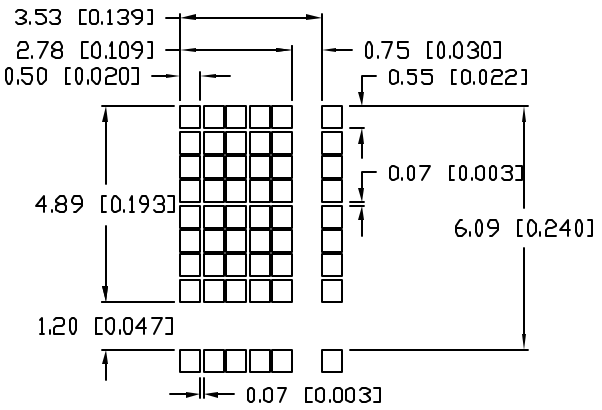
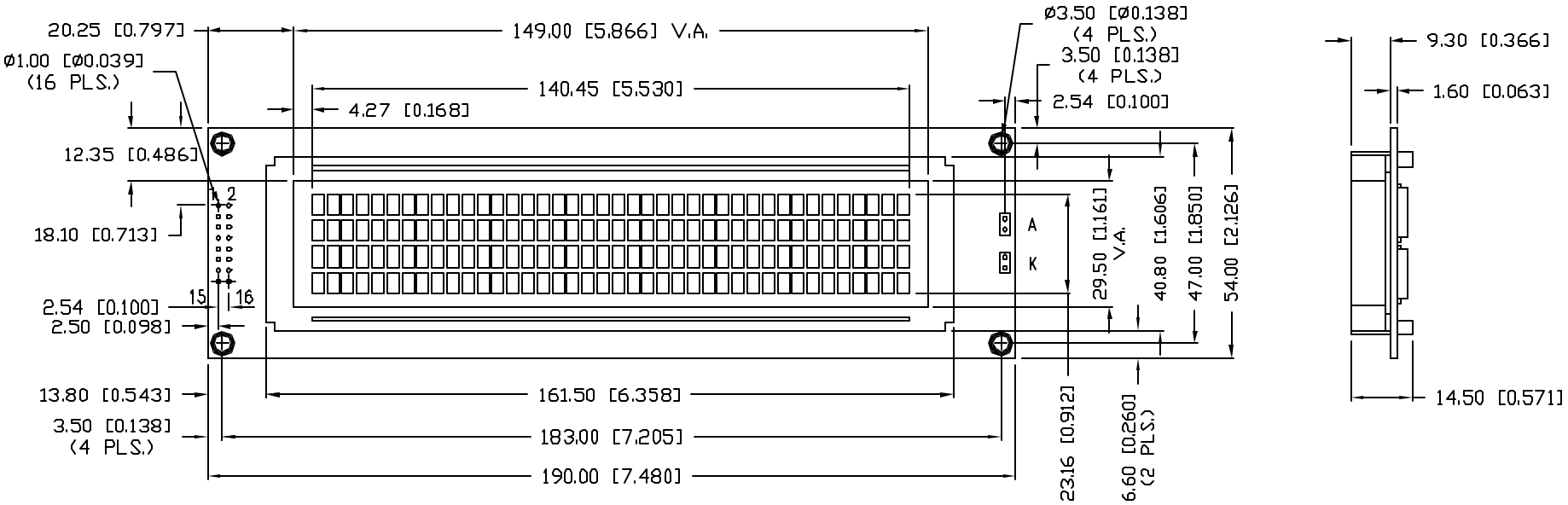
UNCONTROLLED DOCUMENT

PART NUMBER	REV.
LCM-S04004DSF-XB	

CHARACTER DETAIL



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



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*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.	PART NUMBER	CONFIDENTIAL INFORMATION	LUMEX	290 E. HELEN ROAD PALATINE, IL 60067-6976 PHONE: +1.847.359.2790 US WEB: www.lumex.com TW WEB: www.lumex.com.tw
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TRANSFLECTIVE, LED BACKLIGHT, 6:00 VIEW ANGLE
40 x 4 LCD CHARACTER MODULE, 1/16 DUTY, 1/5 BIAS,
EUROPEAN FONT IC.

RELIABILITY NOTE
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.

DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE: 9.21.05 PAGE: 1 OF 2 SCALE: N/A
JD			

PART NUMBER

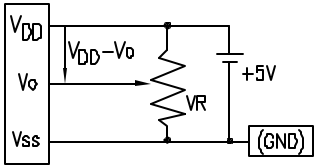
LCM-S04004DSF-XB

REV.

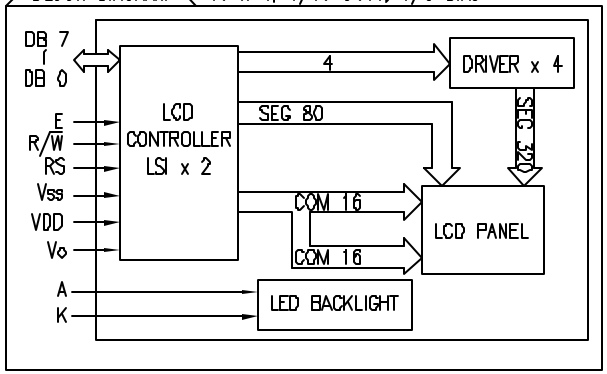
PIN CONFIGURATION

PIN NO.	SYMBOL	LEVEL	FUNCTION	
1~8	DB7~DB0	H/L	DATA BUS-SOFTWARE SELECTABLE 4 OR 8 BIT MODE.	
9	E1	H,H->L	ENABLE 1	
10	R/W	H/L	H: DATA READ (MODULE-->MPU) L: DATA WRITE (MODULE<--MPU)	
11	RS	H/L	REGISTER SELECT SIGNAL H: DATA INPUT L: INSTRUCTION INPUT	
12	Vo	-	POWER SUPPLY	FOR LCD DRIVE
13	Vss	-		GND (0V)
14	V_{DD}	-		5V
15	E2	H,H->L	ENABLE 2	
16	-	-	NO CONNECTION	
	A	-	ANODE FOR BACKLIGHT	
	K	-	CATHODE FOR BACKLIGHT	

V_{DD}-Vo: LCD DRIVING VOLTAGE
VR: 10KΩ-20KΩ



BLOCK DIAGRAM 40 x 4, 1/16 DUTY, 1/5 BIAS



ELECTRICAL CHARACTERISTICS

V_{DD}=4.7V to 5.3V, T_A=25°C

ITEM		SYMBOL	CONDITION	STANDARD VALUE MIN.	TYP.	MAX.	UNIT
SUPPLY VOLTAGE FOR LOGIC		V_{DD}-Vss	-	-	5.0	-	V
SUPPLY CURRENT FOR LOGIC		I_{DD}	V_{DD}=5V	-	4.0	10.0	mA
INPUT VOLTAGE	HIGH	V_{IH}	-	2.2	-	V_{DD}	V
	LOW	V_{IL}	-	0	-	0.6	V
OUTPUT VOLTAGE	HIGH	V_{OH}	-	2.4	-	-	V
	LOW	V_{OL}	-	-	-	0.4	V
*LED BACKLIGHT	VOLTAGE	Vf	-	-	4.2	4.6	V
	CURRENT	If	-	-	500	-	mA
	POWER CUNSUMPTION	PD	-	-	2100	-	mW
	LUMINOUS	L	If=500mA	70	-	-	cd/m²
	COLOR	-	-	-	-	-	nm

*ONLY APPLIES TO MODULES WITH BACKLIGHT

ABSOLUTE MAXIMUM RATINGS

ITEM	SYMBOL	TEST CONDITION	STANDARD VALUE MIN	MAX	UNIT
SUPPLY VOLTAGE FOR LOGIC	V_{DD}-Vss	Ta=25°C	4.7	5.3	V
SUPPLY VOLTAGE FOR LCD DRIVE	V_{DD}-Vo	-	4.2@50°C	4.8@0°C	V
INPUT VOLTAGE	V_I	Ta=25°C	Vss	V_{DD}	V
OPERATING TEMPERATURE	Topr	LCM-S	0	50	°C
STORAGE TEMPERATURE	Tstg	LCM-S	-20	70	°C

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40 x 4 LCD CHARACTER MODULE, 1/16 DUTY, 1/5 BIAS, TRANSFLECTIVE, LED BACKLIGHT, 6:00 VIEW ANGLE, EUROPEAN FONT IC.

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