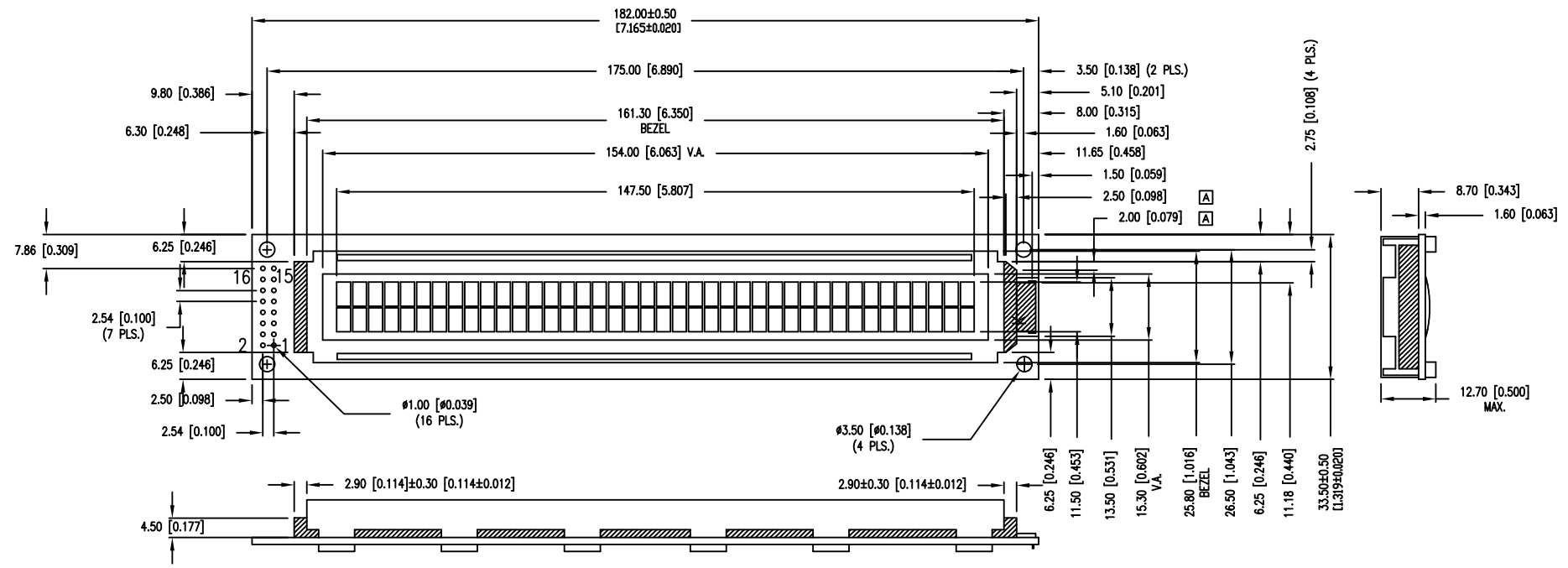
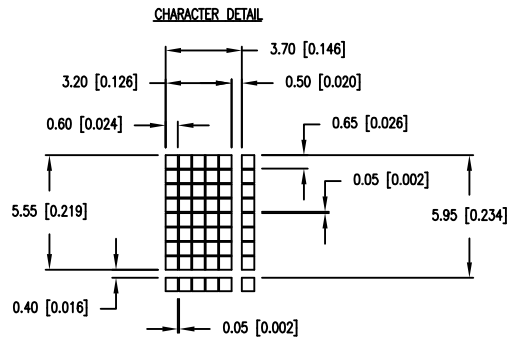
Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



| PART NUMBER | LCM-H04002DWN-1G | REV. | C |
|-------------|-------------------------------------|------|------|
| DATE | E.C.N. NUMBER AND REVISION COMMENTS | | REV. |
| 07.15.09 | E.C.N. #11577. | | A |
| 10.02.03 | E.C.N. #11587. | | B |
| 05.23.16 | ECN-Lumex201600010 | | C |

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), 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 -0.00, MAX.= +0.00 -DECIMAL PRECISION

LUMEX
Creating LED and LCD Solutions Together™

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CAROL STREAM, IL 60188
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40 x 2 LCD CHARACTER MODULE, FSTN BLCK, NEGATIVE IMAGE, 525nm GREEN LED BACKLIGHT.

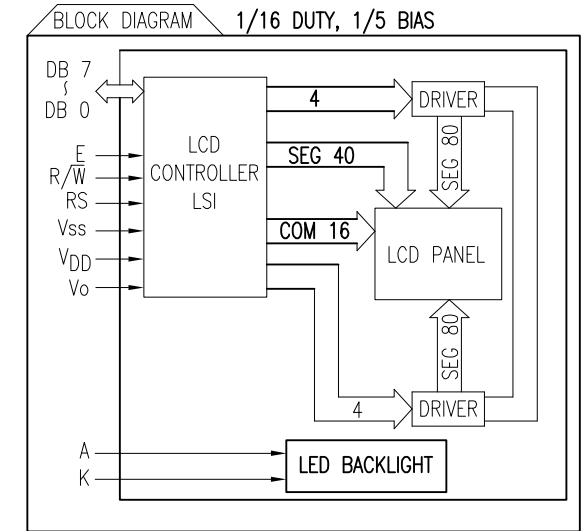
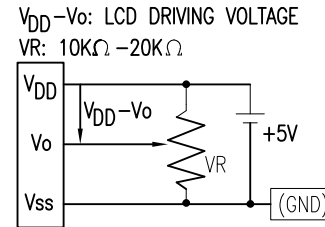
***THE SPECIFICATIONS MAY CHANGE AT ANY TIME WITHOUT NOTICE DUE TO NEW MATERIALS OR PRODUCT IMPROVEMENT.**

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| | | | |
|--------|-----------|-----------|------|
| DATE: | 05.23.16 | DRAWN BY: | E.C. |
| PAGE: | 1 OF 2 | CHKD BY: | G.Y. |
| SCALE: | N/A | APRVD BY: | Ray |
| UNIT: | mm [INCH] | | Ⓟ |

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| PIN CONFIGURATION | | | | | |
|-------------------|-----------------|--------|---|---------------|--|
| PIN NO. | SYMBOL | LEVEL | FUNCTION | | |
| 1 | V _{SS} | - | POWER SUPPLY | GND (0V) | |
| 2 | V _{DD} | - | | 5V | |
| 3 | V _O | - | | 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 | 3.2V | ANODE | LED BACKLIGHT | |
| 16 | K | - | CATHODE | LED BACKLIGHT | |



ⓑ 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} | - | 4.5 | 5.0 | 5.5 | V | |
| SUPPLY CURRENT FOR LOGIC | I _{DD} | V _{DD} =5V | - | 3.0 | 5.0 | mA | |
| INPUT VOLTAGE | HIGH LOW | V _{IH} | - | 0.7V _{DD} | - | V _{DD} | V |
| | | V _{IL} | - | -0.3 | - | 0.6 | V |
| LCD MODULE DRIVING VOLTAGE | V _{DD} -V _O | - | 4.2 | 4.5 | 4.8 | V | |
| LED BACKLIGHT | VOLTAGE | V _f | I _f =60mA | - | 3.2 | 3.4 | V |
| | REVERSE CURRENT | I _r | V _r =5V | - | - | 0.2 | mA |
| | POWER CONSUMPTION | P _D | - | - | 192 | 204 | mW |
| | LUMINOUS | L | I _f =60mA | 100 | 120 | - | cd/m |
| | COLOR | - | I _f =60mA | 520 | 525 | 530 | nm ² |

ABSOLUTE MAXIMUM RATINGS

| ITEM | SYMBOL | TEST CONDITION | STANDARD VALUE | | UNIT |
|------------------------------|----------------------------------|----------------------|----------------|-----------------|------|
| | | | MIN | MAX | |
| SUPPLY VOLTAGE FOR LOGIC | V _{DD} -V _{SS} | T _a =25°C | -0.3 | 7 | V |
| SUPPLY VOLTAGE FOR LCD DRIVE | V _{DD} -V _O | - | -0.3 | 10 | V |
| INPUT VOLTAGE | V _I | T _a =25°C | -0.3 | V _{DD} | V |
| OPERATING TEMPERATURE | T _{opr} | LCM-H | -20 | 70 | °C |
| STORAGE TEMPERATURE | T _{stg} | LCM-H | -30 | 80 | °C |

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