

56×128 dots**DG05122**

1/64 Duty

SANYO SEMICONDUCTOR CORP

This dot matrix module has a built-in RAM driver that allows 56 dots by 128 dots of graphics to be displayed. It can be interfaced with a CPU through an 8-bit data bus. It also provides the control functions necessary for display.

Mechanical characteristics

Parameter	Dimensions	unit
Out line	85.0 (W) × 38.0 (H) × 13.5 (T)	mm
Min. viewing area	61.7 (W) × 26.10 (H)	mm
Dot display area	60.12 (W) × 25.16 (H)	mm
Dot size	0.43 (W) × 0.41 (H)	mm
Dot pitch	0.47 (W) × 0.45 (H)	mm
Weight	41 (approximately)	g

Absolute maximum ratings

Parameter	Symbol	min.	max.	unit
Logic supply voltage	$V_{DD} - V_{SS}$	0	7.0	V
LCD supply voltage	$V_{DD} - V_O$	0	16.5	V
Input voltage	V_I	V_{SS}	V_{DD}	V
Operating temperature	T_{OPG}	0	+50	°C
Storage temperature	T_{stg}	-20	+70	°C

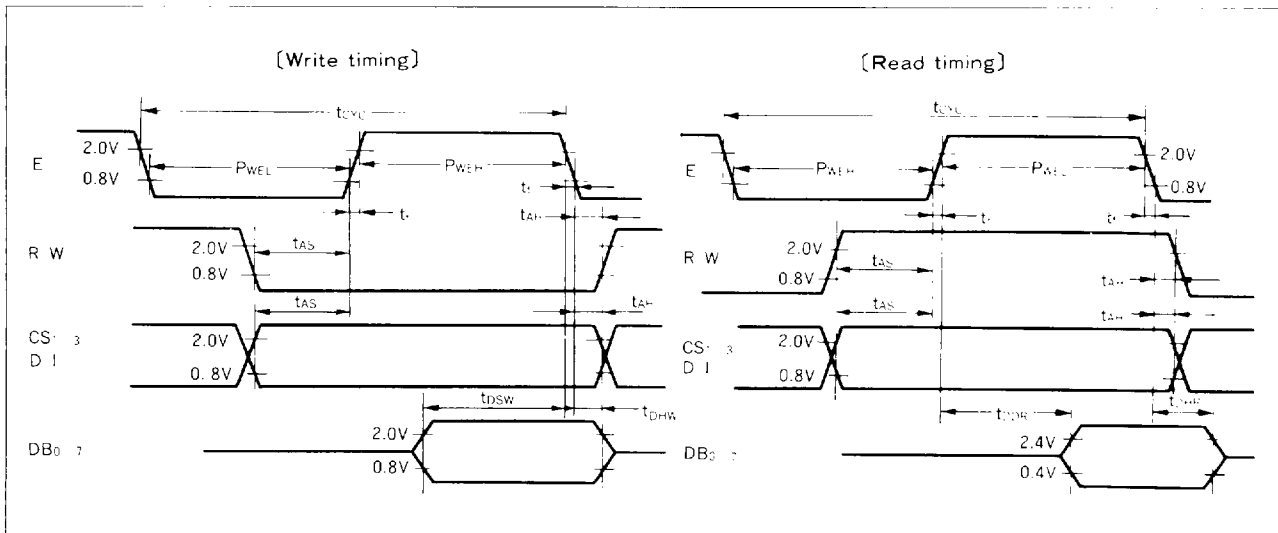
Electrical characteristics ($T_a = 25^\circ\text{C}$, $V_{DD} = 5.0 \pm 0.25\text{V}$)

Parameter	Symbol	Condition	min.	typ.	max.	unit
Input high-level voltage	V_{IH}	—	2.0	—	V_{DD}	V
Input low-level voltage	V_{IL}	—	0	—	0.8	V
LCD drive voltage	V_O	—	—	14.0	—	V
Oscillation frequency	f_{CL}	—	—	225	—	KHz
Supply current	I_{DD}	$V_{DD} - V_O = 13.0\text{V}$	—	—	1.2	mA
LCD supply current	I_{EE}	$f_{OSC} = 225\text{KHz}$	—	—	1.0	mA

Pin functions

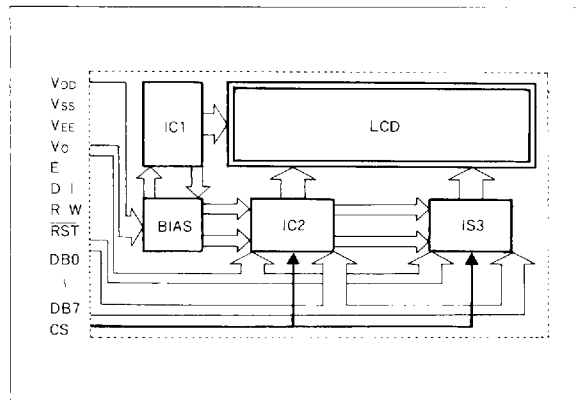
No	Symbol	Functions	No	Symbol	Functions
1	E	Enable input pin	10	NC	(EL/LED: +anode power pin)
2	D/I	Data/instruction select input pin	11	DB 4	Data bus line
3	R/W	Read/write select input pin	12	DB 3	
4	RST	Reset pulse input pin	13	DB 2	
5	CS	Chip select input pin	14	DB 1	
6	DB 7	Data bus line	15	DB 0	Gnd pin, 0V
7	DB 6		16	V_{SS}	
8	DB 5		17	V_{DD}	Positive power pin, +5V
9	NC	(EL/LED: -cathode power pin)	18	V_O	LCD voltage control pin

Timing chart



Parameter	Symbol	min.	typ.	max.	unit
E cycle time	tCYC	1000			ns
E high-level width	tWEH	450			ns
E low-level width	tWEL	450			ns
E rise time	tr			25	ns
E fall time	tf			25	ns
Address setup time	tAS	140			ns
Address hold time	tAH	10			ns
Data setup time	tDSW	200			ns
Data delay time	tDDR			320	ns
Write data hold time	tDHW	10			ns
Read data hold time	tDHR	20			ns

Block diagram



Module dimensions

(unit : mm)

