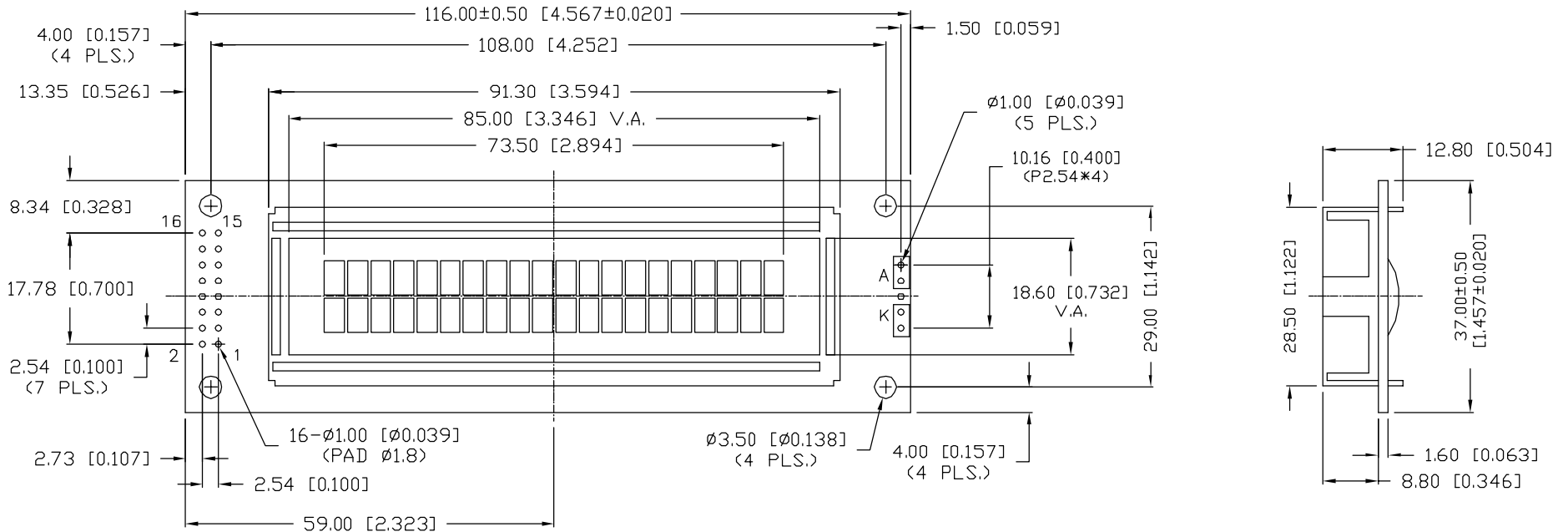
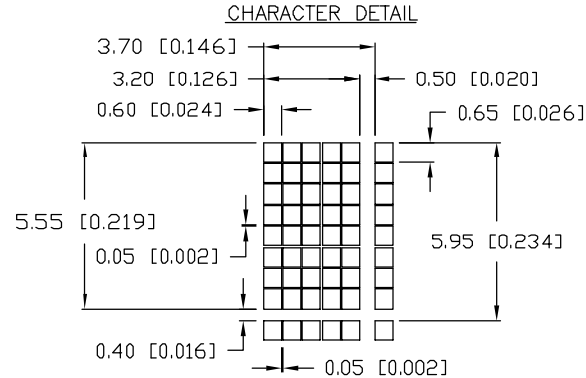


PRELIMINARY IN P/N DIR

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



CM C3 G3 UNCONTROLLED DOCUMENT

\*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= +DECIMAL PRECISION -0.00 MAX.= +0.00 -DECIMAL PRECISION

REV.

PART NUMBER

LCM-H02002DSF

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.



290 E. HELEN ROAD  
PALATINE, IL 60067-6976  
PHONE: +1.847.359.2790  
US WEB: www.lumex.com  
TW WEB: www.lumex.com.tw

5.55mm CHARACTER HEIGHT, 5 x 8 DOT MATRIX,  
20 x 2 CHARACTER LCD MODULE, STN, GREY,  
TRANSFLECTIVE, 1/16 DUTY, 1/5 BIAS, EXTENDED TEMP.

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.

DRAWN BY:

CHECKED BY:

APPROVED BY:

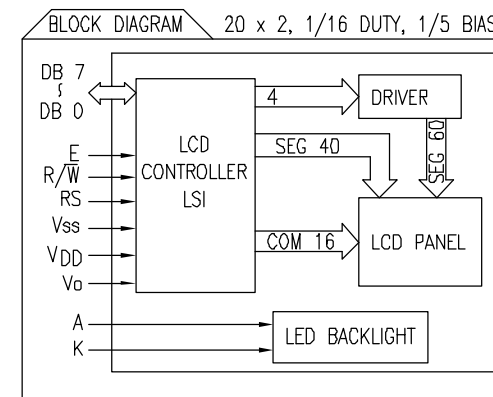
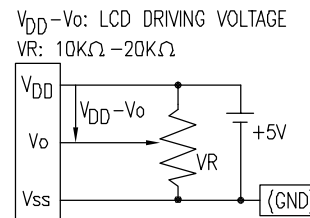
DATE: 10.08.08

JN

PAGE: 1 OF 2

SCALE: N/A

PIN CONFIGURATION			
PIN NO.	SYMBOL	LEVEL	FUNCTION
1	V <sub>SS</sub>	-	POWER SUPPLY GND (0V)
2	V <sub>DD</sub>	-	
3	V <sub>O</sub>	-	
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	A	-	ANODE LED BACKLIGHT
16	K	-	CATHODE LED BACKLIGHT



ELECTRICAL CHARACTERISTICS V<sub>DD</sub>=4.7V to 5.3V, T<sub>A</sub>=25°C

ITEM	SYMBOL	CONDITION	STANDARD VALUE			UNIT	APPLICABLE TERMINAL	
			MIN.	TYP.	MAX.			
SUPPLY VOLTAGE FOR LOGIC	V <sub>DD</sub> -V <sub>SS</sub>	-	-	5.0	-	V	V <sub>DD</sub>	
SUPPLY CURRENT FOR LOGIC	I <sub>DD</sub>	V <sub>DD</sub> =5V	-	2.0	3.0	mA	V <sub>DD</sub>	
INPUT VOLTAGE	HIGH	V <sub>IH</sub>	-	2.2	-	V <sub>DD</sub>	RS,R/W,E	
	LOW	V <sub>IL</sub>	-	0	-	0.6	DB0~DB7	
OUTPUT VOLTAGE	HIGH	V <sub>OH</sub>	I <sub>OH</sub> =-0.205mA	2.4	-	-	DB0~DB7	
	LOW	V <sub>OL</sub>	I <sub>OL</sub> =1.6mA	-	-	0.4	RS,R/W,E	
LED BACKLIGHT	VOLTAGE	V <sub>f</sub>	I <sub>f</sub> =210mA	-	4.2	4.6	V	-
	CURRENT	I <sub>f</sub>	-	-	210	275	mA	-
	POWER CONSUMPTION	PD	-	-	1279	-	mW	-
	LUMINOUS	L	I <sub>f</sub> =210mA	70	-	-	cd/m <sup>2</sup>	-
	COLOR	-	-	-	-	-	nm	-

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>	-	V <sub>SS</sub>	V <sub>DD</sub>	V
OPERATING TEMPERATURE	T <sub>opr</sub>	LCM-H	-20	70	°C
STORAGE TEMPERATURE	T <sub>stg</sub>	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= +DECIMAL PRECISION -0.00 MAX.= +0.00 -DECIMAL PRECISION

REV.	PART NUMBER LCM-H02002DSF
5.55mm CHARACTER HEIGHT, 5 x 8 DOT MATRIX, 20 x 2 CHARACTER LCD MODULE, STN, GREY, TRANSFLECTIVE, 1/16 DUTY, 1/5 BIAS, EXTENDED TEMP.	

**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.

**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.

290 E. HELEN ROAD  
PALATINE, IL 60067-6976  
PHONE: +1.847.359.2790  
US WEB: www.lumex.com  
TW WEB: www.lumex.com.tw

DRAWN BY: JN	CHECKED BY:	APPROVED BY:	DATE: 10.08.08
			PAGE: 2 OF 2
			SCALE: N/A