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

10.00 [0.394]

2.54 [0.100]
(15 PLS.)

0.64 [0.025]
SQR TYP.

8.04±0.50 [0.317±0.020]

ø2.80 [ø0.110]
(4 PLS.)

2.50 [0.098]

1.60 [0.063]

6.00 [0.236]

2.50 [0.098]

2.50 [0.098]

8.70 [0.343]

2.00 [0.079]

1   16

4.15 [0.163]

CHARACTER DETAIL

36.20 [1.425]

20.80 [0.819]

26.30 [1.035]
V.A.

55.00 [2.165]

60.00 [2.362]

0.55 [0.022]

0.05 [0.002]

0.55 [0.022]

0.05 [0.002]

4.75 [0.187]

0.60 [0.024]

0.60 [0.024]

2.95 [0.116]

12.70 [0.500]

70.40 [2.772]

77.00 [3.031] V.A.

93.00 [3.661]

96.20 [3.787]

98.00 [3.858]
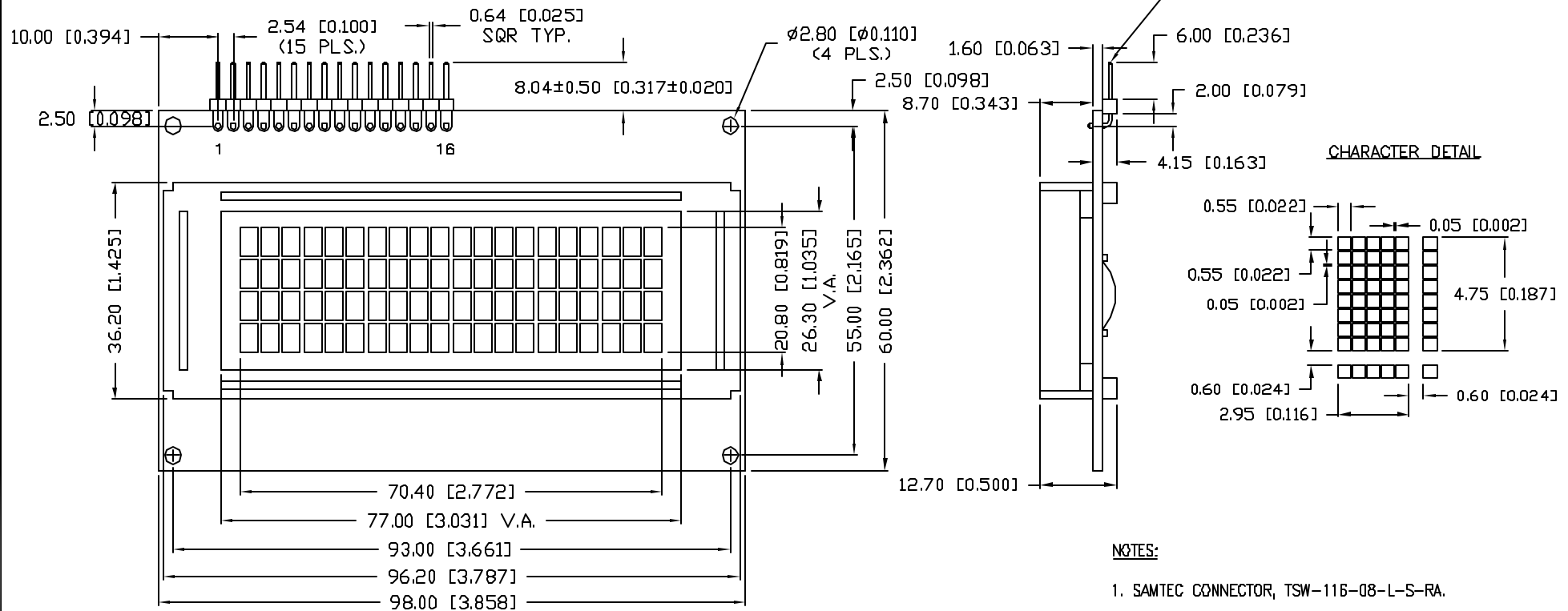
NOTES:

1. SAMTEC CONNECTOR, TSW-116-08-L-S-RA.

UNCONTROLLED DOCUMENT

*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−S02004D40965			

4.75mm CHARACTER HEIGHT, 5 x 8 DOT MATRIX, 20 x 4, LCD MODULE, 1/16 DUTY, 1/5 BIAS, STN GRAY, TRANSFLECTIVE,WHITE LED BACKLIGHT W/ SAMTEC CONNECTOR.

DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE: 04.03.08
JN			PAGE: 1 OF 2
			SCALE: N/A

PIN CONFIGURATION

PIN NO.	SYMBOL	LEVEL	FUNCTION	
1	Vss	–	POWER SUPPLY	GND (0V)
2	V_{DD}	–		5V
3	Vo	–		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	3.4V	ANODE	LED BACKLIGHT
16	K	GND	CATHODE	LED BACKLIGHT

V_{DD}-Vo: LCD DRIVING VOLTAGE
VR: 10KΩ—20KΩ

BLOCK DIAGRAM — 20 x 4, 1/16 DUTY, 1/5 BIAS
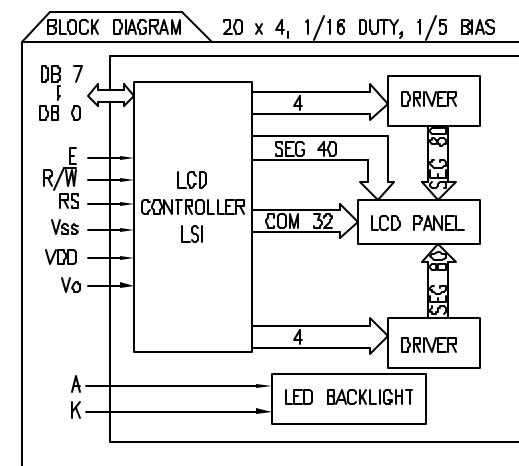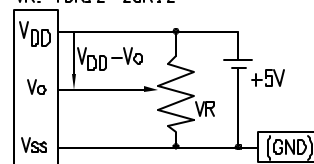
ELECTRICAL CHARACTERISTICS — V_{DD}=4.7V to 5.3V, T_A=25°C

ITEM		SYMBOL	CONDITION	STANDARD VALUE			UNIT
				MIN.	TYP.	MAX.	
SUPPLY VOLTAGE FOR LOGIC		V_{DD}-Vss	–	–	5.0	–	V
SUPPLY CURRENT FOR LOGIC		I_{DD}	V_{DD}=5V	–	3.0	4.0	mA
INPUT VOLTAGE	HIGH	V_{IH}	–	2.2	–	V_{DD}	V
	LOW	V_{IL}	–	0	–	0.6	V
OUTPUT VOLTAGE	HIGH	V_{OH}	I_{OH}=-0.205mA	2.4	–	–	V
	LOW	V_{OL}	I_{OL}=1.6ma	–	–	0.4	V
*LED BACKLIGHT	VOLTAGE	Vf	If=20mA	–	3.4	3.5	V
	CURRENT	If	–	–	20	30	mA
	POWER CUNSUMPTION	PD	–	–	68	105	mW
	LUMINOUS	L	If=20mA	30	35	–	cd/m^2
	COLOR	WHITE	–	–	–	–	nm

*ONLY APPLIES TO MODULES WITH BACKLIGHT

ABSOLUTE MAXIMUM RATINGS

ITEM	SYMBOL	TEST CONDITION	STANDARD VALUE		UNIT
			MIN	MAX	
SUPPLY VOLTAGE FOR LOGIC	V_{DD}-Vss	Ta=25°C	-0.3	7	V
SUPPLY VOLTAGE FOR LCD DRIVE	V_{DD}-Vo	–	-0.3	12	V
INPUT VOLTAGE	V_I	Ta=25°C	Vss	V_{DD}	V
OPERATING TEMPERATURE	Topr	LCM-S	0	50	°C
		LCM-H	-20	70	°C
STORAGE TEMPERATURE	Tstg	LCM-S	-20	70	°C
		LCM-H	-30	85	°C

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4.75mm CHARACTER HEIGHT, 5 x 8 DOT MATRIX, 20 x 4, LCD MODULE, 1/16 DUTY, 1/5 BIAS, STN GRAY. TRANSFLECTIVE, WHITE LED BACKLIGHT W/ SAMTEC CONNECTOR.

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			SCALE: N/A

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