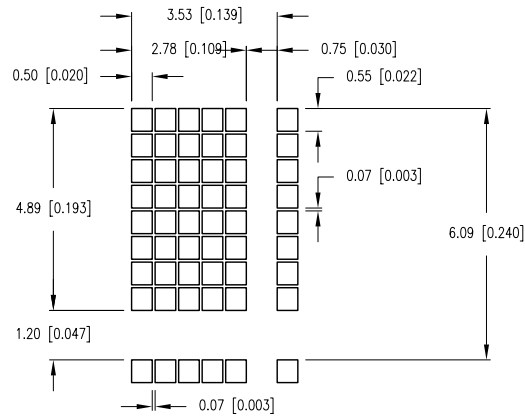


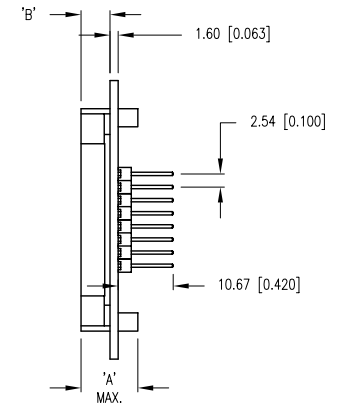
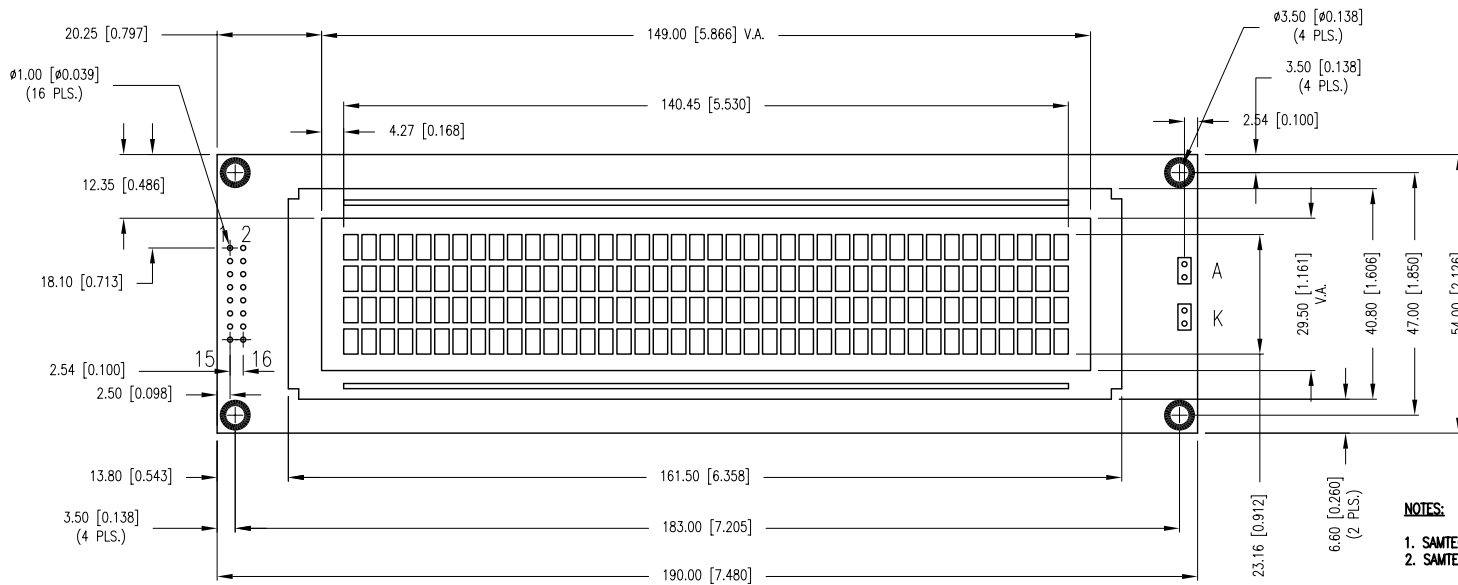
PART NUMBER	LCM-H04004DSF40013	REV.	A
DATE	E.C.N. NUMBER AND REVISION COMMENTS		REV.
02.29.12	E.C.N. #10BRDR. & REDRAWN.		A

CHARACTER DETAIL



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

TYPE	DIM.	A	B
WITH BACKLIGHT		14.5	9.3
NO BACKLIGHT		10	4.9



NOTES:

1. SAMTEC TSW-108-14-T-D OR EQUIVALENT
2. SAMTEC TSW-102-14-T-S OR EQUIVALENT

\*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 MAX.= +0.00 -DECIMAL PRECISION



290 E. HELEN ROAD  
PALATINE, IL 60067-6976  
PHONE: +1.847.359.2790  
FAX: +1.847.359.6538  
WEB: WWW.LUMEX.COM

5x8 DOT MATRIX, STN YELLOW, WIDE OPER TEMP, PIN DEADERS, 40x4 LCD CHAR MODULE, 1/16 DUTY, 1/5 BIAS.

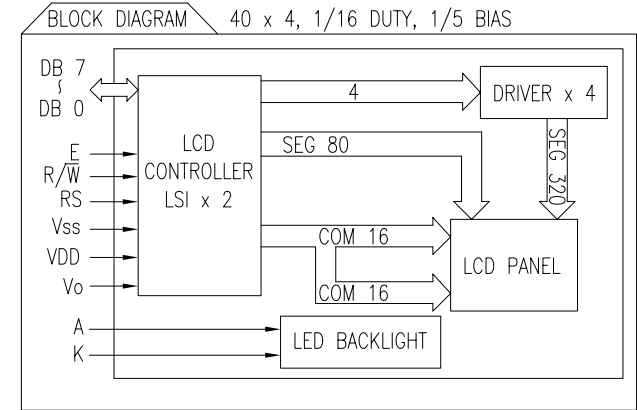
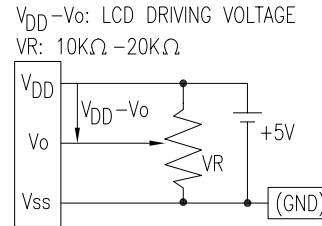
\*\*THE SPECIFICATIONS MAY CHANGE AT ANY TIME WITHOUT NOTICE DUE TO NEW MATERIALS OR PRODUCT IMPROVEMENT.\*\*

CONFIDENTIAL INFORMATION  
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.

DATE:	02.29.12	DRAWN BY:	AB
PAGE:	1 OF 2	CHKD BY:	JD
SCALE:	NTS	APRVD BY:	JD
UNIT:	mm [INCH]		

PART NUMBER	LCM-H04004DSF40013	REV.	A
DATE	E.C.N. NUMBER AND REVISION COMMENTS		REV.
02.29.12	E.C.N. #10BRDR. & REDRAWN.		A

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	VDD	-		5V
15	E2	H,H->L	ENABLE 2	
16	-	-	NO CONNECTION	
	A	-	ANODE FOR BACKLIGHT	
	K	-	CATHODE FOR BACKLIGHT	



ELECTRICAL CHARACTERISTICS		V <sub>DD</sub> =4.7V to 5.3V, T <sub>A</sub> =25°C				
ITEM	SYMBOL	CONDITION	STANDARD VALUE			UNIT
			MIN.	TYP.	MAX.	
SUPPLY VOLTAGE FOR LOGIC	V <sub>DD</sub> -V <sub>SS</sub>	-	-	5.0	-	V
SUPPLY CURRENT FOR LOGIC	I <sub>DD</sub>	V <sub>DD</sub> =5V	-	4.0	10.0	mA
INPUT VOLTAGE	HIGH	V <sub>IH</sub>	-	2.2	-	V <sub>DD</sub> V
	LOW	V <sub>IL</sub>	-	0	-	0.6 V
OUTPUT VOLTAGE	HIGH	V <sub>OH</sub>	-	2.4	-	V
	LOW	V <sub>OL</sub>	-	-	0.4	V
*LED BACKLIGHT	VOLTAGE	V <sub>f</sub>	-	4.2	4.6	V
	CURRENT	I <sub>f</sub>	-	500	-	mA
	POWER CONSUMPTION	PD	-	2100	-	mW
	LUMINOUS	L	I <sub>f</sub> =500mA	70	-	cd/m <sup>2</sup>
	COLOR	-	-	-	-	nm

\*ONLY APPLIES TO MODULES WITH BACKLIGHT

ABSOLUTE MAXIMUM RATINGS					
ITEM	SYMBOL	TEST CONDITION	STANDARD VALUE		UNIT
			MIN	MAX	
SUPPLY VOLTAGE FOR LOGIC	V <sub>DD</sub> -V <sub>SS</sub>	T <sub>a</sub> =25°C	4.7	5.3	V
SUPPLY VOLTAGE FOR LCD DRIVE	V <sub>DD</sub> -V <sub>o</sub>	-	4.2@50°C	4.8@0°C	V
INPUT VOLTAGE	V <sub>I</sub>	T <sub>a</sub> =25°C	V <sub>SS</sub>	V <sub>DD</sub>	V
		OPERATING TEMPERATURE	LCM-S	0	50
		LCM-H	-20	70	°C
STORAGE TEMPERATURE	T <sub>stg</sub>	LCM-S	-20	70	°C
		LCM-H	-30	85	°C

\*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= +<sup>DECIMAL PRECISION</sup> -<sup>DECIMAL PRECISION</sup> MAX= +<sup>DECIMAL PRECISION</sup> -<sup>DECIMAL PRECISION</sup>

**LUMEX**  
 Creating LED and LCD Solutions Together™  
 290 E. HELEN ROAD  
 PALATINE, IL 60067-6976  
 PHONE: +1.847.359.2790  
 FAX: +1.847.359.6538  
 WEB: WWW.LUMEX.COM

5x8 DOT MATRIX, STN YELLOW, WIDE OPER TEMP, PIN DEADERS, 40x4 LCD CHAR MODULE, 1/16 DUTY, 1/5 BIAS.

\*\*THE SPECIFICATIONS MAY CHANGE AT ANY TIME WITHOUT NOTICE DUE TO NEW MATERIALS OR PRODUCT IMPROVEMENT.\*\*

CONFIDENTIAL INFORMATION  
 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.

DATE: 02.29.12	DRAWN BY: AB
PAGE: 2 OF 2	CHKD BY: JD
SCALE: NTS	APRVD BY: JD
UNIT: mm [INCH]	Ⓟ