

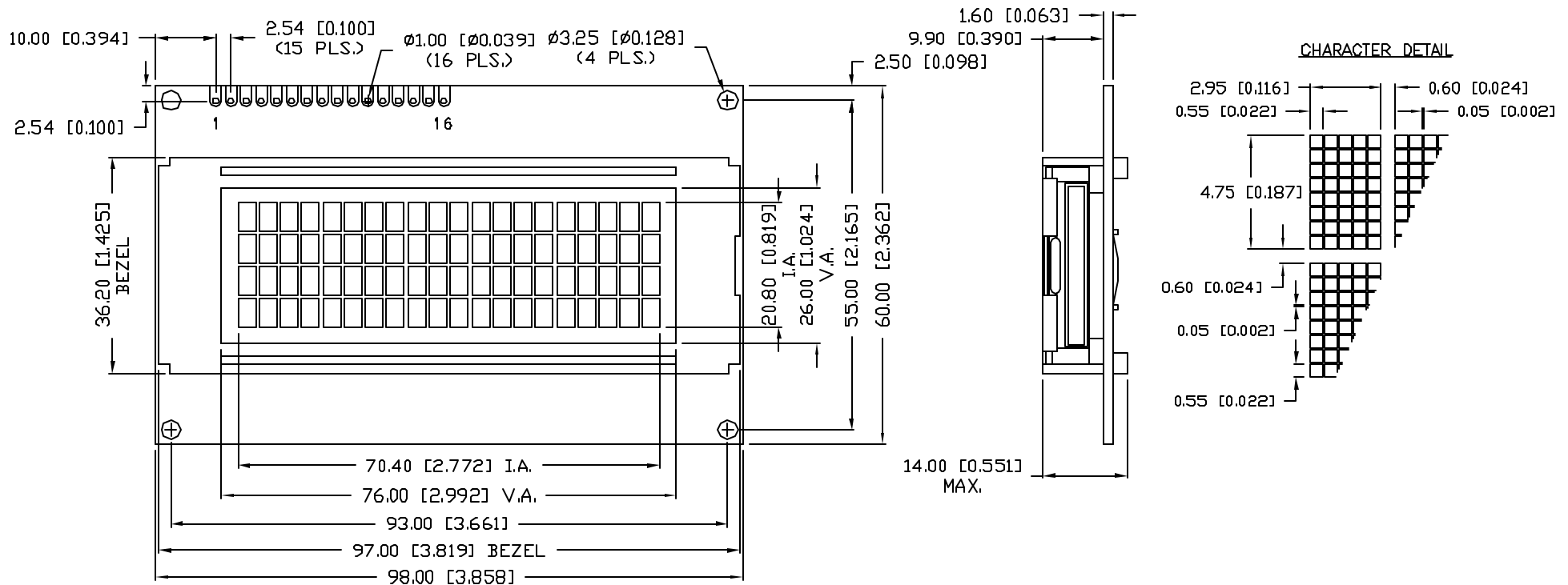
UNCONTROLLED DOCUMENT

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

PART NUMBER
LCM-S02004DSF/E-Y

REV.
A

REV.	E.C.N. NUMBER AND REVISION COMMENTS	DATE
A	E.C.N. #11028.	8.28.03



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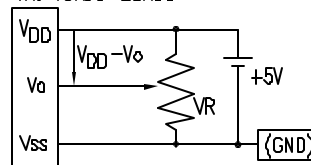
*UNLESS OTHERWISE SPECIFIED TOLERANCES PER DECIMAL PRECISION ARE: X=±1 (±0.039), XX=±0.5 (±0.020), XXX=±0.25 (±0.010), XXXX=±0.127 (±0.005). LEAD SIZE=±0.05 (±0.002), LEAD LENGTH=±0.75 (±0.030). MIN= +DECIMAL PRECISION -0.00 MAX.= +0.00 -DECIMAL PRECISION

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20 x 4 CHARACTER LCD MODULE, STN YELLOW, TRANSFLECTIVE, LED BACKLIGHT, 1/16 DUTY, 1/5 BIAS.		DRAWN BY: CT	CHECKED BY: APPROVED BY: DATE: 5.9.03 PAGE: 1 OF 2 SCALE: N/A

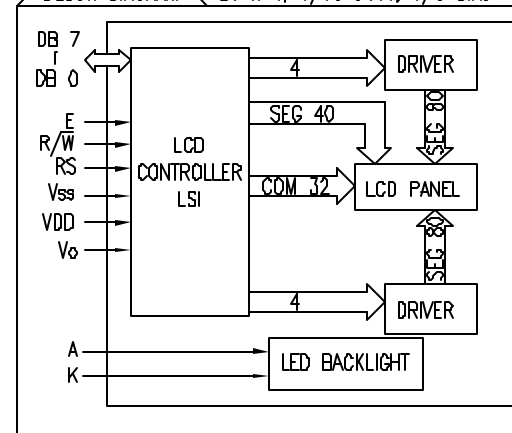
PIN CONFIGURATION

PIN NO.	SYMBOL	LEVEL	FUNCTION
1	V _{SS}	-	POWER SUPPLY GND (0V) 5V FOR LCD DRIVE
2	V _{DD}	-	
3	V _O	-	
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.
15	K	-	CATHODE LED BACKLIGHT
16	A	-	ANODE LED BACKLIGHT

Ⓐ V_{DD}-V_O: LCD DRIVING VOLTAGE
VR: 10K Ω - 20K Ω



BLOCK DIAGRAM 20 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	-	2.0	3.0	mA
INPUT VOLTAGE	HIGH	V _{IH}	-	2.2	-	V _{DD} V
	LOW	V _{IL}	-	0	-	0.6 V
OUTPUT VOLTAGE	HIGH	V _{OH}	I _{OH} =-0.205mA	2.4	-	V
	LOW	V _{OL}	I _{OL} =1.6mA	-	0.4	V
*LED BACKLIGHT	VOLTAGE	V _f	I _f =300mA	-	4.2	4.5 V
	CURRENT	I _f	-	-	300	600 mA
	POWER CONSUMPTION	PD	-	-	1260	mW
	LUMINOUS	L	I _f =300mA	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
STORAGE TEMPERATURE	T _{stg}	LCM-S	-20	70	°C

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RELIABILITY NOTE

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