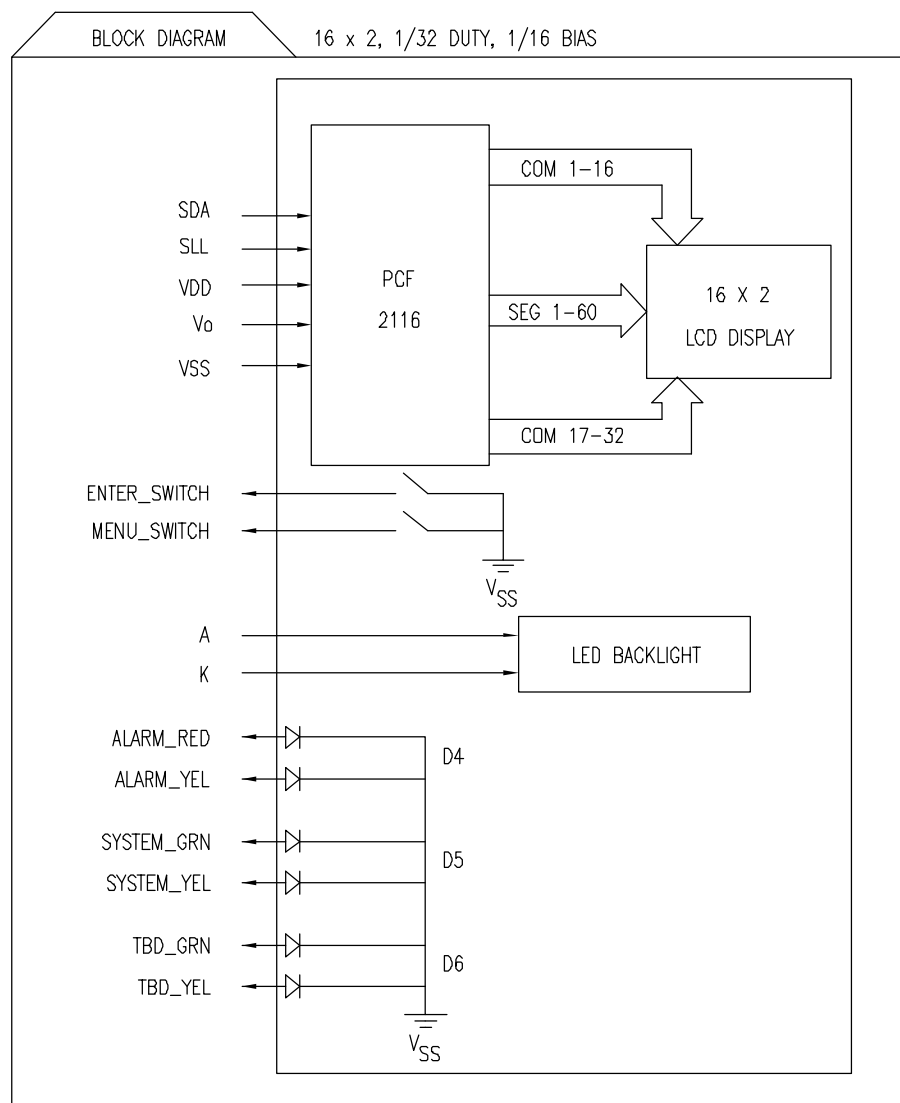




PIN CONFIGURATION

PIN	SYMBOL	FUNCTION
1	VSS	GROUND (0V)
2	VDD	SUPPLY VOLTAGE FOR LOGIC.
3	Vo	THE INPUT LEVEL AT THIS PIN DETERMINES THE GENERATED VLCD OUTPUT VOLTAGE. (CONTRAST ADJUST, 0.5V TYP.)
4	SDA	INPUT/OUTPUT FOR THE I2C-BUS DATA LINE.
5	SCL	INPUT FOR THE I2C-BUS CLOCK SIGNAL.
6	RESET_L	ACTIVE LOW RESET SIGNAL.
7	ENTER_SW	SWITCH OUTPUT
8	MENU_SW	SWITCH OUTPUT
9	ALARM_RED	RED LED ANODE
10	ALARM_YEL	YELLOW LED ANODE
11	SYSTEM_GREEN	GREEN LED ANODE
12	SYSTEM_YEL	YELLOW LED ANODE
13	TBD_GREEN	GREEN LED ANODE
14	TBD_YEL	YELLOW LED ANODE
15	A	LED BACK LIGHT ANODE
16	K	LED BACK LIGHT CATHODE

NOTES:

1. D4 IS THE ALARM LED.
2. D5 IS THE SYSTEM LED.
3. D6 IS THE TBD LED.

*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-H01602DSN41953

16 X 2 LCD CHARACTER MODULE, CUSTOM PCB ASSEMBLY,
12:00 VIEW, -20°C TO 70°C OPERATING TEMP, STN NEGATIVE
BLUE, WHITE LED BACKLIGHT, NPX PCF2116 LCD DRIVER.

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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DATE: 08.14.08

PAGE: 2 OF 3

SCALE: N/A

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
00	01	02	03	04	05	06	07	08	09	0A	0B	40	41	42	43
20	21	22	23	24	25	26	27	28	29	2A	2B	60	61	62	63

DISPLAY POSITION
DDRAM ADDRESS

WHEN THE DISPLAY OPERATION IS PERFORMED, THE DDRAM ADDRESS MOVED AS FOLLOW: AFTER THE LEFT SHIFT INSTRUCTION

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
01	02	03	04	05	06	07	08	09	0A	0B	0C	41	42	43	44
21	22	23	24	25	26	27	28	29	2A	2B	2C	61	62	63	64

DISPLAY POSITION
DDRAM ADDRESS

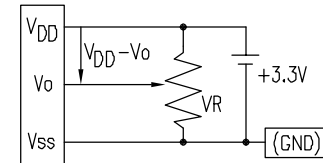
AFTER THE RIGHT SHIFT INSTRUCTION

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
13	00	01	02	03	04	05	06	07	08	09	0A	53	40	41	42
33	20	21	22	23	24	25	26	27	28	29	2A	63	60	61	62

DISPLAY POSITION
DDRAM ADDRESS

$1.8V_{DD}-V_o$: LCD DRIVING VOLTAGE

VR: $10K\Omega-20K\Omega$



AC CHARACTERISTICS

SYMBOL	PARAMETER	STANDARD VALUE			UNIT
		MIN.	TYP.	MAX.	
F_{SLC}	SLC CLOCK FREQUENCY	—	—	100	KHz
T_{SW}	TOLERABLE SPIKE WIDTH ON BUS			100	ns
T_{BUF}	BUS FREE TIME	4.7			μ S
$T_{SU;STA}$	SET-UP TIME FOR A REPEATED START CONDITION	4.7			μ S
$T_{HD;STA}$	START CONDITION HOLD TIME	4			μ S
T_{LOW}	SCL LOW TIME	4.7			μ S
T_{HIGH}	SCL HIGH TIME	4			μ S
T_R	SCL AND SDA RISE TIME	—		1	μ S
T_F	SLC AND SDA FALL TIME	—		0.3	μ S
$T_{SU;DAT}$	DATA SETUP TIME	250			ns
$T_{HD;DAT}$	DATA HOLD TIME	0			ns
$T_{SU;STO}$	SETUP TIME FOR STOP CONDITION	4			μ S

ABSOLUTE MAXIMUM RATINGS

ITEM	SYMBOL	TEST CONDITION	STANDARD VALUE		UNIT
			MIN	MAX	
SUPPLY VOLTAGE FOR LOGIC	V_{DD}	$T_a=25^{\circ}C$	-0.5	8.0	V
SUPPLY VOLTAGE FOR LCD DRIVE	V_o	—	V_{SS}	V_{DD}	V
OPERATING TEMPERATURE	T_{opr}	LCM-H	-20	70	$^{\circ}C$
STORAGE TEMPERATURE	T_{stg}	LCM-H	-30	80	$^{\circ}C$

ELECTRICAL CHARACTERISTICS

$V_{DD}=5V$, $T_A=25^{\circ}C$

ITEM		SYMBOL	CONDITION	STANDARD VALUE			UNIT
				MIN.	TYP.	MAX.	
OPERATING VOLTAGE		V _{DD}	—	3.0	3.3	3.6	V
SUPPLY CURRENT		I _{DD}	—	—	TBD	—	mA
INPUT VOLTAGE		I _{IL}		V _{SS}	—	0.3V _{DD}	
		V _{OH}		0.7V _{DD}	—	V _{DD}	V
LED BACKLIGHT	FORWARD CURRENT	I _F	V _F = 3.4	—	30	40	mA
	COLOR	X	I _F = 30mA	0.287	—	0.330	mA
		Y	I _F = 30mA	0.276	—	0.339	mA

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