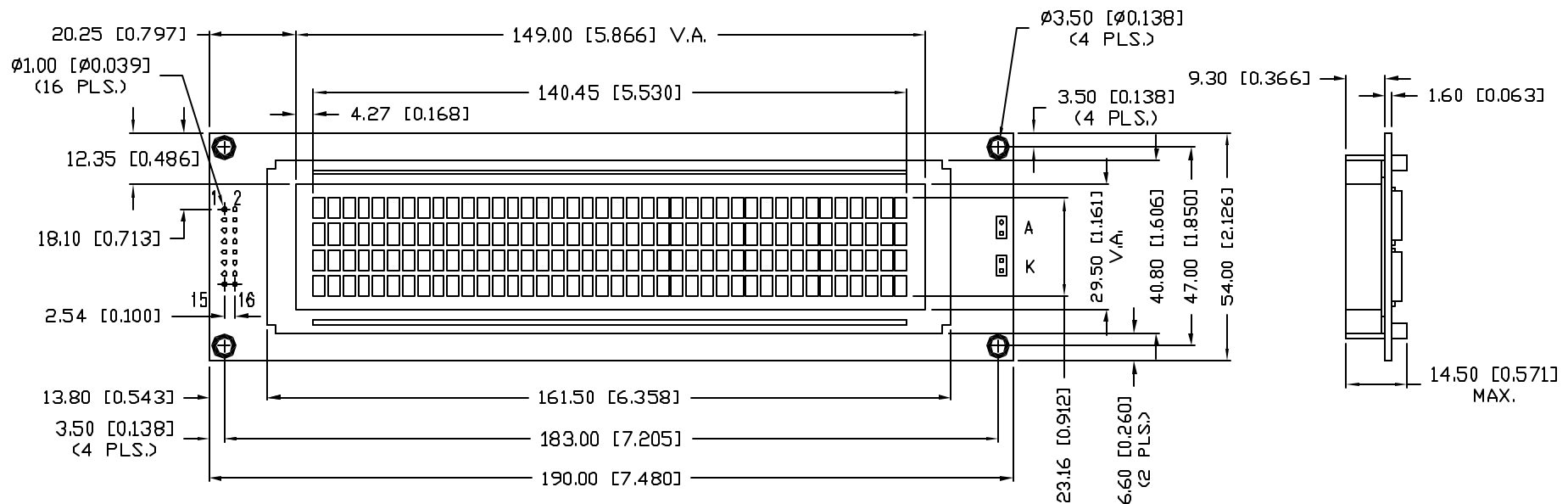
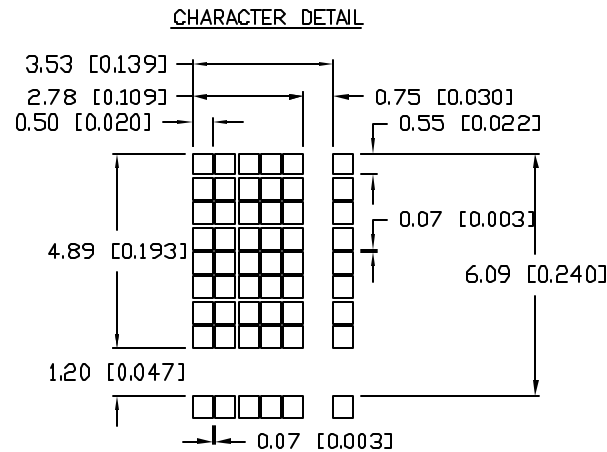


PRELIMINARY IN P/N DIR

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), XX=±0.5 (±0.020), XXX=±0.25 (±0.010), XXXX=±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.

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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.



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DATE: 4.29.02

PAGE: 1 OF 2

SCALE: N/A

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.

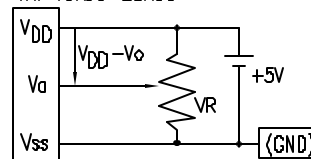
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PRELIMINARY IN P/N DIR

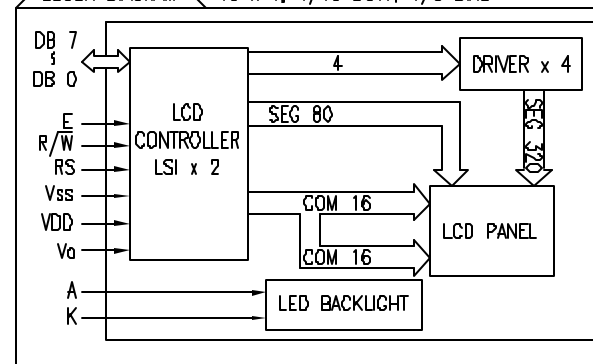
PIN CONFIGURATION

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	—	POWER SUPPLY	FOR LCD DRIVE
13	V _{ss}	—		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}-V_o: LCD DRIVING VOLTAGE
VR: 10K Ω -20K Ω



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
OPERATING TEMPERATURE	T _{opr}	LCM-S	0	50	°C
		LCM-H	-20	70	°C
		LCM-S	-20	70	°C
STORAGE TEMPERATURE	T _{stg}	LCM-H	-30	85	°C

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