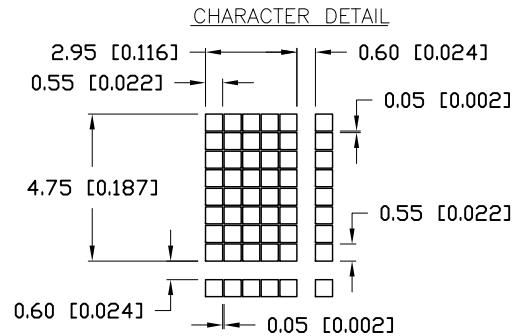


PART NUMBER	LCM-S02004DSF/C	REV.	A
DATE	E.C.N. NUMBER AND REVISION COMMENTS		REV.
03.13.13	E.C.N. #10BRDR. & REDRAWN.		A

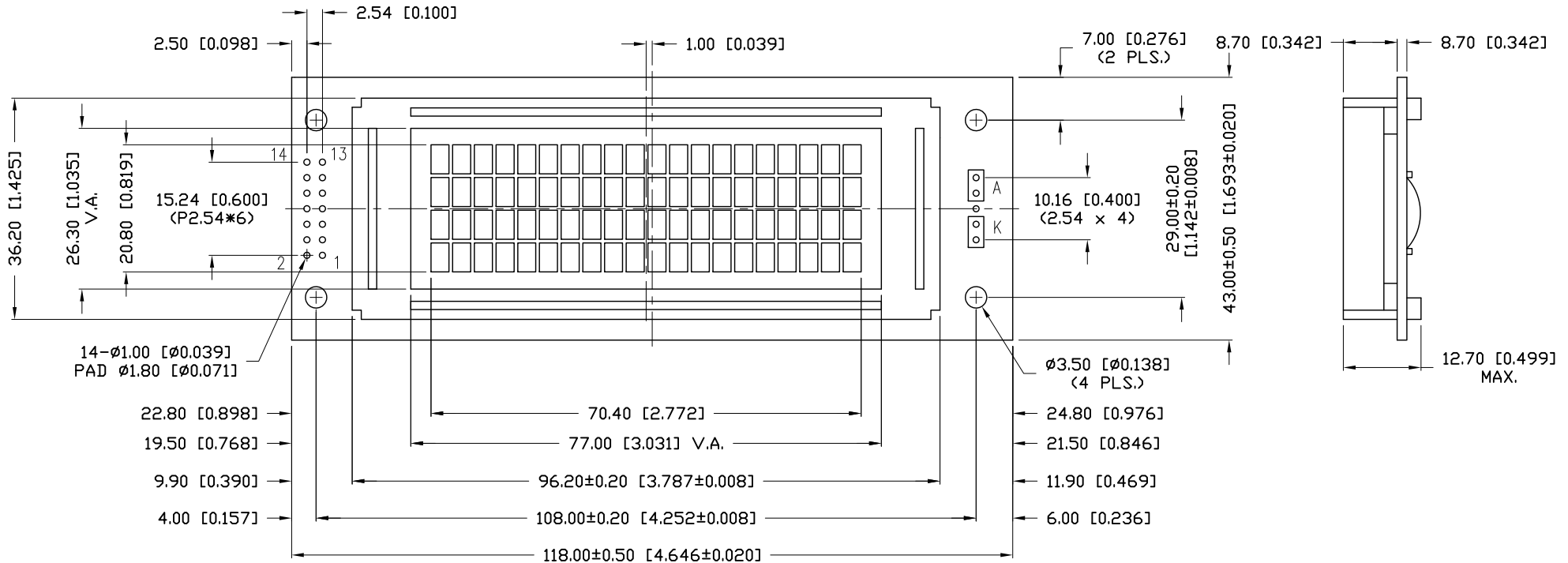
[A]

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

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



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

4.75mm CHAR HEIGHT, 5x8 DOT MATRIX, 20x4 LCD MODULE, 1/16 DUTY, 1/5 BIAS, STN, TRANSFLECTIVE W/ BACKLIGHT.

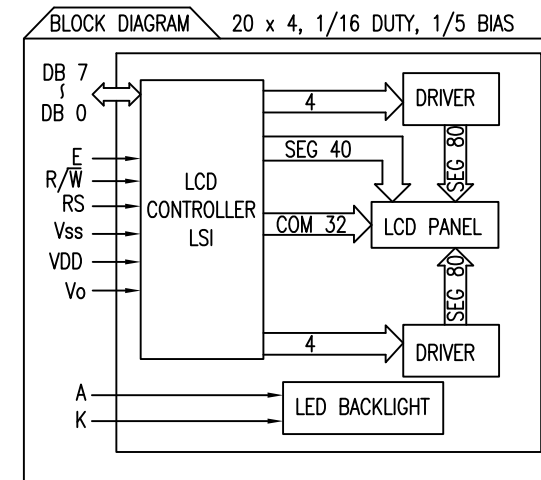
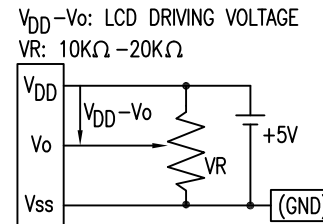
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DATE:	03.13.13	DRAWN BY:	MA
PAGE:	1 OF 2	CHKD BY:	JD
SCALE:	NTS	APRVD BY:	JD
UNIT:	mm [INCH]		(Pb)

[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.
A	-	-	ANODE LED BACKLIGHT
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>	-	-	5.0	-	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>	I <sub>OH</sub> =-0.205mA	2.4	-	V
	LOW	V <sub>OL</sub>	I <sub>OL</sub> =1.6ma	-	0.4	V
*LED BACKLIGHT	VOLTAGE	V <sub>f</sub>	I <sub>f</sub> =300mA	-	4.2	4.5 V
	CURRENT	I <sub>f</sub>	-	-	300	600 mA
	POWER CONSUMPTION	PD	-	-	1260	- mW
	LUMINOUS	L	I <sub>f</sub> =300mA	70	-	- cd/m <sup>2</sup>
	COLOR	-	-	-	-	- nm

\*ONLY APPLIES TO MODULES WITH BACKLIGHT

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	Topr	LCM-S	0
STORAGE TEMPERATURE	Tstg	LCM-H	-20	70	°C
		LCM-S	-20	70	°C
STORAGE TEMPERATURE	Tstg	LCM-H	-30	85	°C

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