

5x11 dots**DM4011**

(40 Characters × 1 Line) 1/11 Duty

SANYO SEMICONDUCTOR CORP

Absolute maximum ratings

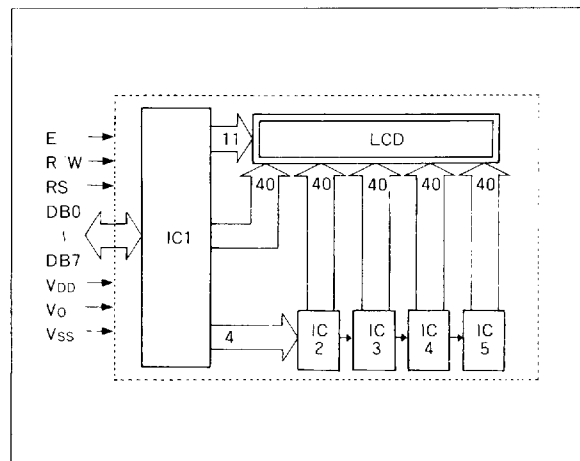
| Parameter | Symbol | min. | max. | unit |
|-----------------------|-------------------|------|----------------|------|
| Logic supply voltage | $V_{DD} - V_{SS}$ | -0.3 | 7.0 | V |
| LCD supply voltage | $V_{DD} - V_o$ | -0.3 | 13.5 | V |
| Input voltage | V_I | -0.3 | $V_{DD} + 0.3$ | V |
| Operating temperature | T_{opg} | 0 | +50 | °C |
| Storage temperature | T_{stg} | -20 | +70 | °C |

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

| Parameter | Symbol | Condition | min. | typ. | max. | unit |
|---------------------------|----------|--------------------------|------|------|----------|------|
| Input high-level voltage | V_{IH} | — | 2.2 | — | V_{DD} | V |
| Input low-level voltage | V_{IL} | — | 0 | — | 0.6 | V |
| Output high-level voltage | V_{OH} | $-I_{OH} = 0.2\text{mA}$ | 2.4 | — | V_{DD} | V |
| Output low-level voltage | V_{OL} | $I_{OL} = 1.2\text{mA}$ | 0 | — | 0.4 | V |
| Supply current | I_{DD} | — | — | 1.5 | 3.0 | mA |

Pin function

| No | Symbol | Function |
|----|----------|-----------------------------------|
| 1 | V_{SS} | Gnd pin, OV |
| 2 | V_{DD} | Positive power pin, +5V |
| 3 | V_o | LCD drive voltage input pin |
| 4 | RS | Data/instruction select input pin |
| 5 | R/W | Read/write select input pin |
| 6 | E | Enable input pin |
| 7 | DB0 | Data bus line (Lower 4 bits) |
| 8 | DB1 | |
| 9 | DB2 | |
| 10 | DB3 | |
| 11 | DB4 | Data bus line (Upper 4 bits) |
| 12 | DB5 | *When interface data is 4 bits |
| 13 | DB6 | long, data is transferred |
| 14 | DB7 | using only 4 buses of DB4 to DB7. |

Block diagram**Module dimensions**

(unit : mm)

