

# SCG003A ( 16 CHARACTERS X 1 LINES )

## FEATURES

- BUILT-IN CONTROLLER (NT7651 OR EQUIVALENT)
- +3 V POWER SUPPLY
- 1/16 DUTY CYCLE
- 8-BIT PARALLEL INTERFACE

## MECHANICAL DATA

ITEM	DIMENSIONS	UNIT
Module Size (W x H x T)	70.0 x 27.0 x 2.9	mm
Viewing Area ( W x H )	65.5 x 15.0	mm
Active Area ( W x H )	59.62 x 6.56	mm
Dot Size ( W x H )	0.55 x 0.75	mm
Dot Pitch ( W x H )	0.63 x 0.83	mm

## INTERFACE PIN CONNECTIONS

NO.	SYMBOL	LEVEL	FUNCTION
1	VLCD	H	Lcd Driver Supply Voltage
2	VSS	0V	Power Supply Ground
3	VDD	3.0V	Power Supply Voltage
4	SDA	H/L	IIC Bus Serial Data Input/Output
5	PDR	H	Reset Input
6	SCL	H/L	IIC Bus Serial Clock Input

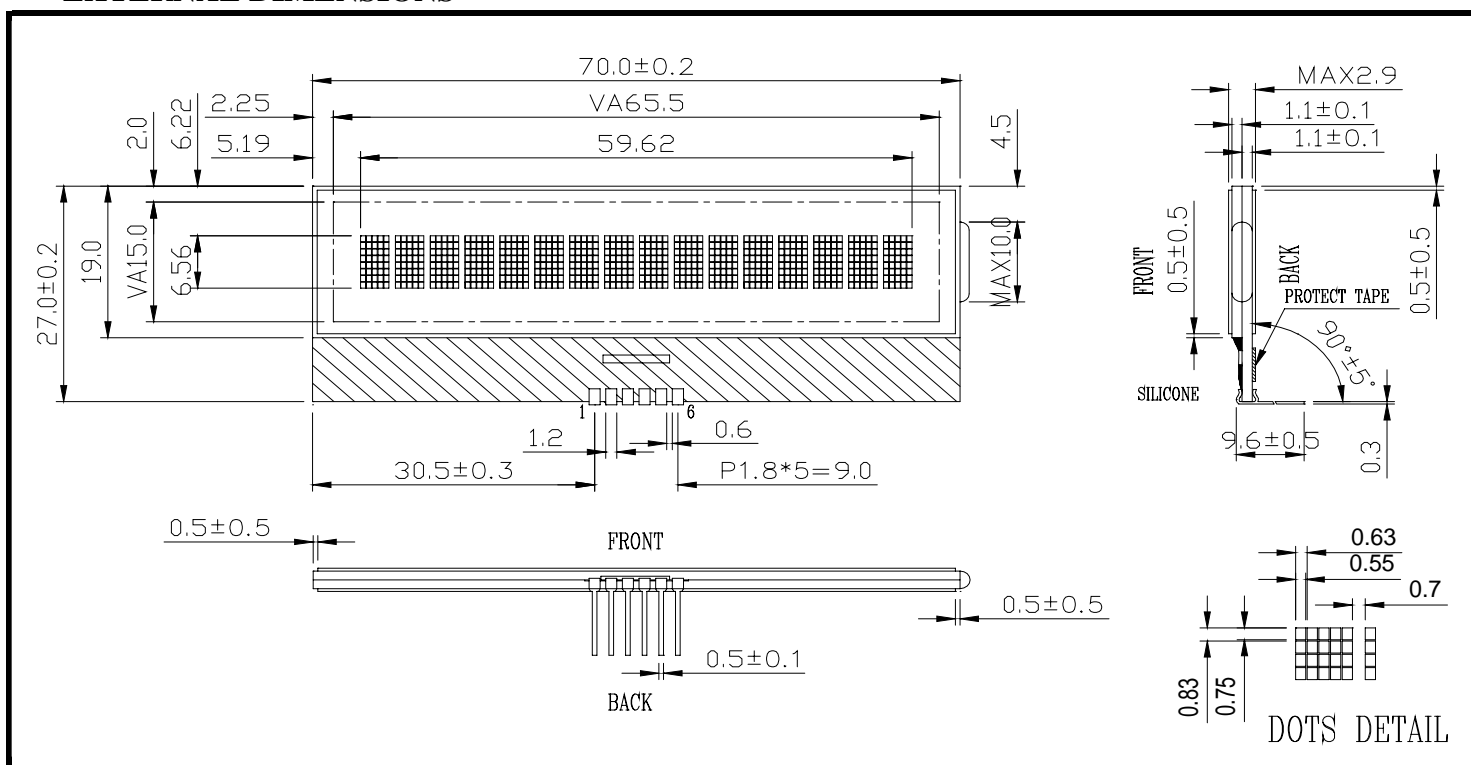
## ABSOLUTE MAXIMUM RATINGS

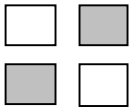
ITEM	SYMBOL	MIN.	TYP.	MAX.	UNIT
Supply Voltage For Logic	V <sub>DD</sub> -V <sub>SS</sub>	0	-	7	V
Supply Voltage For LCD Drive	V <sub>DD</sub> -V <sub>o</sub>	0	-	12	V
Input Voltage	V <sub>I</sub>	V <sub>SS</sub>	-	V <sub>DD</sub>	V

## ELECTRICAL CHARACTERISTICS

ITEM	SYMBOL	CONDITION	MIN.	TYP.	MAX.	UNIT	
Supply Voltage For Logic	V <sub>DD</sub> -V <sub>SS</sub>	-	2.4	3	3.6	V	
Supply Voltage For LCD	V <sub>DD</sub> -V <sub>o</sub>	V <sub>DD</sub> =3V Ta=25	4	4.4	5	V	
Supply Current	I <sub>DD</sub>	V <sub>DD</sub> =3V	-	0.7	1	mA	
Input Voltage	"HIGH" Level	V <sub>IH</sub>	-	2.2	-	V <sub>DD</sub>	V
	"LOW" Level	V <sub>IL</sub>	-	-	-	0.6	V
Output Voltage	"HIGH" Level	V <sub>OH</sub>	-	2.4	-	-	V
	"LOW" Level	V <sub>OL</sub>	-	-	-	0.4	V

## EXTERNAL DIMENSIONS

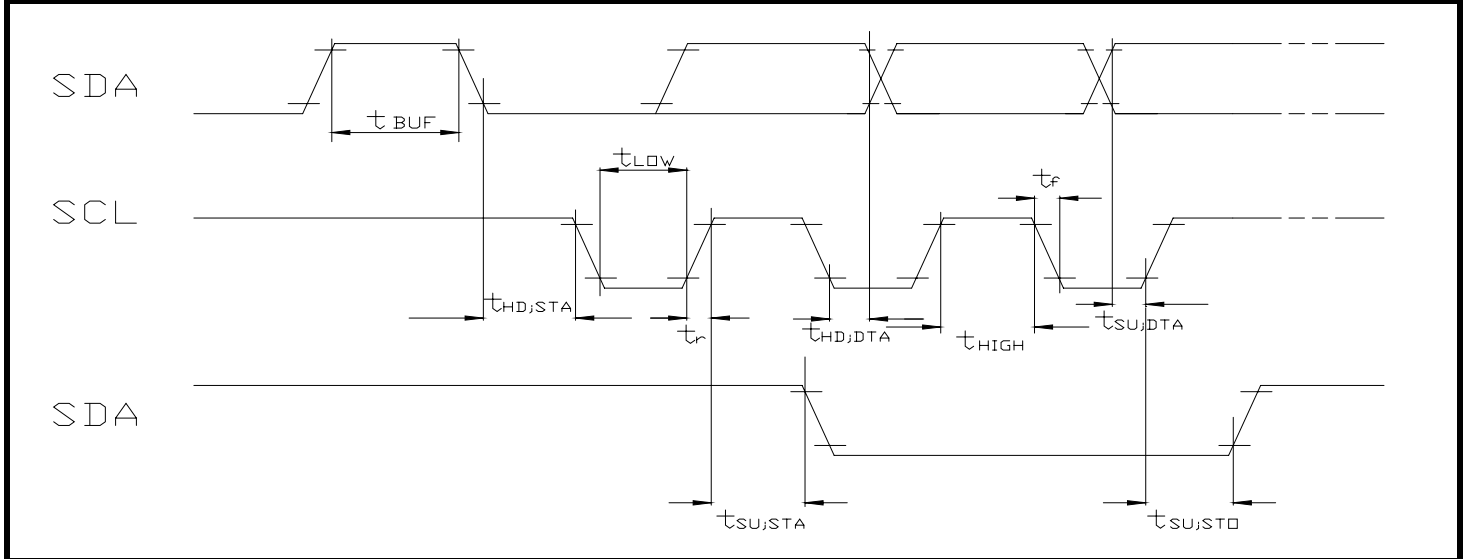




# SCG003A ( 16 CHARACTERS X 2 LINES )

## TIMING CHARACTERISTICS

ITEM	SYMBOL	MIN.	TYP.	MAX.	UNIT.
SCL clock frequency	$f_{SCL}$	-	-	400	KHZ
Bus free time between a STOP and START	$t_{BUF}$	1.3	-	-	us
START condition delay time	$t_{HD;STA}$	0.6	-	-	us
Set-up time for a repeated START condition	$t_{SU;STA}$	0.6	-	-	us
SCL LOW time	$t_{LOW}$	1.3	-	-	us
SCL HIGH time	$t_{HIGH}$	0.6	-	-	us
SCL and SDA rise time	$t_r$	-	-	300	ns
SCL and SDA fall time	$t_f$	-	-	300	ns
Capacitive bus line load	$C_B$	-	-	400	pF
Data set-up time	$t_{SU;DAT}$	100	-	-	ns
Data hold time	$t_{HD;DAT}$	0	-	-	ns
Set-up time for STOP condition	$t_{SU;STO}$	0.6	-	-	us
Tolerable spike width on bus	$t_{sw}$	-	-	50	ns



## BLOCK DIAGRAM

