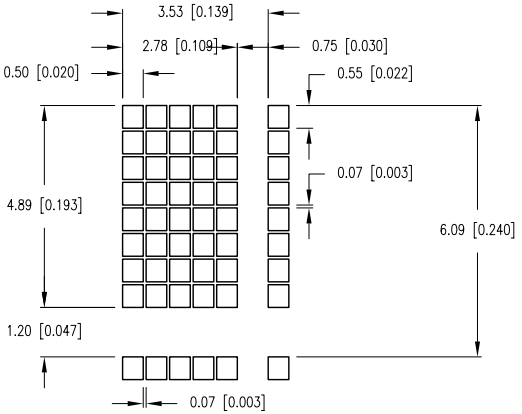
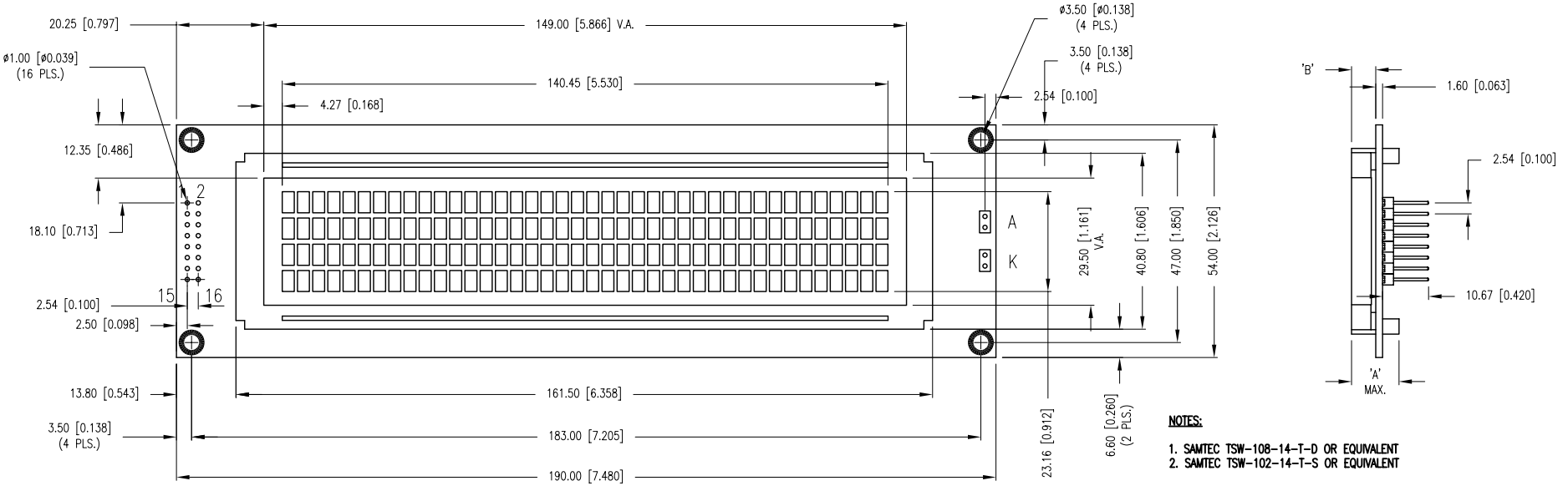
PART NUMBER	LCM-H04004DSF40013	REV.	A
DATE	E.C.N. NUMBER AND REVISION COMMENTS		REV.
02.29.12	E.C.N. #10BRDR. & REDRAWN.		A

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), 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= $^{+\text{DECIMAL PRECISION}}_{-0.00}$ MAX.= $^{+0.00}_{-\text{DECIMAL PRECISION}}$

UNCONTROLLED DOCUMENT

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.

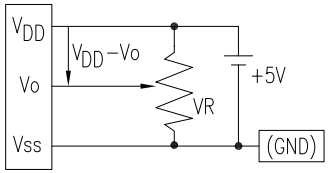
DATE:	02.29.12	DRAWN BY:	AB
PAGE:	1 OF 2	CHKD BY:	JD
SCALE:	NTS	APRVD BY:	JD
UNIT:	mm [INCH]		

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

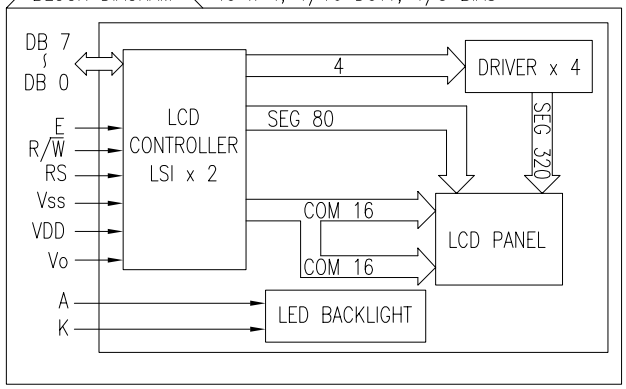
PIN CONFIGURATION

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/$\overline{W}$	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	V_{DD}	–		5V
15	E2	H,H–>L	ENABLE 2	
16	–	–	NO CONNECTION	
	A	–	ANODE FOR BACKLIGHT	
	K	–	CATHODE FOR BACKLIGHT	

V_{DD}–Vo: 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}–Vss	–	–	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	Vf	–	–	4.2	4.6	V
	CURRENT	If	–	–	500	–	mA
	POWER CUNSUMPTION	PD	–	–	2100	–	mW
	LUMINOUS	L	If=500mA	70	–	–	cd/m^2
	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_{DD}–Vss	Ta=25°C	4.7	5.3	V
SUPPLY VOLTAGE FOR LCD DRIVE	V_{DD}–Vo	–	4.2@50°C	4.8@0°C	V
INPUT VOLTAGE	V_I	Ta=25°C	Vss	V_{DD}	V
OPERATING TEMPERATURE	Topr	LCM–S	0	50	°C
		LCM–H	–20	70	°C
STORAGE TEMPERATURE	Tstg	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= $^{+\text{DECIMAL PRECISION}}_{-0.00}$ MAX.= $^{+0.00}_{-\text{DECIMAL PRECISION}}$

UNCONTROLLED DOCUMENT

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.

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