64×240 dots　DG06245　(Built-in controller with back light) 1/64 Duty

This dot matrix module with back light has a controller that allows 40 characters by 8 lines on 64 dots by 240 dots of graphics to be displayed. It provides the control circuits such as data RAM, character ROM. It can be interfaced with a CPU through an 8-bit bidirectional data bus and connected directly to 80-series CPU.

Mechanical characteristics

Parameter	Dimensions	unit
Out line	180.0 (W)×65.0 (H)×17.0(T)	mm
Min. viewing area	132.5 (W)×39.5 (H)	mm
Dot display area	127.16(W)×33.88(H)	mm
Dot size	0.49(W)× 0.49(H)	mm
Dot pitch	0.53(W)× 0.53(H)	mm
Weight	240(approximately)	g

Absolute maximum ratings

Parameter	Symbol	min.	max.	unit
Logic supply voltage	$V_{DD}-V_{SS}$	−0.3	7.0	V
LCD supply voltage	$V_{DD}-V_O$	−0.3	20.0	V
Input voltage	V_I	−0.3	$V_{DD}+0.3$	V
Operating temperature	T_{opg}	0	+50	°C
Storage temperature	T_{stg}	−20	+70	°C

Electrical characteristics (Ta=25°C, $V_{DD}=5.0\pm0.25V$)

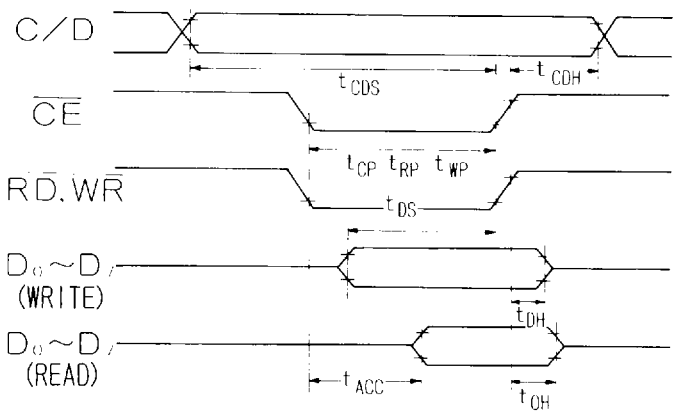
Parameter	Symbol	Condition	min.	typ.	max.	unit
Input high-level voltage	V_{IH}	Input pin	$V_{DD}-2.2$	−	V_{DD}	V
Input low-level voltage	V_{IL}		0	−	0.8	V
LCD drive voltage	V_O	−	−	14.0	−	V
Oscillation frequency	f_{OSC}	−	−	4.0	−	MHz
Supply current	I_{DD}	$V_{DD}-V_{SS}=5.0V$	−	15.0	25.0	mA
LCD supply current	I_{EE}	$V_{DD}-V_O=14.0V$	−	1.0	4.0	mA

Pin functions

No	Symbol	Functions	No	Symbol	Functions
1	FGND	Frame Gnd/EL Gnd, pin	11	DB 0	
2	V_{SS}	Gnd pin, OV	12	DB 1	
3	V_{DD}	Positive power pin, +5V	13	DB 2	Data bus line
4	V_{EE}	Negative power pin, −15V max.	14	DB 3	D 0 : LSB
5	WR	Write input pin, L:data write	16	DB 4	D 7 : MSB
6	RD	Read input pin, L:data read	16	DB 5	
7	CE	Chip enable input pin, L:enable	17	DB 6	
8	C/D	Command/data select pin, H:command, L:data	18	DB 7	
9	NC		19	FS	Word area select pin, FS=L(8×8)
10	RESET	Reset input pin, L:reset	20	NC	

P/N	(Open)	Positive indicate	21	CFL 1	Power terminal of CFL lamp, 1 or LED (Anode)
	(Short)	Negative indicate	22	CFL 2	Power terminal of CFL lamp, 2 or LED (Cathode)

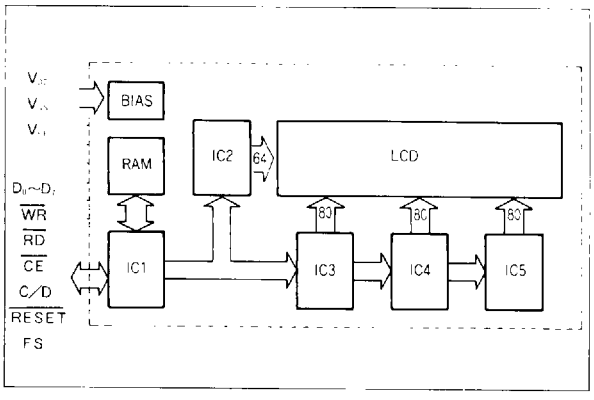
Timing chart



V_{DD}=5V±10%、V_{SS}=0V、Ta=−10~+70°C

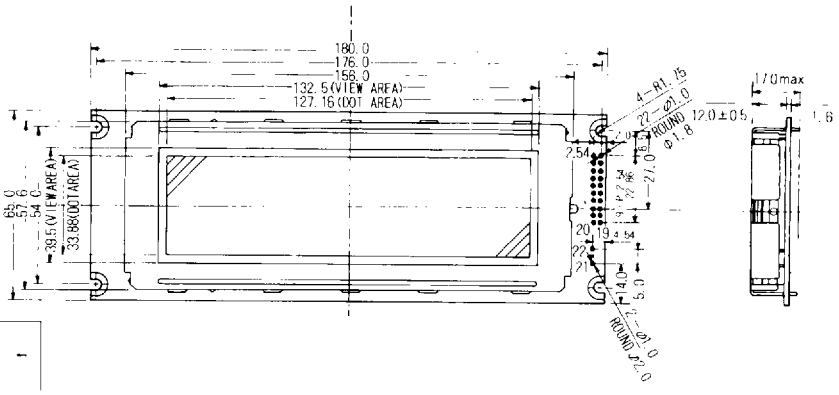
Parameter	Symbol	min.	max.	unit
C/D setup time	tCDS	100	—	ns
C/D hold time	tCDH	10	—	ns
CE, RD, WR, pulse width	tCP tRP tWP	80	—	ns
Data setup time	tDS	80	—	ns
Data hold time	tDH	40	—	ns
Access time	tACC	—	150	ns
Output hold time	tOH	10	50	ns

Block diagram



Module dimensions

(unit : mm)



■Pattern dimensions