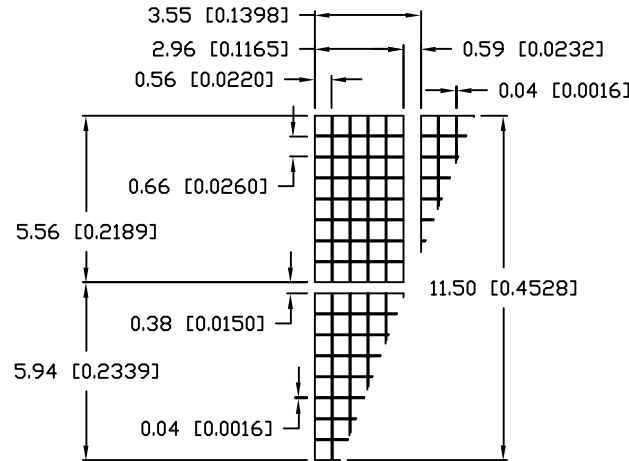


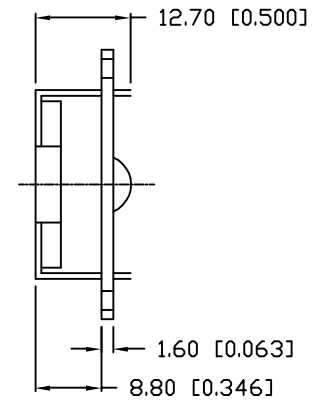
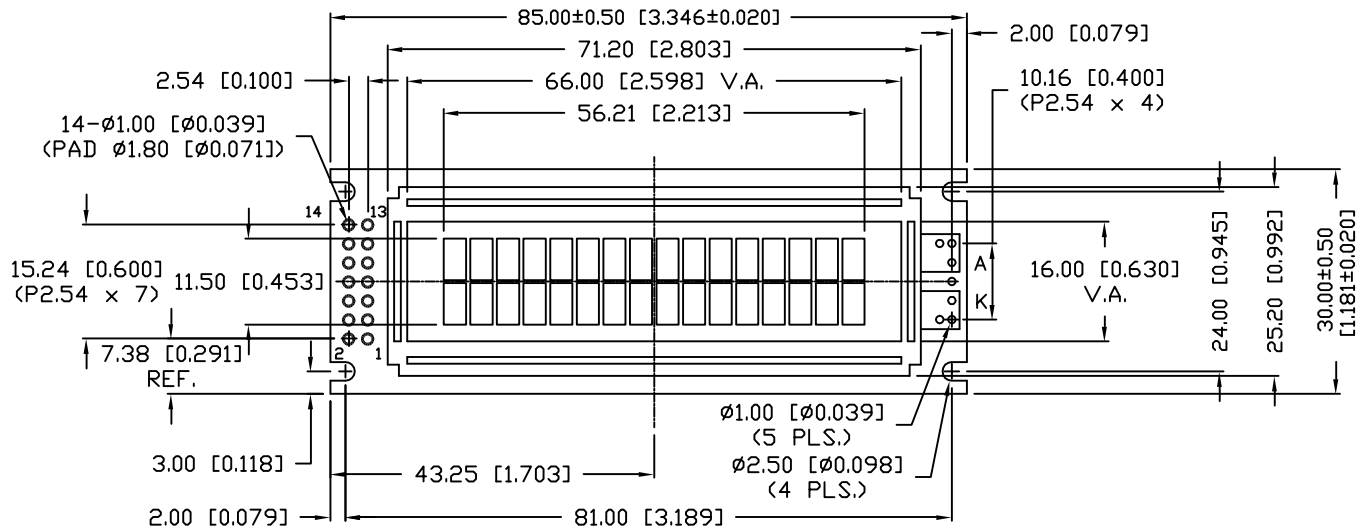
UNCONTROLLED DOCUMENT

PART NUMBER		REV.
LCM-S01602DSF/C		A
REV.	E.C.N. NUMBER AND REVISION COMMENTS	DATE
A	E.C.N. #11148.	10.10.07

CHARACTER DETAIL



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



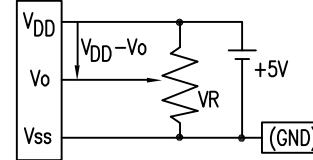
UNCONTROLLED DOCUMENT

\*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

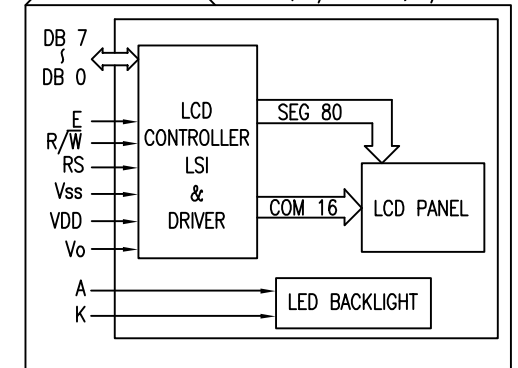
REV. A	PART NUMBER LCM-S01602DSF/C	<p><b>CONFIDENTIAL INFORMATION</b></p> <p>THE INFORMATION CONTAINED IN THIS DOCUMENT IS THE PROPERTY OF LUMEX INC. EXCEPT AS SPECIFICALLY AUTHORIZED IN WRITING BY LUMEX INC., THE HOLDER OF THIS DOCUMENT SHALL KEEP ALL INFORMATION CONTAINED HEREIN CONFIDENTIAL AND SHALL PROTECT SAME IN WHOLE OR IN PART FROM DISCLOSURE AND DISSEMINATION TO ALL THIRD PARTIES.</p> <p><b>RELIABILITY NOTE</b></p> <p>OUR MANY YEARS OF EXPERIENCE DATA ACCUMULATION INDICATE THAT SOLDER HEAT IS A MAJOR CAUSE OF EARLY AND FUTURE FAILURE. PLEASE PAY ATTENTION TO YOUR SOLDERING PROCESS.</p>	<p>290 E. HELEN ROAD PALATINE, IL 60067-6976 PHONE: +1.847.359.2790 US WEB: www.lumex.com TW WEB: www.lumex.com.tw</p>
16 x 2 LCD, 5 x 8 DOT MATRIX, STN, TRANSFLECTIVE, BACKLIGHT, 1/16 DUTY, 1/5 BIAS.		DRAWN BY: CT CHECKED BY: APPROVED BY:	DATE: 10.30.01 PAGE: 1 OF 2 SCALE: N/A

PIN CONFIGURATION					
PIN NO.	SYMBOL	LEVEL	FUNCTION		
1	V <sub>DD</sub>	-	POWER SUPPLY	5V	
2	V <sub>SS</sub>	-		GND (0V)	
3	V <sub>O</sub>	-		FOR LCD DRIVE	
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.		

V<sub>DD</sub>-V<sub>O</sub>: LCD DRIVING VOLTAGE  
VR: 10KΩ-20KΩ



BLOCK DIAGRAM 16 x 2, 1/16 DUTY, 1/5 BIAS



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>	
	LOW	V <sub>IL</sub>	-	0	-	0.6	
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> =160mA	-	4.2	4.6	V
	CURRENT	I <sub>f</sub>	-	-	160	-	mA
	POWER CONSUMPTION	PD	-	-	656	-	mW
	LUMINOUS	L	I <sub>f</sub> =160mA	70	-	-	cd/m <sup>2</sup>
	COLOR	-	-	-	-	-	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>	LCM-S	0	50	°C
STORAGE TEMPERATURE	T <sub>stg</sub>	LCM-S	-20	70	°C

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REV. A	PART NUMBER LCM-S01602DSF/C
5.56mm CHARACTER HEIGHT, 5 x 8 DOT MATRIX, 16 x 2 LCD MODULE, 1/16 DUTY, 1/5 BIAS.	

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DRAWN BY: CT	CHECKED BY:	APPROVED BY:	DATE: 10.30.01 PAGE: 1 OF 2 SCALE: N/A

