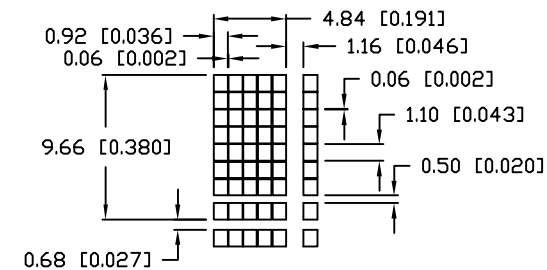
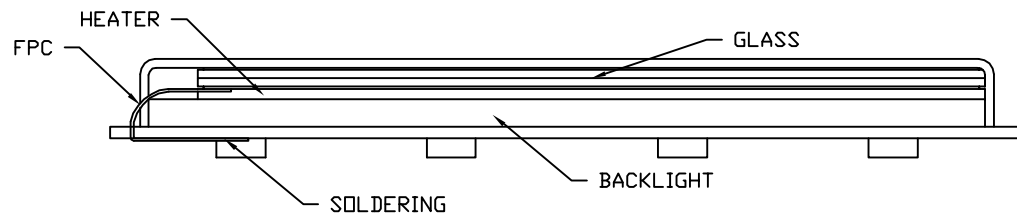


CHARACTER DETAIL



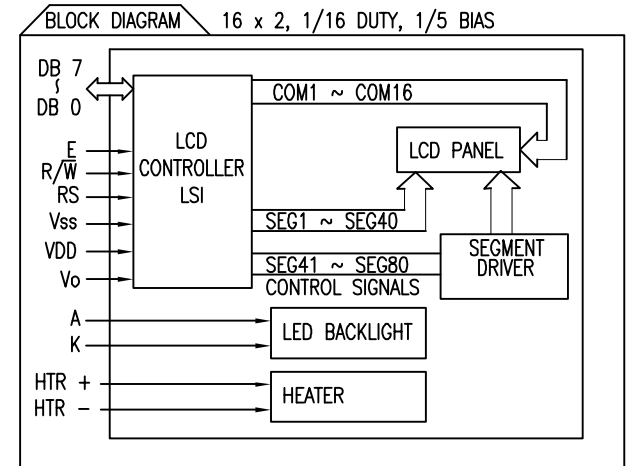
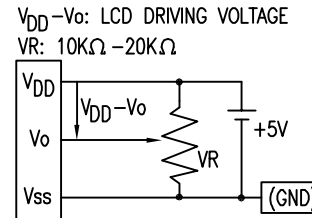
CAUTION: STATIC SENSITIVE DEVICE  
 FOLLOW PROPER E.S.D. HANDLING PROCEDURES  
 WHEN WORKING WITH THIS PART.



\*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 LCR-U01602DSF/D-WH	<p>CONFIDENTIAL INFORMATION</p> <p>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.</p>	<p><b>LUMEX</b>  <small>Creating LED and LCD Solutions Together™</small></p> <p>290 E. HELEN ROAD              PALATINE, IL 60067-6976              PHONE: +1.847.359.2790              US WEB: www.lumex.com              TW WEB: www.lumex.com.tw</p>
<p>16 x 2 CHARACTER LCD MODULE, STN GRAY,              -40°C TO +85°C OPERATING TEMPERATURE, W/ HEATER,              TRANSFLECTIVE, WHITE LED BACKLIGHT, 6:00 VIEW.</p>		<p>RELIABILITY NOTE</p> <p>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.</p>	<p>DRAWN BY: JN      CHECKED BY:      APPROVED BY:      DATE: 11.17.09              PAGE: 1 OF 2              SCALE: N/A</p>

PIN CONFIGURATION				
PIN NO.	SYMBOL	LEVEL	FUNCTION	
1	V <sub>SS</sub>	-	POWER SUPPLY	GND (0V)
2	V <sub>DD</sub>	-		5V
3	V <sub>O</sub>	-		FOR LCD DRIVE
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
17	HTR +	-	+12V	
18	HTR -	-	GND (0V)	



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	-	1.6	2.5	mA
INPUT VOLTAGE	HIGH	V <sub>IH</sub>	-	2.2	-	V <sub>DD</sub>
	LOW	V <sub>IL</sub>	-	0	-	0.6
OUTPUT VOLTAGE	HIGH	V <sub>OH</sub>	-	2.4	-	V
	LOW	V <sub>OL</sub>	-	-	-	0.4
LED BACKLIGHT	VOLTAGE	V <sub>f</sub>	I <sub>f</sub> =15mA	-	6.2	6.8
	CURRENT	I <sub>f</sub>	-	-	15	-
	POWER CONSUMPTION	PD	-	-	90	-
	LUMINOUS	L	I <sub>f</sub> =15mA	70	-	-
	COLOR COORDINATE	X Y	WHITE	.240 .240	- -	.330 .330
HEATER	VOLTAGE	V <sub>fH</sub>	-	-	12	-
	RESISTANCE		-	-	12.4	-
	CURRENT	I <sub>H</sub>	-	-	0.97	-
	POWER	PH	-	-	11.6	-

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	T <sub>opr</sub>	W/ HEATER	-40	+85	°C
STORAGE TEMPERATURE	T <sub>stg</sub>	W/ HEATER	-40	+85	°C

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	16 x 2 CHARACTER LCD MODULE, STN GRAY, -40°C TO +85°C OPERATING TEMPERATURE, W/ HEATER, TRANSFLECTIVE, WHITE LED BACKLIGHT, 6:00 VIEW.	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: JN CHECKED BY: APPROVED BY: DATE: 11.17.09 PAGE: 2 OF 2 SCALE: N/A



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Components Supply Platform

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