

# DG series

## DG-12232-01 122 X 32 Dots

### Mechanical Data

Item	Standard Value	Unit
Module Size	65.1(W) x 27.1(H) x 5.9(T)	mm
Viewing Area	60.5(W) x 18.5(H)	mm
Dot Pixels	122 x 32	dots
Dot Size	0.40 x 0.45	mm
Dot Pitch	0.44 x 0.49	mm

### Absolute Maximum Ratings

Item	Symbol	Standard Value			Unit
		Min.	Typ.	Max.	
Supply Voltage for Logic	$V_{DD}-V_{SS}$	--	--	8.0	V
Supply Voltage for LCD Drive	$V_{DD}-V_{SS}$	--	--	16.5	V
Input Voltage	$V_i$	$V_{SS}-0.3$	--	$V_{DD}+0.3$	V
Operation Temperature	$T_{opr}$	0	--	50	°C
Storage Temperature	$T_{stg}$	-20	--	70	°C

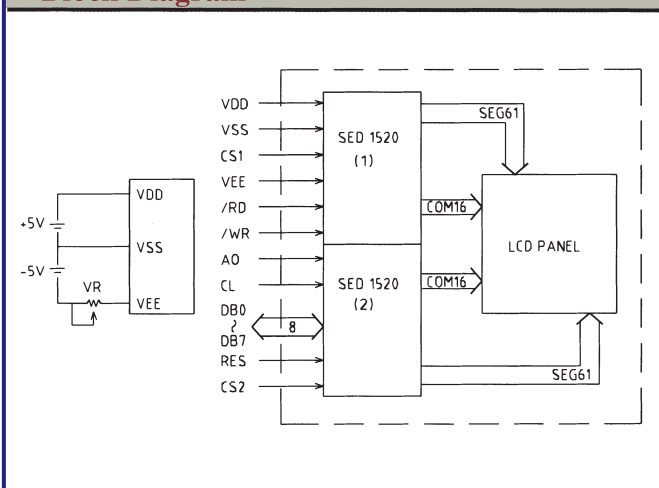
### Electrical Characteristics

Item	Symbol	Condition	Standard Value			Unit
			Min.	Typ.	Max.	
LCD Supply Voltage	$V_{DD}-V_{SS}$	--	4.5	5.0	5.5	V
LCD Driver Circuit Power Supply Voltage	$V_{DD}-V_{EE}$	--	--	6.4	--	V
Input Voltage	$V_{IH}$	--	$V_{SS}+2.0$	--	$V_{DD}$	V
Input Voltage	$V_{IL}$	--	$V_{SS}$	--	$V_{SS}+0.8$	V
Output Voltage	$V_{OH}$	$I_{OH}=-3.0mA$	$V_{SS}+2.4$	--	--	V
Output Voltage	$V_{OL}$	$I_{OL}=+3.0mA$	--	--	$V_{SS}+0.4$	V
Input Leakage Current	$I_{IL}$	--	-1	--	+1	μA
Supply Current	$I_{DD}$	$V_{DD}-V_{SS}=5.0V$	--	0.6	1.1	mA
EL Backlight Current	$I_{EL}$	$V_{DD}-V_{SS}=5.0V$	--	0.12/CM	--	mA

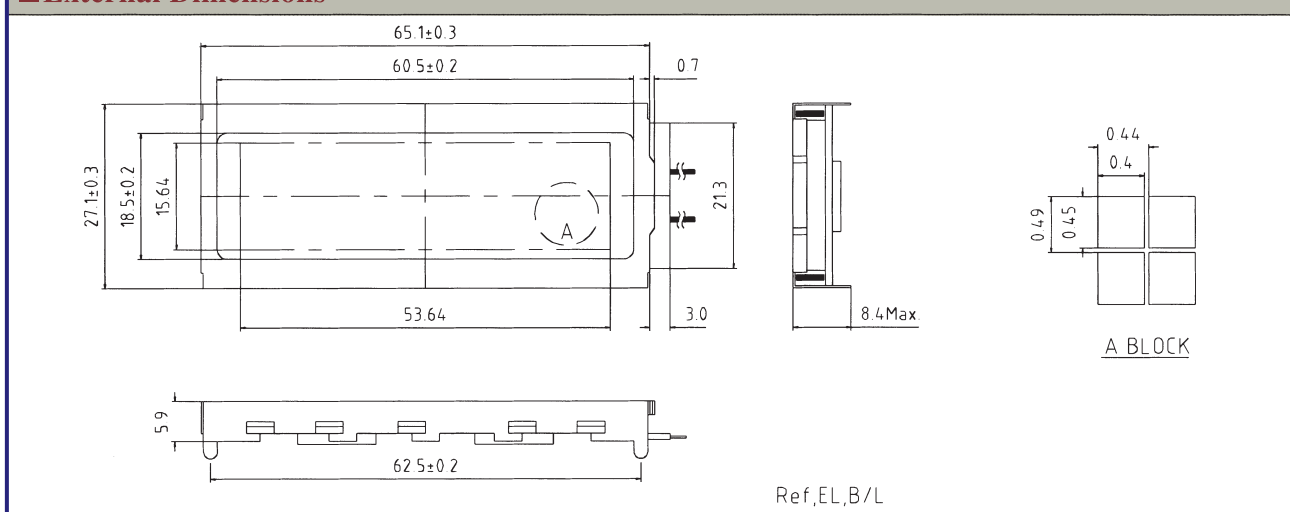
### Pin Assignment

No.	Symbol	Level	Function
1	A0	H/L	L -Instruction, H-Data
2	CS2	L	Chip Enable Active L
3	CS1	L	Chip Enable Active L
4	CL	H/L	External Clock (2KHz)
5	/RD(E)	--	/RD for 80 Series, E for 68 Series
6	/WR (R/W)	--	/WR for 68 Series, R/W for 80 Series
7	Vss	--	Ground
8~15	DB0~DB7	H/L	Data Bus Line
16	VDD	--	Power Supply for Logic Circuit
17	Res	H/L	H -68 Series L 80 Series
18	VEE	--	Power Supply for LCD

### Block Diagram



### External Dimensions



### Option

LCD Type						Backlight Type			Touch Panel	Built-in Control LSI	
S1	S2	W	N	R	F	M	H	EL			LED
•	•		•	•				•	•		SED1520