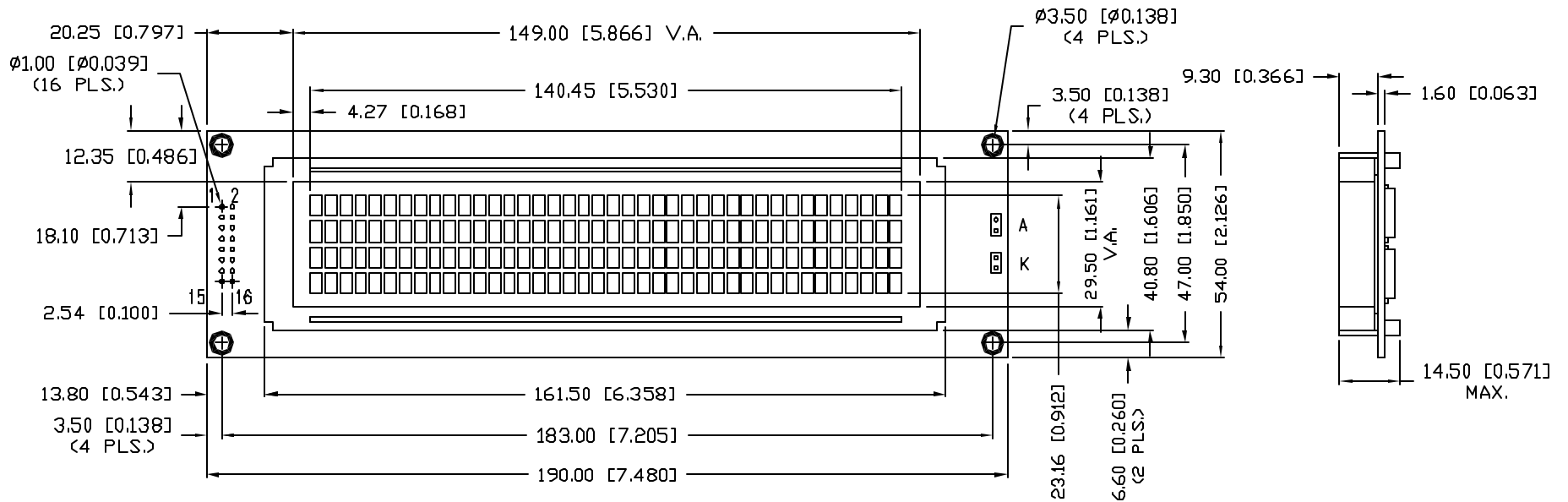
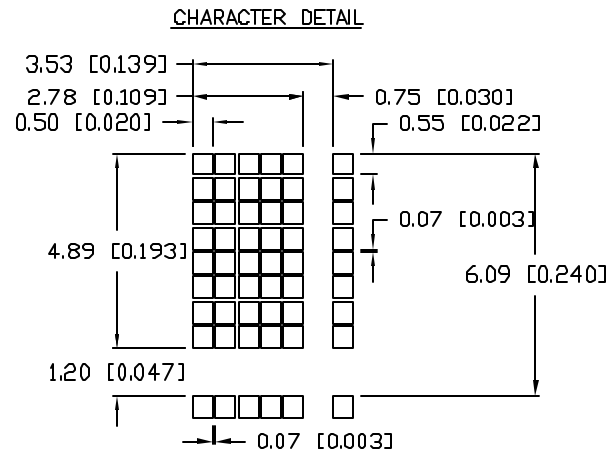



PRELIMINARY IN P/N DIR

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



UNCONTROLLED DOCUMENT

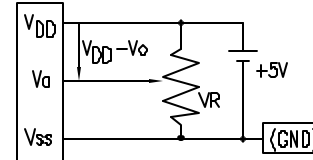
*UNLESS OTHERWISE SPECIFIED TOLERANCES PER DECIMAL PRECISION ARE: X=±1 (±0.039), X.X=±0.5 (±0.020), X.XX=±0.25 (±0.010), X.XXX=±0.127 (±0.005). LEAD SIZE=±0.05 (±0.002), LEAD LENGTH=±0.75 (±0.030), MIN.=^{+DECIMAL PRECISION}_{-0.00} MAX.=^{+0.00}_{-DECIMAL PRECISION}

REV.	PART NUMBER LCM-S04004DSF	<p>CONFIDENTIAL INFORMATION</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>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>
<p>4.89mm CHARACTER HEIGHT, 5 x 8 DOT MATRIX, 40 x 4 LCD CHARACTER MODULE, 1/16 DUTY, 1/5 BIAS, STN, TRANSFLECTIVE, WITH LED BACKLIGHT.</p>		<p>RELIABILITY NOTE</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>DRAWN BY: gt</p> <p>CHECKED BY:</p> <p>APPROVED BY:</p>
		<p>DATE: 4.29.02</p> <p>PAGE: 1 OF 2</p> <p>SCALE: N/A</p>	

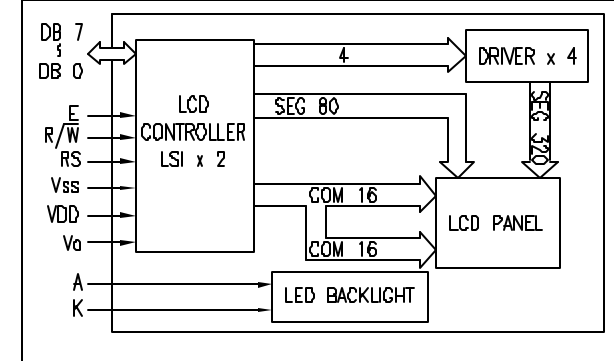
PRELIMINARY IN P/N DIR

PIN CONFIGURATION			
PIN NO.	SYMBOL	LEVEL	FUNCTION
1~8	DB0~DB7	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	V _o	-	FOR LCD DRIVE
13	V _{SS}	-	POWER SUPPLY
14	V _{DD}	-	5V
15	E2	H,H->L	ENABLE 2
16	-	-	NO CONNECTION
	A	-	ANODE FOR BACKLIGHT
	K	-	CATHODE FOR BACKLIGHT

V_{DD}-V_o: 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			UNIT	
			MIN.	TYP.	MAX.		
SUPPLY VOLTAGE FOR LOGIC	V _{DD} -V _{SS}	-	-	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	V _f	-	4.2	4.6	V	
	CURRENT	I _f	-	500	-	mA	
	POWER CONSUMPTION	PD	-	2100	-	mW	
	LUMINOUS	L	I _f =500mA	70	-	-	cd/m ²
	COLOR	-	-	-	-	-	nm

ABSOLUTE MAXIMUM RATINGS

ITEM	SYMBOL	TEST CONDITION	STANDARD VALUE		UNIT
			MIN	MAX	
SUPPLY VOLTAGE FOR LOGIC	V _{DD} -V _{SS}	T _a =25°C	4.7	5.3	V
SUPPLY VOLTAGE FOR LCD DRIVE	V _{DD} -V _o	-	4.2@50°C	4.8@0°C	V
INPUT VOLTAGE	V _I	T _a =25°C	V _{SS}	V _{DD}	V
		LCM-S	0	50	°C
OPERATING TEMPERATURE	T _{opr}	LCM-H	-20	70	°C
		LCM-S	-20	70	°C
STORAGE TEMPERATURE	T _{stg}	LCM-H	-30	85	°C

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REV.

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