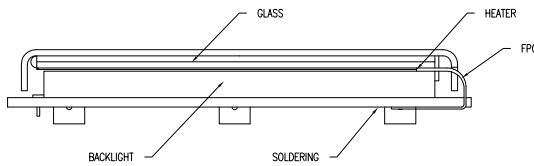
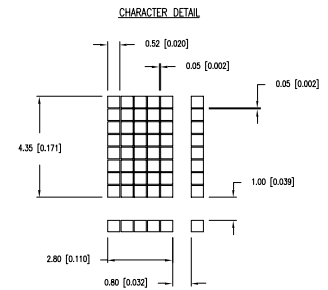
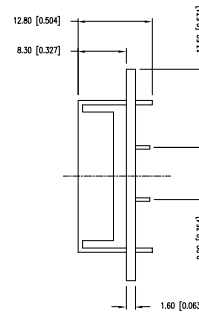
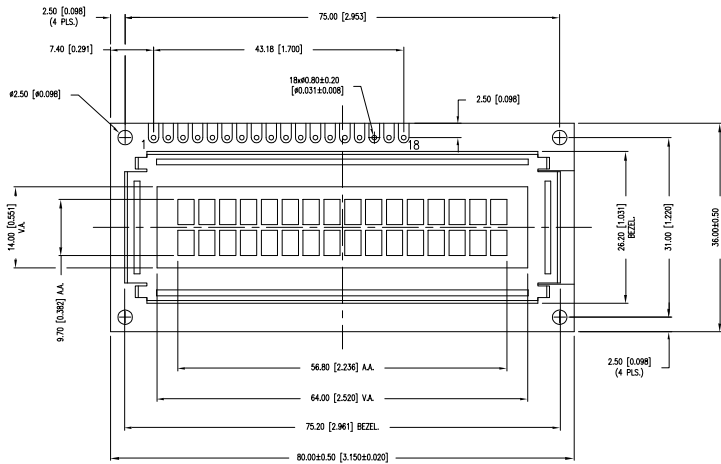


UNCONTROLLED DOCUMENT

PART NUMBER	LCR-U01602DSF/A-WH	REV.	A
DATE	E.C.N. NUMBER AND REVISION COMMENTS	REV.	A
05.20.10	E.C.N. #11642.		



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 MAX= +0.00 -DECIMAL PRECISION UNCONTROLLED DOCUMENT



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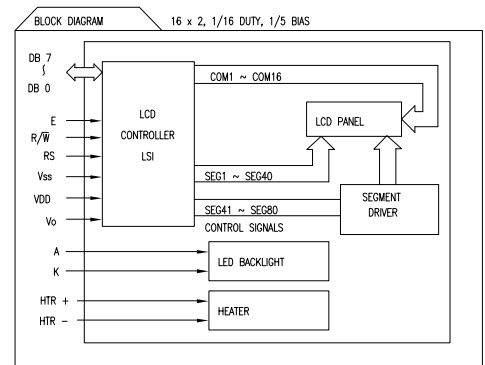
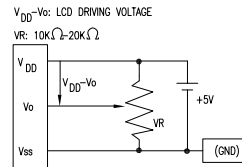
16 x 2 CHARACTER LCD MODULE, STN GRAY, W/ HEATER, TRANSFLECTIVE, WHITE LED BACKLIGHT, 6:00 VIEW.
THE SPECIFICATIONS MAY CHANGE AT ANY TIME WITHOUT NOTICE DUE TO NEW MATERIALS OR PRODUCT IMPROVEMENT.
CONFIDENTIAL INFORMATION
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DATE:	11.13.09	DRAWN BY:	JN
PAGE:	1 OF 2	CHKD BY:	JD
SCALE:	N/A	APRVD BY:	SA
UNIT:	mm [INCH]		

UNCONTROLLED DOCUMENT

PART NUMBER	LCR-U01602DSF/A-WH	REV.	A
DATE	E.C.N. NUMBER AND REVISION COMMENTS		REV.
	SEE PAGE 1		

PIN CONFIGURATION			
PIN NO.	SYMBOL	LEVEL	FUNCTION
1	V _{SS}	-	POWER SUPPLY GND (0V)
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,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 _{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} -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	
	LOW	V _{IL}	-	0	-	0.6 V	
OUTPUT VOLTAGE	HIGH	V _{OH}	-	2.4	-	V	
	LOW	V _{OL}	-	-	0.4	V	
LED BACKLIGHT	VOLTAGE	V _F	I _F =15mA	-	6.2	6.8 V	
	CURRENT	I _F	-	-	15	mA	
	POWER CONSUMPTION	P _D	-	-	90	mW	
	LUMINOUS	L	I _F =15mA	70	-	-	cd/m ²
	COLOR COORDINATE	X Y	WHITE	.240 .240	- -	.330 .330	
HEATER	VOLTAGE	V _H	-	-	12	20 V	
	RESISTANCE		-	50	100	150 OHM	
	CURRENT	I _H	-	100	150	200 mA	
	POWER	P _H	-	1.0	1.6	2.2 W	

ABSOLUTE MAXIMUM RATINGS					
ITEM	SYMBOL	TEST CONDITION	STANDARD VALUE		UNIT
			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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			UNIT: mm [INCH]	