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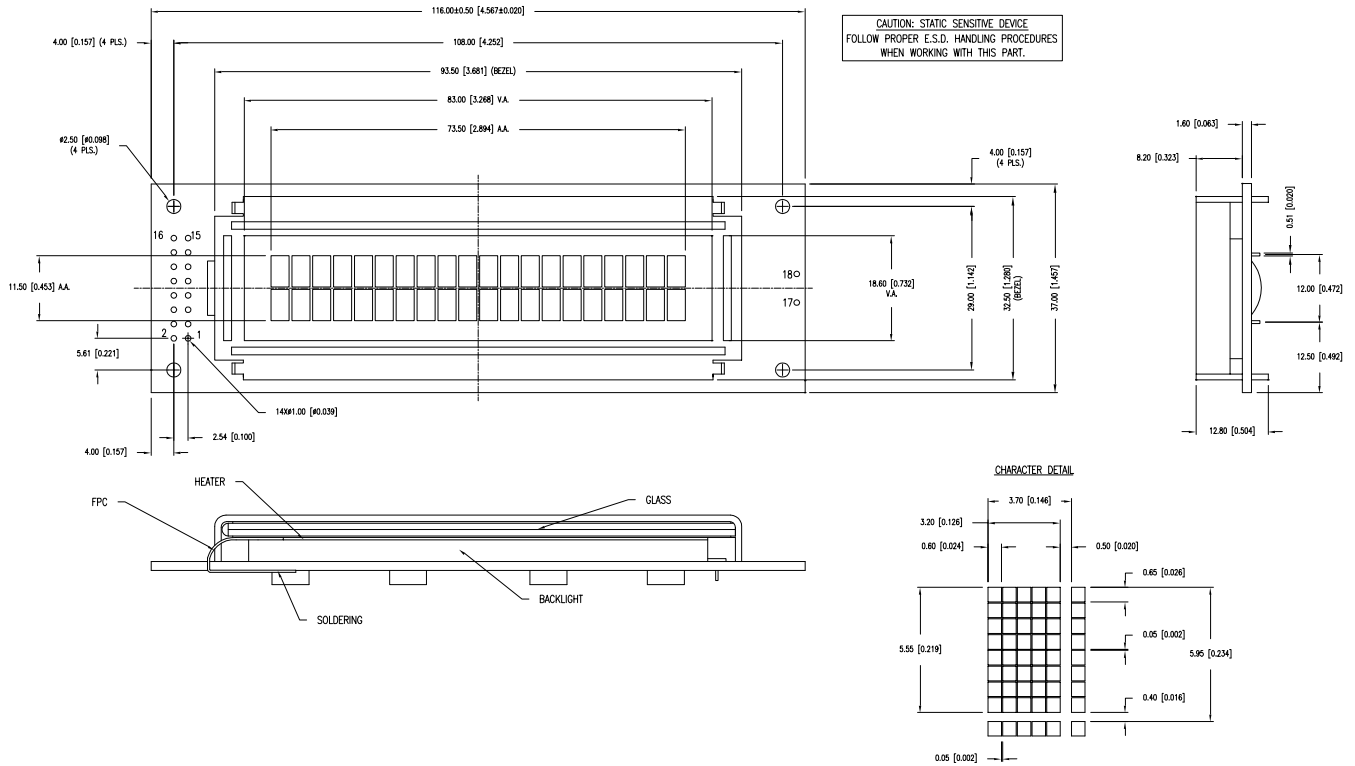
[Lumex, Inc.](#)
[LCR-U02002DSF-WH](#)

For any questions, you can email us directly:

sales@integrated-circuit.com

UNCONTROLLED DOCUMENT

PART NUMBER	LCR-U02002DSF-WH	REV.	A
DATE	E.C.N. NUMBER AND REVISION COMMENTS		
05.20.10	E.C.N. #11642.		
REV.			
A			



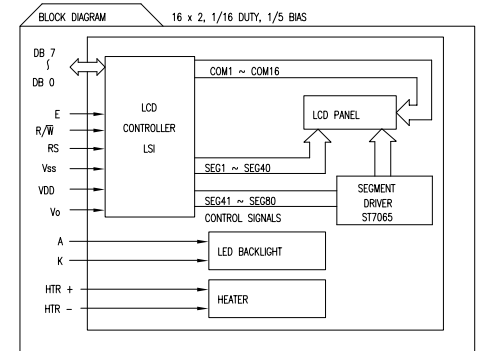
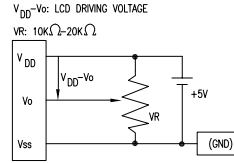
*UNLESS OTHERWISE SPECIFIED TOLERANCES PER DECIMAL PRECISION ARE: X=±1 (±0.039), X.X=±0.5 (±0.020), X.XX=±0.25 (±0.010), X.XXX=±0.127 (±0.005). LEAD SIZE=±0.05 (±0.002), LEAD LENGTH=±0.75 (±0.030). MIN= ±DECIMAL PRECISION MAX= +0.00 DECIMAL PRECISION

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	20 x 2 CHARACTER LCD MODULE, STN GRAY, W/ HEATER, TRANSPARENT, WHITE LED BACKLIGHT, 6:00 VIEW. **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: 11.17.09	DRAWN BY: JN
			PAGE: 1 OF 2	CHKD BY: JD
			SCALE: N/A	APRVD BY: SA
			UNIT: mm [INCH]	®

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	SEE PAGE 1		

PIN CONFIGURATION			
PIN NO.	SYMBOL	LEVEL	FUNCTION
1	V _{SS}	—	POWER SUPPLY
2	V _{DD}	—	
3	V _O	—	
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/L->L	ENABLE
7~14	DB0~DB7	H/L	DATA BUS--SOFTWARE SELECTABLE 4 OR 8 BIT MODE.
15	A	—	LED BACKLIGHT
16	K	—	LED BACKLIGHT
17	HTR +	—	+12V
18	HTR -	—	GND (0V)



ELECTRICAL CHARACTERISTICS		V _{DD} =4.7V to 5.3V, T _A =25°C		STANDARD VALUE			UNIT
ITEM	SYMBOL	CONDITION		MIN.	TYP.	MAX.	
SUPPLY VOLTAGE FOR LOGIC	V _{DD} -V _{SS}	—	—	—	5.0	—	V
SUPPLY CURRENT FOR LOGIC	I _{DD}	V _{DD} =5V	—	—	1.6	2.5	mA
INPUT VOLTAGE	HIGH	V _{IH}	—	2.2	—	V _{DD}	V
		V _{IL}	—	0	—	0.6	V
OUTPUT VOLTAGE	HIGH	V _{OH}	—	2.4	—	—	V
		V _{OL}	—	—	—	0.4	V
LED BACKLIGHT	VOLTAGE	V _I	I _F =15mA	—	6.6	7.2	V
	CURRENT	I _F	—	—	15	—	mA
	POWER CONSUMPTION	P _D	—	—	99	—	mW
	LUMINOUS	L	I _F =15mA	70	—	—	cd/m ²
	COLOR	X	WHITE	.240	—	.330	
HEATER	COORDINATE	Y	—	.240	—	.330	
	VOLTAGE	V _{TH}	—	—	12	20	V
	RESISTANCE		—	50	100	150	Ω
	CURRENT	I _H	—	100	150	200	mA
	POWER	P _H	—	1.0	1.5	2.0	W

ABSOLUTE MAXIMUM RATINGS		TEST CONDITION	STANDARD VALUE		UNIT
ITEM	SYMBOL		MIN	MAX	
SUPPLY VOLTAGE FOR LOGIC	V _{DD} -V _{SS}	T _a =25°C	4.7	5.3	V
SUPPLY VOLTAGE FOR LCD DRIVE	V _{DD} -V _O	—	4.2@50°C	4.8@0°C	V
INPUT VOLTAGE	V _I	T _a =25°C	V _{SS}	V _{DD}	V
OPERATING TEMPERATURE	T _{opr}	W/ HEATER	-40	+85	°C
STORAGE TEMPERATURE	T _{stg}	W/ HEATER	-40	+85	°C

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