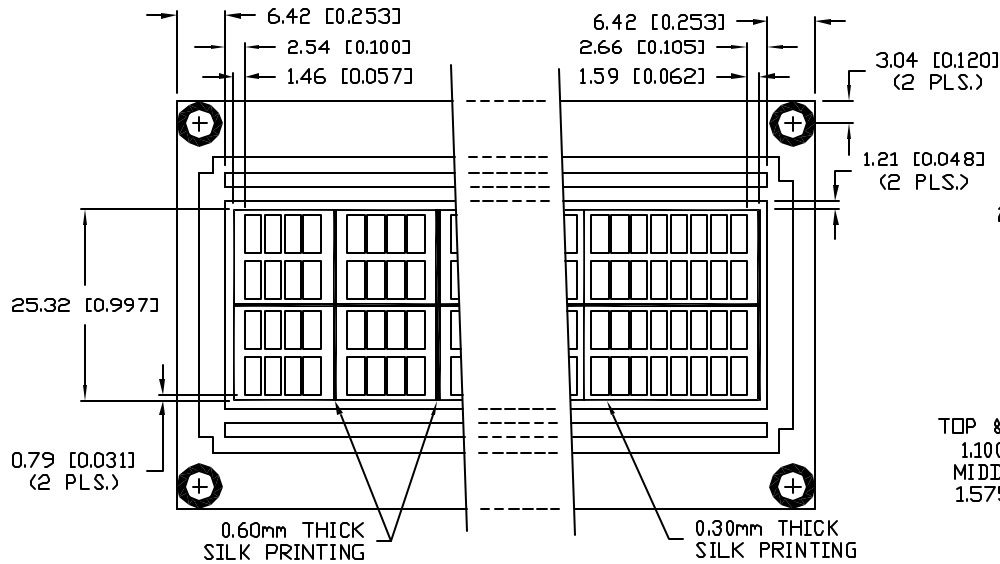


PART NUMBER
LCM-S10404DSF-Y1P

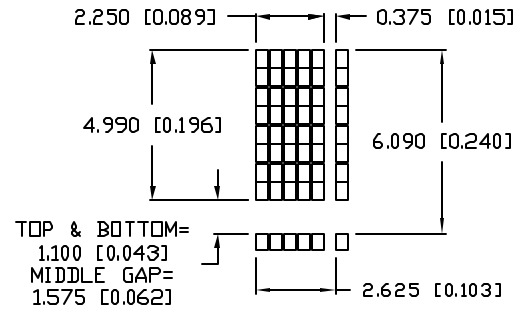
REV.

A

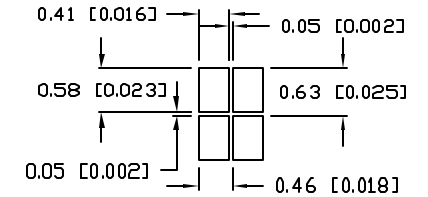
REV.	E.C.N. NUMBER AND REVISION COMMENTS	DATE
A	E.C.N. #10489./	12-22-98



CHARACTER DETAIL



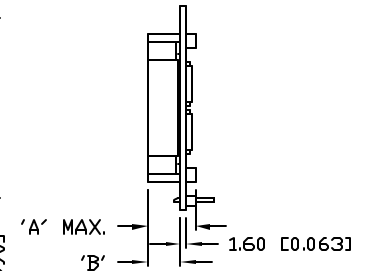
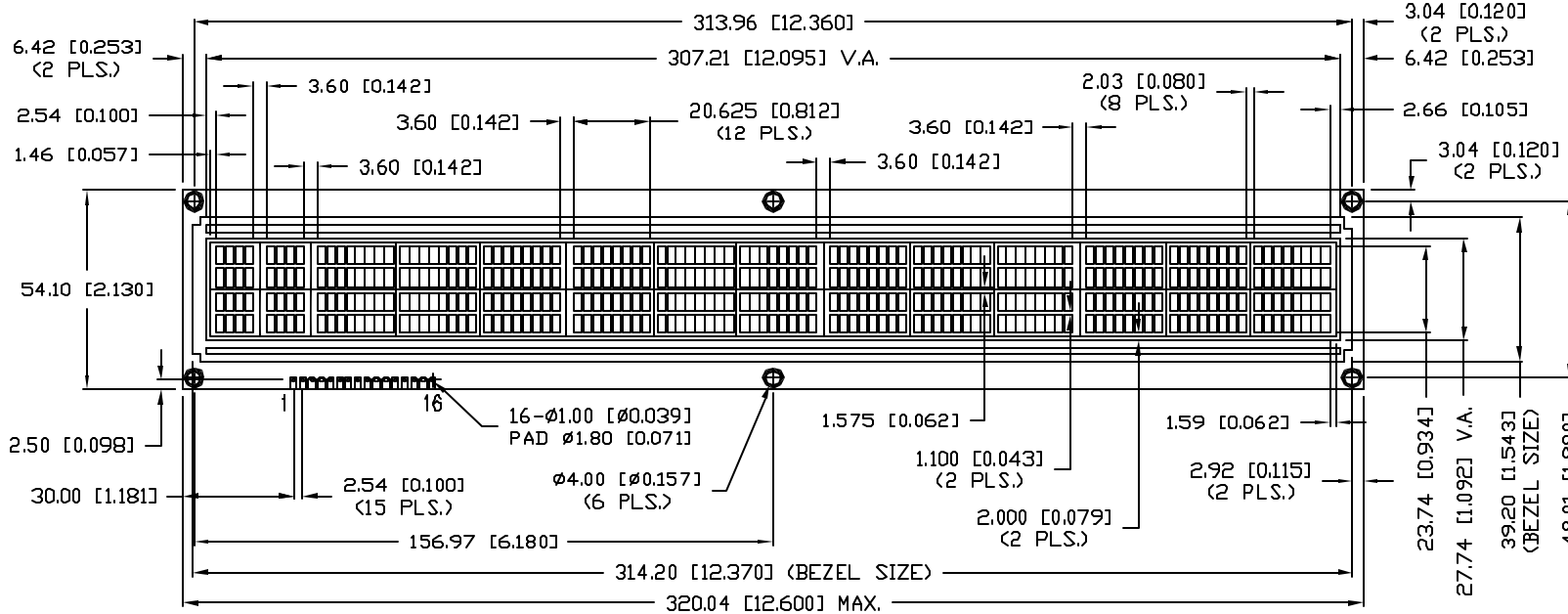
PIXEL DETAIL



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

NOTES:

- 0.3mm THICK SILK SCREEN ON FRONT PANEL UNLESS OTHERWISE SPECIFIED.
- 16 PIN SINGLE ROW HEADER, SAMTEC PART#: MTSW-116-07-S-S-215 OR EQUIVALENT.



TYPE	DIM.	A	B
WITH BACKLIGHT		12.7	8.8
NO BACKLIGHT		8.8	4.8

*UNLESS OTHERWISE SPECIFIED TOLERANCE IS ±0.25mm (±0.010")

REV.

A

PART NUMBER

LCM-S10404DSF-Y1P

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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.

LUMEX
INCORPORATED

290 E. HELLEN ROAD
PALATINE, ILLINOIS 60067
PHONE: 1-847-359-2790
WEB: HTTP://WWW.LUMEX.COM

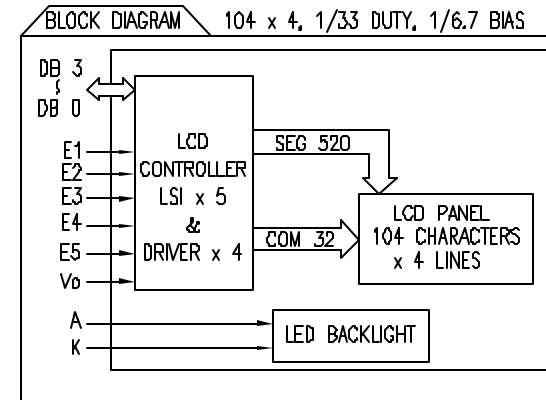
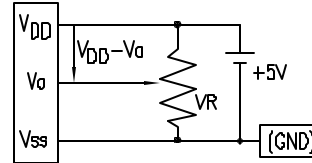
4.99mm CHARACTER HEIGHT, 104 x 4 CHARACTER LCD MODULE, TOP VIEW, STN, YELLOW-GREEN BACKGROUND, TRANSFLECTIVE W/LED BACKLIGHT, 1/33 DUTY, 16 PINS.

DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE: 9-30-98
			PAGE: 1 OF 2
SA/DU/BC			SCALE: N/A

PART NUMBER		REV.
LCM-S10404DSF-Y1P		A
REV.	E.C.N. NUMBER AND REVISION COMMENTS	DATE
	SEE PAGE 1./	

PIN CONFIGURATION					
PIN NO.	SYMBOL	LEVEL	FUNCTION		
1	V _{SS}	-	POWER SUPPLY	GND (0V)	
2	V _{DD}	-		5V	
3	V ₀	-		FOR LCD DRIVE	
4	RS	H/L	REGISTER SELECT SIGNAL H: DATA INPUT L: INSTRUCTION INPUT		
5	R/ \bar{W}	H/L	H: DATA READ (MODULE \rightarrow MPU) L: DATA WRITE (MODULE \leftarrow MPU)		
6	E1	H,H \rightarrow L	ENABLE 1		
7	E2	H,H \rightarrow L	ENABLE 2		
8	E3	H,H \rightarrow L	ENABLE 3		
9	E4	H,H \rightarrow L	ENABLE 4		
10	E5	H,H \rightarrow L	ENABLE 5		
11~14	DB0~DB3	H/L	DATA BUS LINE		
15	A	-	ANODE	LED BACKLIGHT	
16	K	-	CATHODE	LED BACKLIGHT	

V_{DD}-V₀: LCD DRIVING VOLTAGE
VR: 10K Ω -20K Ω



ELECTRICAL CHARACTERISTICS		V _{DD} =4.5V to 5.5V, 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	-	2.5	3.0	mA
INPUT VOLTAGE	HIGH	V _{IH}	-	2.2	-	V _{DD}
	LOW	V _{IL}	-	-0.3	-	0.6
OUTPUT VOLTAGE	HIGH	V _{OH}	I _{OH} =-0.205mA	2.4	-	-
	LOW	V _{OL}	I _{OL} =1.6mA	-	-	0.4
*LED BACKLIGHT	FORWARD VOLTAGE	V _f	-	-	4.3	5.0
	FORWARD CURRENT	I _f	V _f =5V	-	-	1200
	REVERSE VOLTAGE	V _r	-	-	8	-
	REVERSE CURRENT	I _r	V _r =8V	-	-	12000
	POWER DISSIPATION	P _D	-	-	-	6
	LUMINOUS INTENSITY	I _v	-	-	100	150

*ONLY APPLIES TO MODULES WITH BACKLIGHT

ABSOLUTE MAXIMUM RATINGS					
ITEM	SYMBOL	TEST CONDITION	STANDARD VALUE		UNIT
			MIN	MAX	
SUPPLY VOLTAGE FOR LOGIC	V _{DD} -V _{SS}	T _a =25°C	4.5	5.5	V
SUPPLY VOLTAGE FOR LCD DRIVE	V ₀	T _a =25°C	V _{DD} -13.5	V _{DD} +0.3	V
INPUT VOLTAGE	V _I	T _a =25°C	V _{SS}	V _{DD}	V
OPERATING TEMPERATURE	T _{opr}	LGM-S	-10	60	°C
		LGM-H	-20	70	°C
STORAGE TEMPERATURE	T _{stg}	LGM-S	-20	70	°C
		LGM-H	-30	85	°C

REV.	PART NUMBER
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290 E. HELLEN ROAD
PALATINE, ILLINOIS 60067
PHONE: 1-847-359-2790
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4.99mm CHARACTER HEIGHT, 104 x 4 CHARACTER LCD MODULE, TOP VIEW, STN, YELLOW-GREEN BACKGROUND, TRANSLFECTIVE W/LED BACKLIGHT, 1/33 DUTY, 16 PINS.

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			PAGE: 2 OF 2
SA/BC			SCALE: N/A