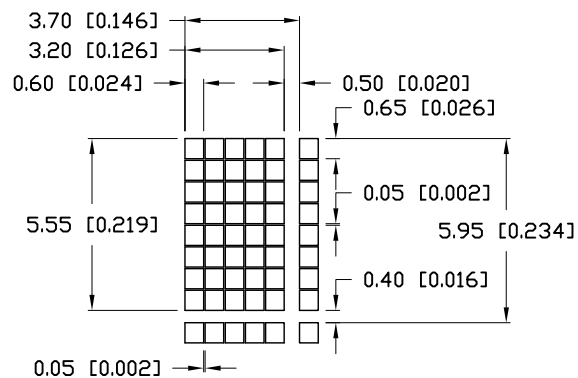


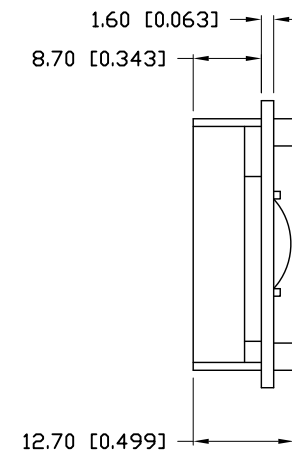
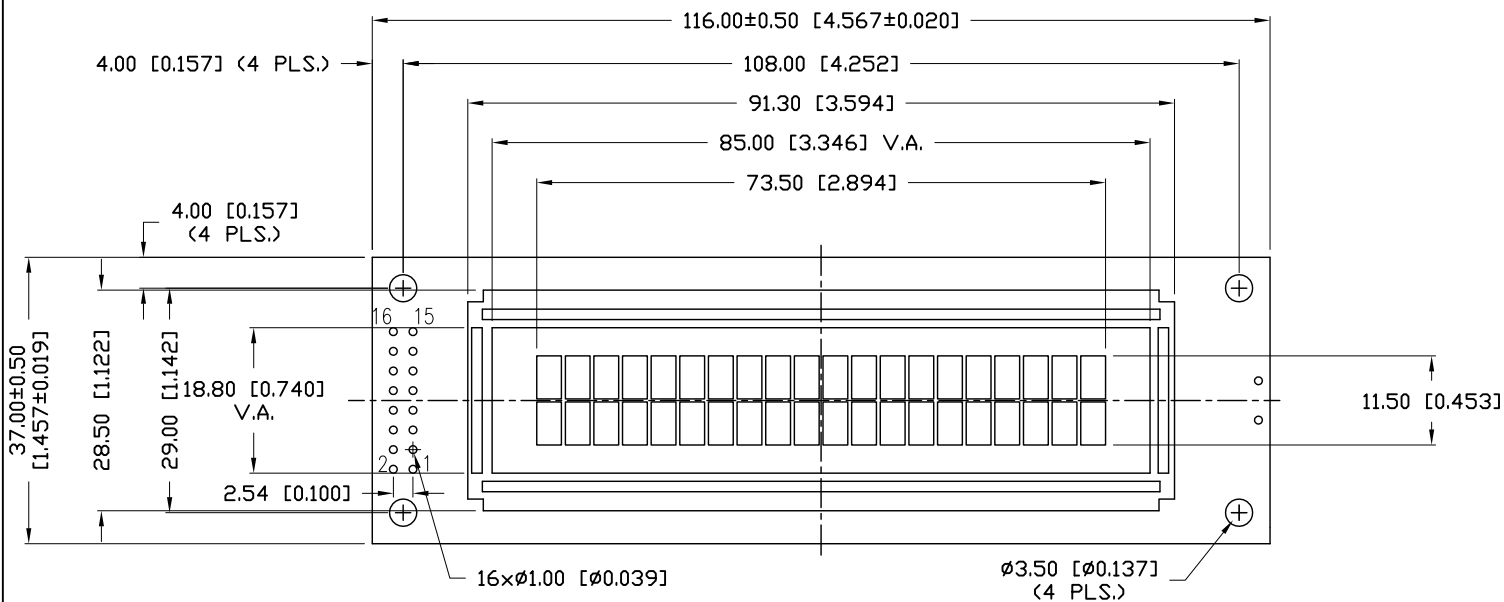
PART NUMBER	LCM-S02002DSM-Y	REV.	D
DATE	E.C.N. NUMBER AND REVISION COMMENTS		REV.
08.03.98	E.C.N. #10447.		A
09.04.98	E.C.N. #10BRDR. & REDRAWN.		B
02.14.13	E.C.N. #10BRDR. & REDRAWN.		C
11.26.13	E.C.N. #11888.		D

A

## 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.= +DECIMAL PRECISION MAX.= +0.00 -DECIMAL PRECISION

UNCONTROLLED DOCUMENT



425 N. GARY AVE.  
CAROL STREAM, IL 60188-4900  
PHONE: +1.800.278.5666  
FAX: +1.630.315.2152  
WEB: WWW.LUMEX.COM  
MEMBER OF ITW PHOTONICS GROUP

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.\*\*

## CONFIDENTIAL INFORMATION

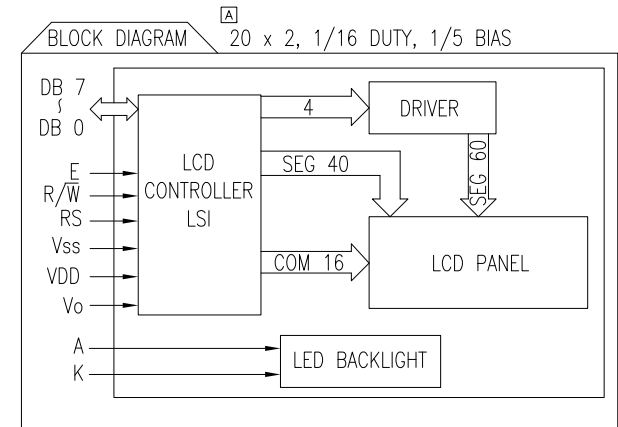
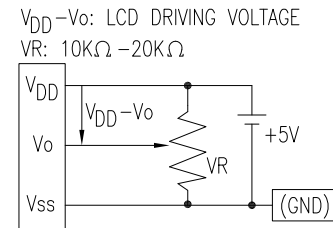
THE INFORMATION CONTAINED IN THIS DOCUMENT IS THE PROPERTY OF LUMEX INC. EXCEPT AS SPECIFICALLY AUTHORIZED IN WRITING BY LUMEX INC., THE HOLDER OF THIS DOCUMENT SHALL KEEP ALL INFORMATION CONTAINED HEREIN CONFIDENTIAL AND SHALL PROTECT SAME IN WHOLE OR IN PART FROM DISCLOSURE AND DISSEMINATION TO ALL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

DATE:	02.14.13	DRAWN BY:	MA
PAGE:	1 OF 2	CHKD BY:	KF
SCALE:	NTS	APRVD BY:	KF
UNIT:	mm [INCH]		(Pb)

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

A

PIN CONFIGURATION			
PIN NO.	SYMBOL	LEVEL	FUNCTION
1	V <sub>SS</sub>	—	POWER SUPPLY GND (0V) 5V FOR LCD DRIVE
2	V <sub>DD</sub>	—	
3	V <sub>O</sub>	—	
4	RS	H/L	REGISTER SELECT SIGNAL H: DATA INPUT L: INSTRUCTION INPUT
5	R/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



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 LOW	V <sub>IH</sub>	—	2.2	—	V <sub>DD</sub>
		V <sub>IL</sub>	—	0	—	0.6
OUTPUT VOLTAGE	HIGH LOW	V <sub>OH</sub>	—	2.4	—	—
		V <sub>OL</sub>	—	—	—	0.4
*LED BACKLIGHT	VOLTAGE	V <sub>f</sub>	I <sub>f</sub> =210mA	—	4.2	4.6
	CURRENT	I <sub>f</sub>	—	—	210	—
	POWER CONSUMPTION	PD	—	—	882	—
	LUMINOUS	L	I <sub>f</sub> =210mA	110	170	—
	COLOR	—	—	—	570	—

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	

A

\*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>+0.00</sup> <sub>-0.00</sub> DECIMAL PRECISION MAX.= <sup>+0.00</sup> <sub>-0.00</sub> DECIMAL PRECISION

UNCONTROLLED DOCUMENT

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.\*\*

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.

DATE: 02.14.13	DRAWN BY: MA
PAGE: 2 OF 2	CHKD BY: KF
SCALE: NTS	APRVD BY: KF
UNIT: mm [INCH]	Ⓟ