



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!



## Contact us

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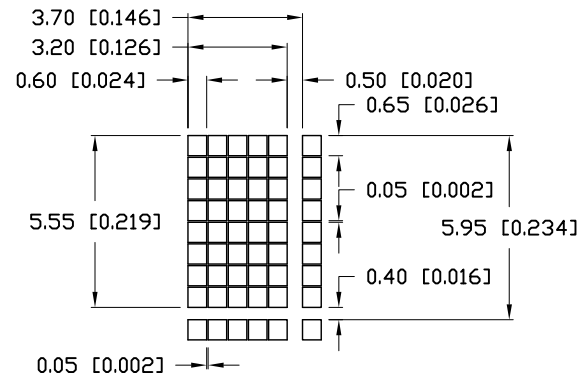
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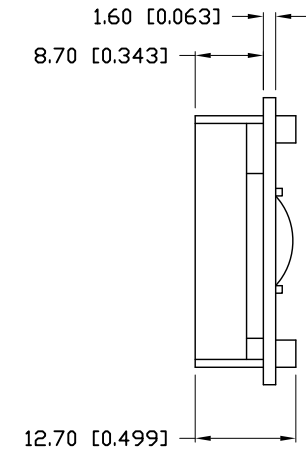
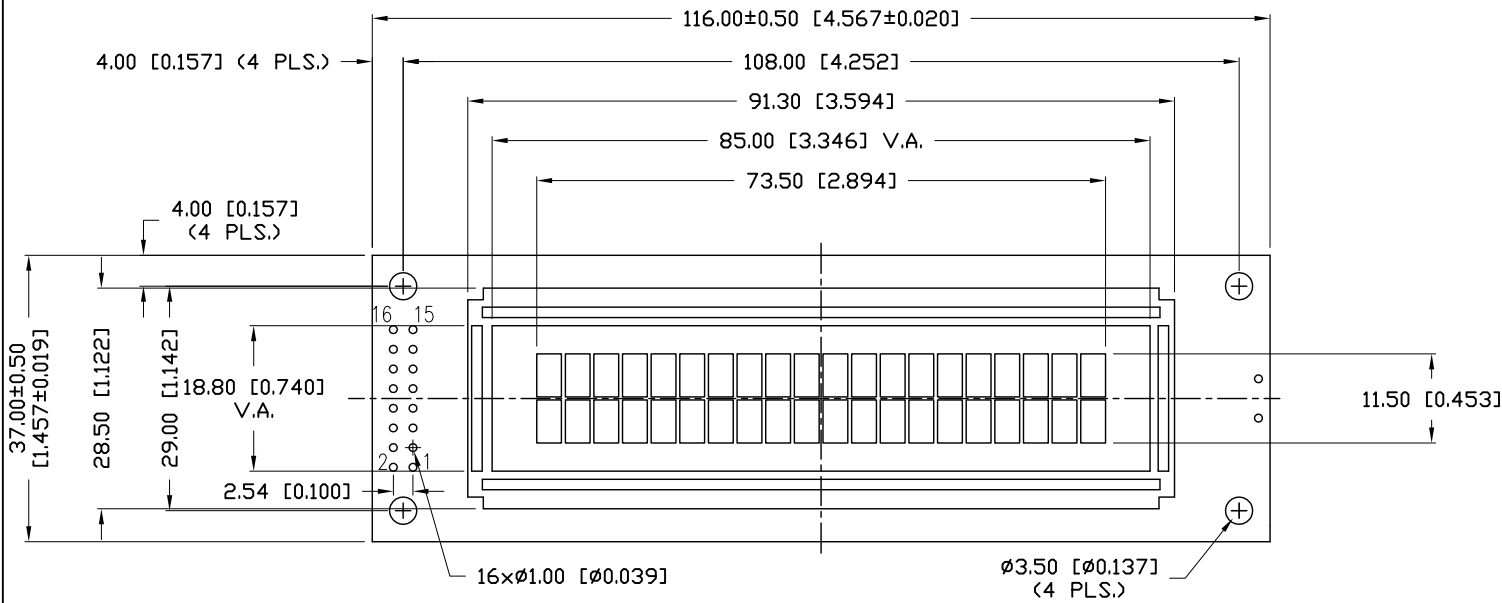


PART NUMBER	LCM-S02002DSM-Y	REV.	D
DATE	E.C.N. NUMBER AND REVISION COMMENTS		REV.
08.03.98	E.C.N. #10447.		A
09.04.98	E.C.N. #10BRDR. & REDRAWN.		B
02.14.13	E.C.N. #10BRDR. & REDRAWN.		C
11.26.13	E.C.N. #11888.		D

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), 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= <sup>+DECIMAL PRECISION</sup> -0.00 MAX= <sup>+0.00</sup> -DECIMAL PRECISION UNCONTROLLED DOCUMENT



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5.55mm CHARACTER HEIGHT, 5x8 DOT MATRIX, 20x2 LCD MODULE 1/16 DUTY, 1/5 BIAS, STN TRANS YELLOW BACKLIGHT.

\*\*THE SPECIFICATIONS MAY CHANGE AT ANY TIME WITHOUT NOTICE DUE TO NEW MATERIALS OR PRODUCT IMPROVEMENT.\*\*  
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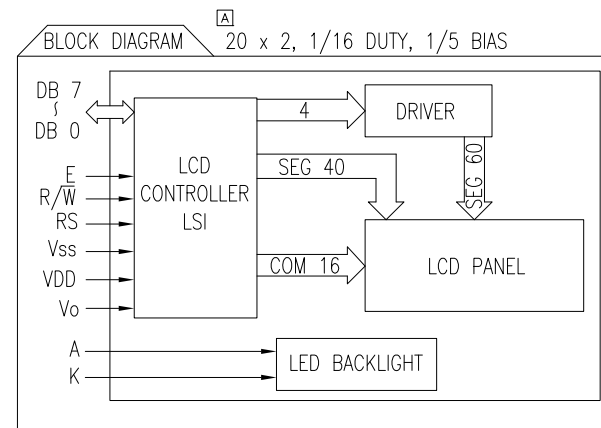
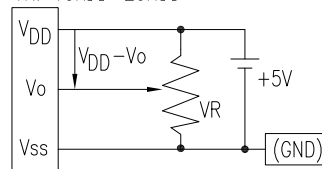
DATE:	02.14.13	DRAWN BY:	MA
PAGE:	1 OF 2	CHKD BY:	KF
SCALE:	NTS	APRVD BY:	KF
UNIT:	mm [INCH]		(Pb)

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PIN CONFIGURATION

PIN NO.	SYMBOL	LEVEL	FUNCTION	
1	V <sub>SS</sub>	-	POWER SUPPLY GND (0V)	
2	V <sub>DD</sub>	-		5V
3	V <sub>O</sub>	-		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 LED BACKLIGHT	
16	K	-	CATHODE LED BACKLIGHT	

V<sub>DD</sub>-V<sub>O</sub>: LCD DRIVING VOLTAGE  
VR: 10K $\Omega$ -20K $\Omega$



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>	-	4.5	5.0	5.5	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
	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> =210mA	-	4.2	4.6	V
	CURRENT	I <sub>f</sub>	-	-	210	-	mA
	POWER CONSUMPTION	P <sub>D</sub>	-	-	882	-	mW
	LUMINOUS	L	I <sub>f</sub> =210mA	110	170	-	cd/m <sup>2</sup>
COLOR	-	-	-	570	-	nm	

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>	-	0	50	°C
STORAGE TEMPERATURE	T <sub>stg</sub>	-	-20	70	°C

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