

**5x7** dots+  
cursol**DM2011**

(20 Characters × 1 Line) 1/16 Duty

SANYO SEMICONDUCTOR CORP

**Absolute maximum ratings**

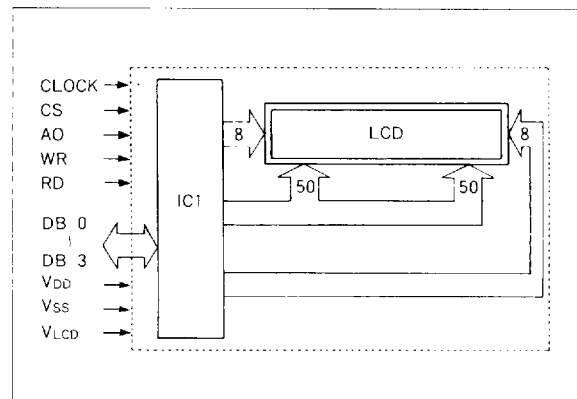
Parameter	Symbol	min.	max.	unit
Logic supply voltage	$V_{DD} - V_{SS}$	-0.3	7.0	V
LCD supply voltage	$V_{DD} - V_0$	-0.3	7.0	V
Input voltage	$V_i$	-0.3	$V_{DD} + 0.3$	V
Operating temperature	$T_{opg}$	0	+50	°C
Storage temperature	$T_{stg}$	-20	+70	°C

**Electrical characteristics (Ta = 25°C, V<sub>DD</sub> = 5.0 ± 0.25V)**

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
Output high-level current	$I_{OH}$	$V_{OH} = 2.4V$	-1.0	—	—	mA
Output low-level current	$I_{OL}$	$V_{OL} = 0.4V$	1.6	—	—	mA
Supply current	$I_{DD}$	$f_{osc} = 100KHz$	—	120	300	μA

**Pin function**

No	Symbol	Function
1	$V_{DD}$	Positive power pin, +5V
2	$V_{SS}$	Negative Gnd pin, 0V
3	$V_0$	LCD drive voltage input pin
4	$\phi$	External clock input pin for commands
5	$\overline{CS}$	Chip select input pin
6	AO	Instruction/data select input pin
7	WR	Write enable input pin
8	RD	Read enable input pin
9	DB 3	Data bus line *DB3:Common pin to I/O port (Busy flag)
10	DB 2	
11	DB 1	
12	DB 0	

**Block diagram****Module dimensions**

(unit : mm)

