

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), XX=±0.5 (±0.020), XXX=±0.25 (±0.010), XXXX=±0.127 (±0.005). LEAD SIZE=±0.05 (±0.002), LEAD LENGTH=±0.75 (±0.030). MIN.= +0.00 -0.00 MAX.= +0.00 -0.00

REV.

PART NUMBER

LCM-H160160GSF-1

160 x 160 DOT MATRIX GRAPHIC MODULE,  
1/160 DUTY, STN, TRANSFLECTIVE, LED BACKLIGHT,  
WIDE OPERATING TEMP, 12:00 VIEW.

CONFIDENTIAL INFORMATION

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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.



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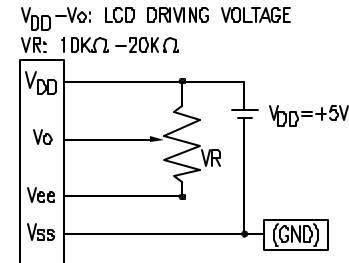
SCALE: N/A

JIN

PIN CONFIGURATION			
PIN NO.	SYMBOL	LEVEL	FUNCTION
1	V <sub>SS</sub>	0V	GND
2	V <sub>DD</sub>	5V	SUPPLY VOLTAGE FOR LOGIC
3	V <sub>0</sub>	-	CONTRAST VOLTAGE FOR LCD DRIVE(VARIABLE)
4	RD	L	READ SIGNAL
5	WR	L	WRITE SIGNAL
6	CS	L	CHIP SELECT
7	AO	H/L	DATA TYPE SELECT
8~15	DB0~DB7	H/L	DATA BUS
16	RES	L	RESET SIGNAL (NOTE 1)
17	VEE	-	POWER SUPPLY VOLTAGE FOR LCD
18	A	4.2V	ANODE LED BACKLIGHT
19	K	-	CATHODE LED BACKLIGHT
20	(N/C)	-	NO CONNECTION

CAUTION:

- RES IS A SCHMITT TRIGGER INPUT. THE PULSEWIDTH ON RES MUST BE AT LEAST 200μs. PULSES OF MORE THAN A FEW SECONDS WILL CAUSE DC VOLTAGES TO BE APPLIED TO THE LCD PANEL.



ELECTRICAL CHARACTERISTICS		V <sub>DD</sub> =4.75V to 5.25V, 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>	-	4.75	5.0	5.25	V	
SUPPLY VOLTAGE FOR LCD DRIVE	V <sub>DD</sub> -V <sub>EE</sub>	-	-	18.2	-	V	
SUPPLY CURRENT FOR LOGIC	I <sub>DD</sub>	-	-	-	20	mA	
INPUT VOLTAGE	HIGH	V <sub>IH</sub>	-	0.2	-	V <sub>DD</sub>	V
	LOW	V <sub>IL</sub>	-	0	-	0.8	V
OUTPUT VOLTAGE	HIGH	V <sub>OH</sub>	I <sub>OH</sub> =-3.0mA	2.4	-	-	V
	LOW	V <sub>OL</sub>	I <sub>OL</sub> =3.0mA	-	-	0.4	V
LED BACKLIGHT	VOLTAGE	V <sub>F</sub>	I <sub>f</sub> =560mA	-	4.2	4.5	V
	CURRENT	I <sub>f</sub>	-	-	560	-	mA
	POWER CONSUMPTION	PD	-	-	2.8	-	W
	LUMINOUS	L	I <sub>f</sub> =560mA	60	-	-	cd/m <sup>2</sup>
	COLOR	-	-	-	570	-	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	0	7.0	V
SUPPLY VOLTAGE FOR LCD DRIVE	V <sub>DD</sub> -V <sub>EE</sub>	-	17.2@40°C	19.2@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>	LCM-H	-20	70	°C
STORAGE TEMPERATURE	T <sub>stg</sub>	LCM-H	-30	85	°C

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