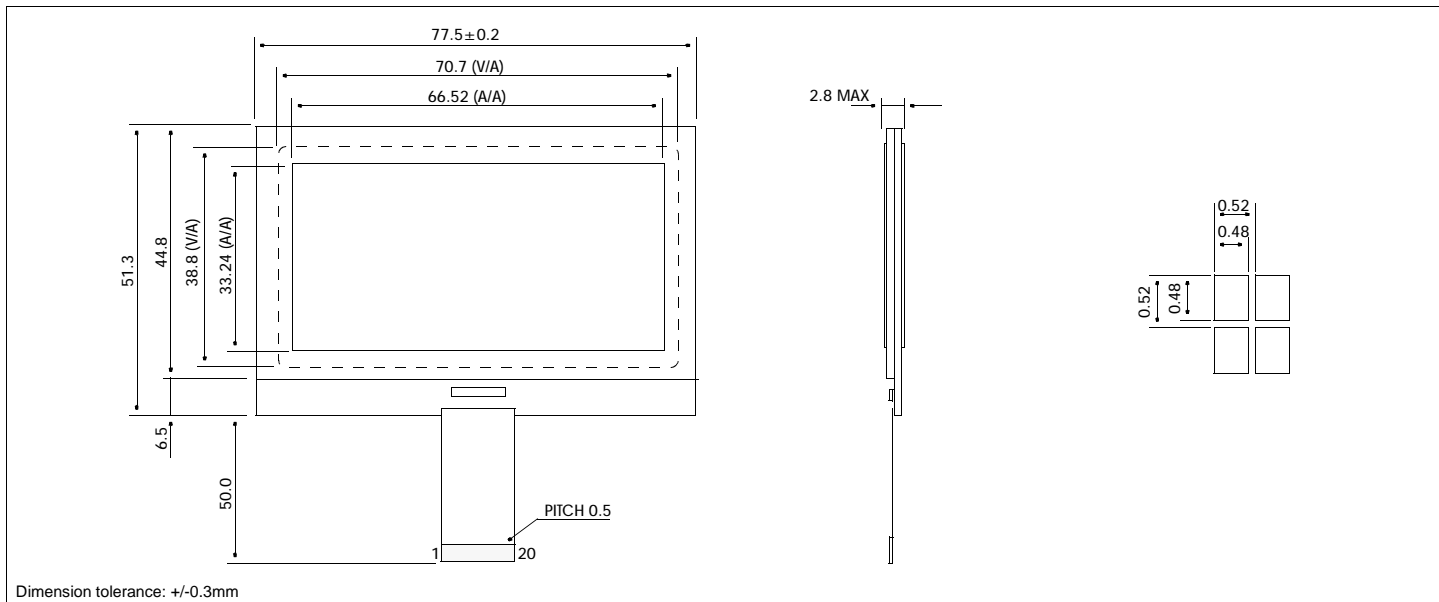


HDG12864F-1

Chip On Glass technology

Dimensional Drawing

128 X 64 Dots Graphic



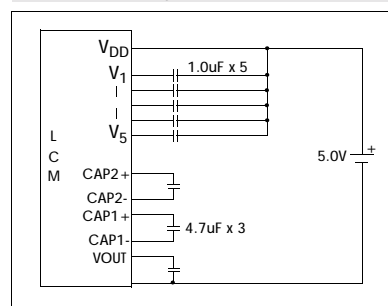
Features

Back lightNone
 ConnectionFlat Flex Cable
 Options.....STN/FSTN, Transflective or Reflective Polarizer
 Built-in Controller.....Epson/S-MOS SED1565

Physical Data

Module Size.....77.5W x 51.3H x 2.8T mm
 Viewing Area Size.....70.7W x 38.8H mm
 Dot Pitch.....0.52W x 0.52H mm
 Dot Size.....0.48W x 0.48H mm
 Weight.....23 g

Power Supply



Absolute Maximum Ratings

| PARAMETER | SYMBOL | MIN | MAX | UNIT |
|-----------------------|-----------------|--------------|----------|------|
| SUPPLY VOLTAGE | $V_{DD}-V_{SS}$ | -0.3 | 5.5 | V |
| INPUT VOLTAGE | V_{IN} | $V_{SS}-0.3$ | V_{DD} | V |
| OPERATING TEMPERATURE | T_{OP} | 0 | 50 | °C |
| STORAGE TEMPERATURE | T_{STG} | -20 | 70 | °C |

Electrical Characteristics (VDD=5.0±0.25V 25°C)

| PARAMETER | SYM | CONDITION | MIN | TYP | MAX | UNIT |
|----------------------|--------------|----------------|-------------|-----|-------------|------|
| INPUT HIGH VOLTAGE | V_{IH} | - | $0.8V_{DD}$ | - | V_{DD} | V |
| INPUT LOW VOLTAGE | V_{IL} | - | V_{SS} | - | $0.2V_{DD}$ | V |
| OUTPUT HIGH VOLTAGE | V_{OH} | $I_{OH}=0.2mA$ | $0.8V_{DD}$ | - | V_{DD} | V |
| OUTPUT LOW VOLTAGE | V_{OL} | $I_{OL}=1.2mA$ | V_{SS} | - | $0.2V_{DD}$ | V |
| POWER SUPPLY CURRENT | I_{DD} | $V_{DD}=5V$ | - | 0.7 | 1.1 | mA |
| POWER SUPPLY FOR LCD | $V_{DD}-V_L$ | $T_A=25°C$ | 8.8 | 8.2 | 9.6 | V |
| DRIVE METHOD | 1/64 Duty | | | | | |

Pin Connections

| PIN NO. | SYMBOL | LEVEL | FUNCTION |
|---------|----------|--------|------------------------------|
| 1 | V5 | - | Intermediate voltages |
| 2 | V4 | - | |
| 3 | V3 | - | |
| 4 | V2 | - | |
| 5 | V1 | - | |
| 6 | VR | - | Voltage regulator |
| 7 | CAP2+ | - | Inverter capacitors |
| 8 | CAP2- | - | |
| 9 | CAP1- | - | |
| 10 | CAP1+ | - | |
| 11 | VOUT # | Output | Voltage for contrast control |
| 12 | V_{SS} | 0V | Power supply |
| 13 | V_{DD} | +5V | |
| 14 | SI | H/L | Serial data input |
| 15 | SCL | L→H | Shift clock |
| 16 | RD | L | Read serial data |
| 17 | WR | L | Write serial data |
| 18 | A0 | H/L | H = Data, L = Command |
| 19 | RES | L | Reset |
| 20 | CS1 | L | Chip select |

#Has built-in inverter for negative power supply