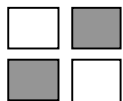


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# PRODUCT SPECIFICATION

MONOCHROME LCD MODULE  
 PART NUMBER : FDG122032N  
 DESCRIPTION : 32x122Graphic  
 REVISION : Rev A

	Approval for Specification only		Approval for Sample Only
	Approval for Pre-production	<b>x</b>	Approval for Mass Production



# FDG122032N ( 122 DOTS X 32 DOTS )

## FEATURES

- ◆ BUILT-IN CONTROLLER (SED1520 OR EQUIVALENT)
- ◆ +5 V POWER SUPPLY
- ◆ 1/32 DUTY CYCLE
- ◆ 8-BIT PARALLEL INTERFACE
- ◆ 4.2 V LED FORWARD VOLTAGE

## MECHANICAL DATA

ITEM	DIMENSIONS	UNIT
Module Size (W x H x T)	84.0 x 40.0 x 8.8 ( 12.7 LED )	mm
Viewing Area ( W x H )	60.5 x 18.5	mm
Active Area ( W x H )	53.64 x 15.64	mm
Dot Size ( W x H )	0.40 x 0.45	mm
Dot Pitch ( W x H )	0.44 x 0.49	mm

## INTERFACE PIN CONNECTIONS

NO.	SYMBOL	LEVEL	FUNCTION
1	V <sub>SS</sub>	0V	Power Supply Ground
2	V <sub>DD</sub>	5V	Power Supply Voltage
3	V <sub>o</sub>	-	Contrast Adjustment Voltage
4	A <sub>o</sub>	H/L	Data Type Select Signal
5	E1		Enable IC1
6	E2		Enable IC2
7	NC	-	No Control
8	NC	-	No Control
9	R/W	H/L	H: Read / L: Write
10~17	DB0~DB7	H/L	Data Bus Line
18	/RES	L	Reset Signal
19	A	4.2V	LED Power (+)
20	K	0V	LED Power (-)

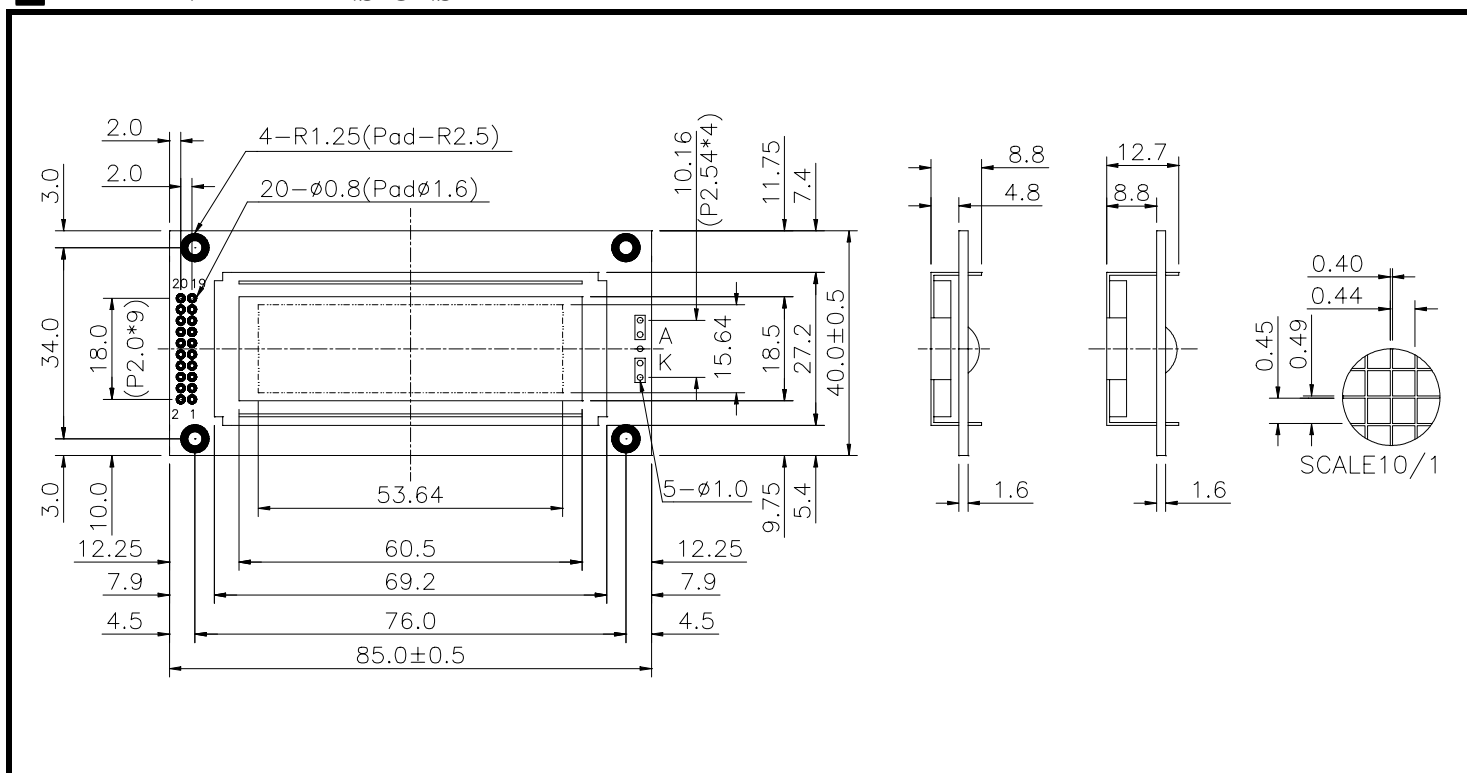
## ABSOLUTE MAXIMUM RATINGS

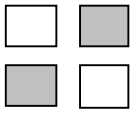
ITEM	SYMBOL	MIN.	TYP.	MAX.	UNIT
Supply Voltage For Logic	V <sub>DD</sub> -V <sub>SS</sub>	0	-	7	V
Supply Voltage For LCD Drive	V <sub>DD</sub> -V <sub>o</sub>	0	-	12	V
Input Voltage	V <sub>I</sub>	V <sub>SS</sub>	-	V <sub>DD</sub>	V

## ELECTRICAL CHARACTERISTICS

ITEM	SYMBOL	CONDITION	MIN.	TYP.	MAX.	UNIT	
Supply Voltage For Logic	V <sub>DD</sub> -V <sub>SS</sub>	-	4.5	5	5.5	V	
Supply Voltage For LCD	V <sub>DD</sub> -V <sub>o</sub>	V <sub>DD</sub> =5V Ta=25°C	4.4	4.8	5.2	V	
Supply Current	I <sub>DD</sub>	V <sub>DD</sub> =5V	-	2.5	4.5	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	V
	"LOW" Level	V <sub>OL</sub>	-	-	-	0.4	V

## EXTERNAL DIMENSIONS

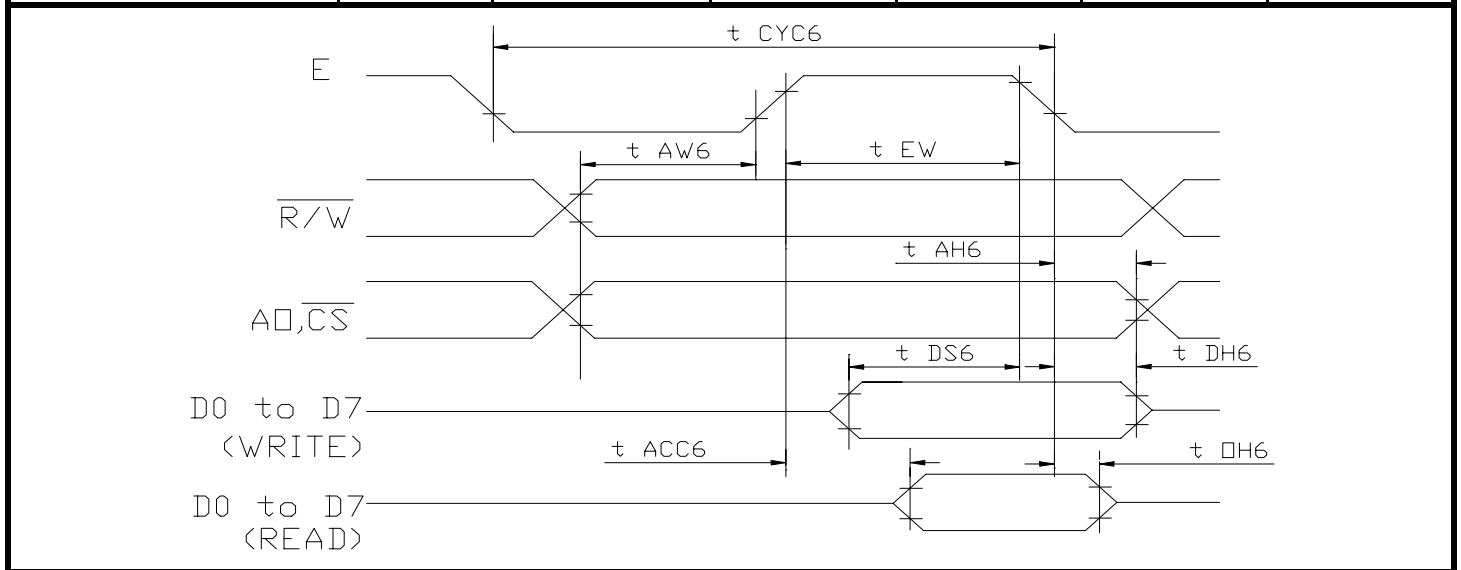




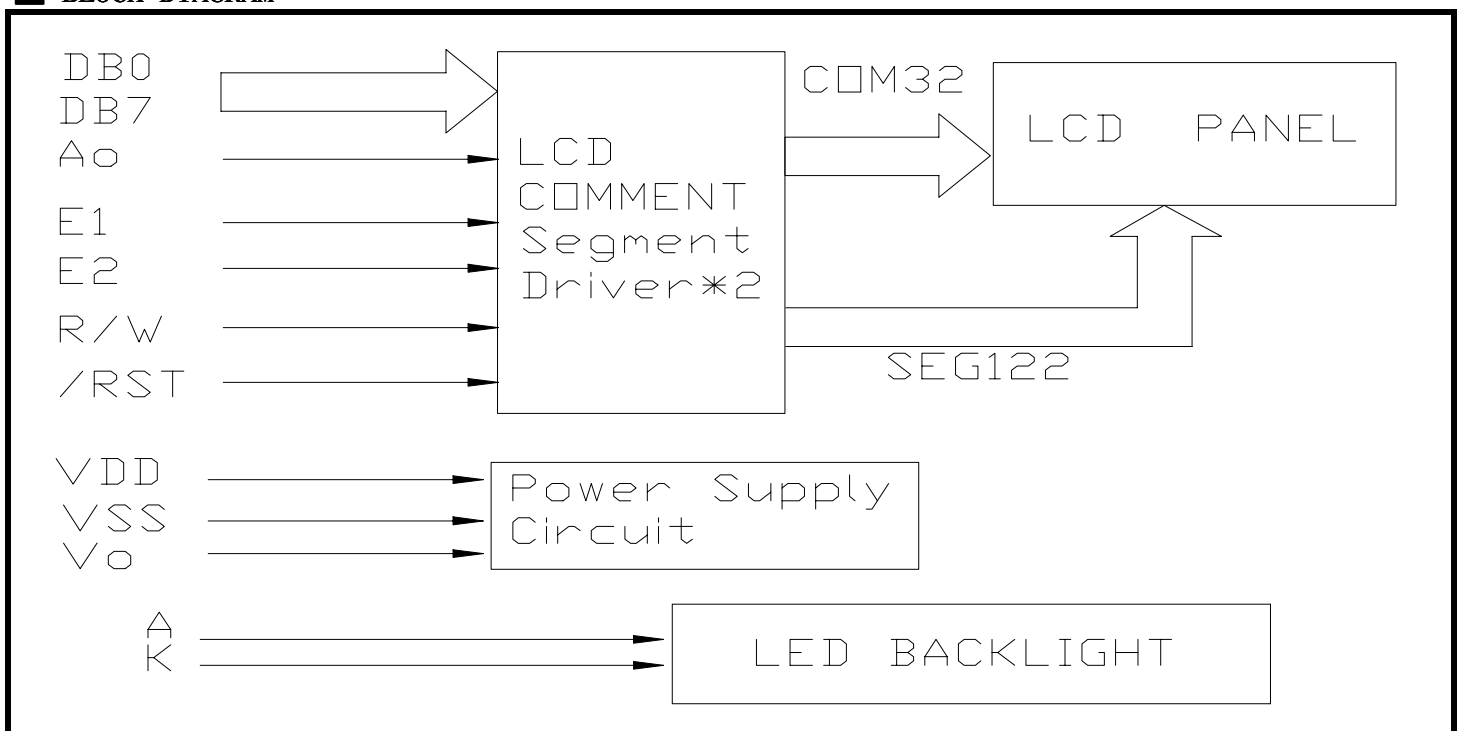
# FDG122032N ( 122 DOTS X 32 DOTS )

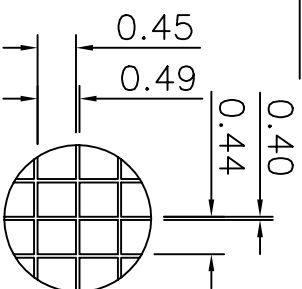
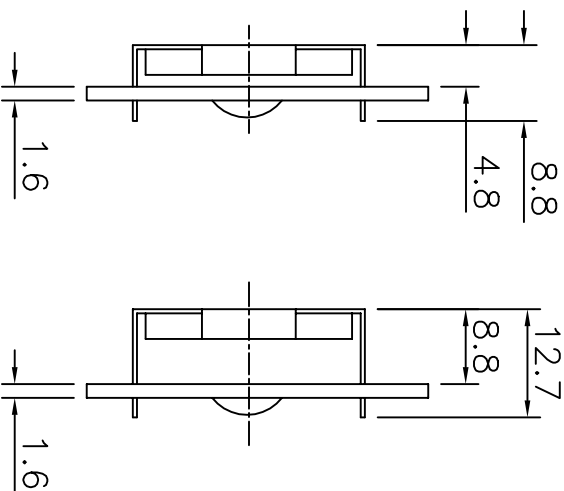
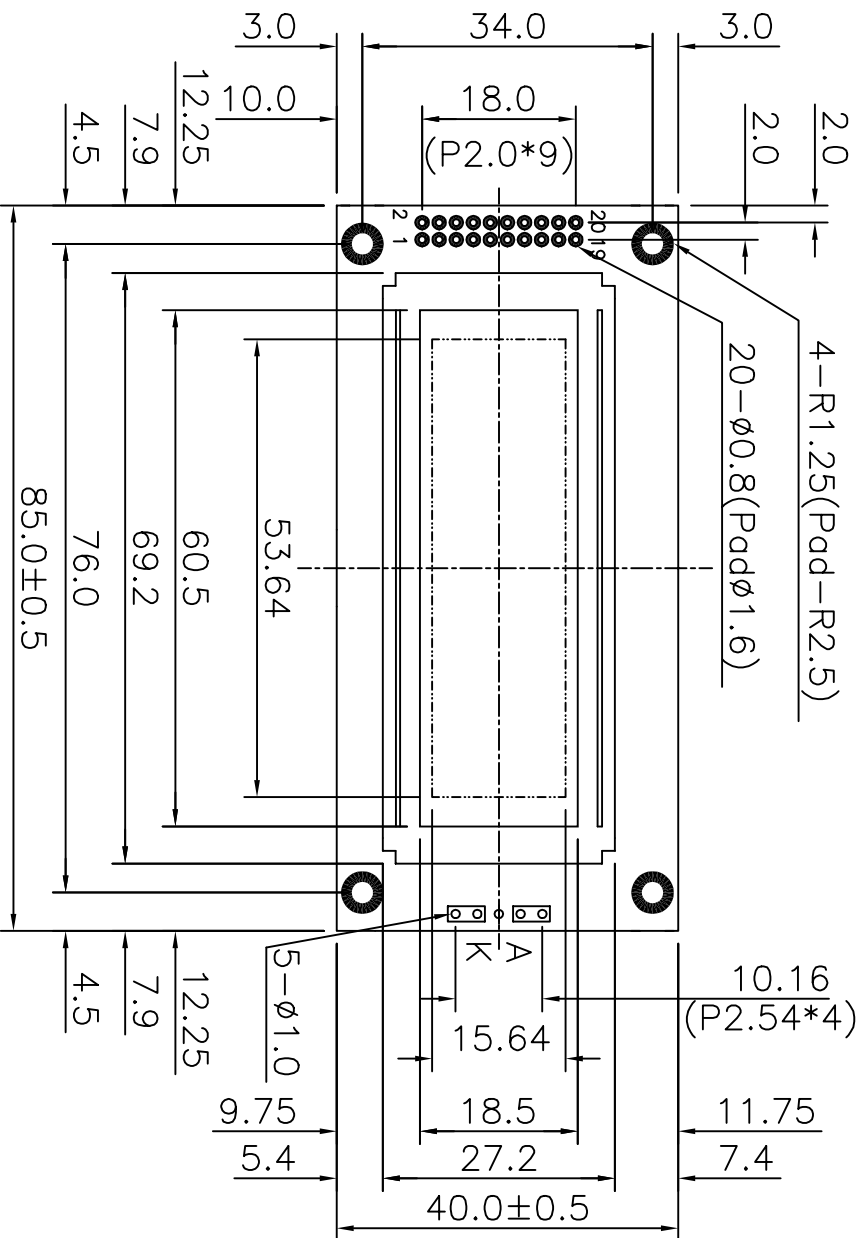
## ■ TIMING CHARACTERISTICS

ITEM	SYMBOL	MIN.	TYP.	MAX.	UNIT.
System Cycle Time	$t_{CYC6}$	1000	-	-	ns
Address Set-up Time	$t_{AW6}$	20	-	-	ns
Address Hold Time	$t_{AH6}$	10	-	-	ns
Data Set-up Time	$t_{DS6}$	80	-	-	ns
Data Hold Time	$t_{DH6}$	10	-	-	ns
Output Disable Time	$t_{OH6}$	10	-	60	ns
Access Time	$t_{ACC6}$	-	-	90	ns
Enable Pulse Width	Read	$t_{EW}$	-	-	ns
	Write				



## ■ BLOCK DIAGRAM





SCALE 10:1

PIN NO	SIGNAL
1	VSS
2	VDD
3	VO
4	A0
5	R1
6	R2
7	NC
8	NC
9	R/W
10	DB0
11	DB1
12	DB2
13	DB3
14	DB4
15	DB5
16	DB6
17	DB7
18	/RES
19	A
20	K

NOTE	ITEM	CONTENT	DATA	REV	TOLERANCE	SCALE	UNIT	DWYN	CUSTOMER	APVL	TITLE	MODEL	DWG NO	PAGE
		CHANGE NUMBER	2004.03.01	0	X. ±0.30 X ±0.20 .XX±0.05	1/1	mm	Gilli	2004.03.01		MODULE	SG12232N	A-A2-0032	1/1
<b>SUNLIKE DISPLAY</b>														