



FOCUS LCDs

LCDs MADE SIMPLE®

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TFT | OLED | GRAPHIC | CHARACTER | UWVD | SEGMENT | CUSTOM

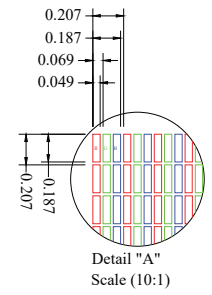
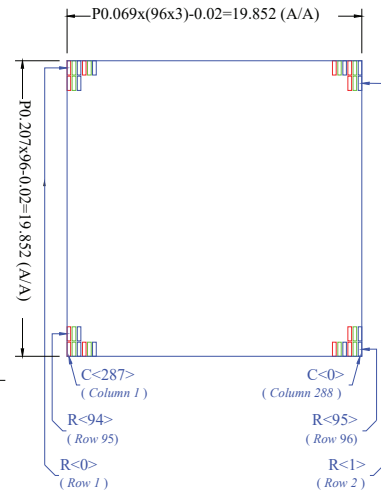
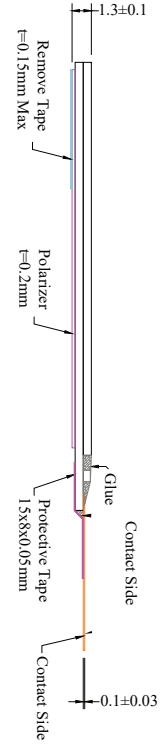
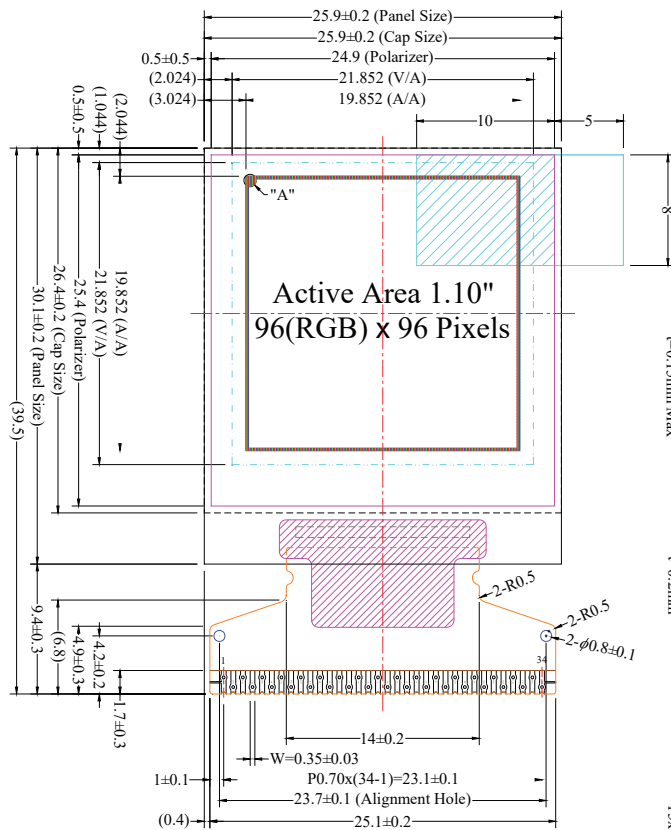
Graphic OLED Module

Part Number
O9696A-F-TW3

Overview:


- 96x96 Graphic OLED
- Full Pixel Color
- Overall Size: 25.90mm x 30.10mm
- Parallel Interface
- -40C to 70C Operating Temperature
- 2.8V
- Controller: SEPS114A
- RoHS Compliant

1. Outline Dimensions



| Pin | Symbol |
|-----|----------|
| 1 | NC (GND) |
| 2 | VSSH |
| 3 | VCC_R |
| 4 | VCC_C |
| 5 | VDER |
| 6 | VDD |
| 7 | PSEL |
| 8 | VDDIO |
| 9 | RSTB |
| 10 | WRB |
| 11 | RDB |
| 12 | CSB |
| 13 | AD |
| 14 | DO |
| 15 | D1 |
| 16 | D2 |
| 17 | D3 |
| 18 | D4 |
| 19 | D5 |
| 20 | D6 |
| 21 | D7 |
| 22 | PS |
| 23 | C80 |
| 24 | OSC1 |
| 25 | OSC2 |
| 26 | IREF |
| 27 | VSS |
| 28 | BPRE |
| 29 | GPPE |
| 30 | RPPE |
| 31 | VCC_C |
| 32 | VCC_R |
| 33 | VSSH |
| 34 | NC (GND) |

- Notes:
- 1.) Pixel Color: Full
 - 2.) OLED Type: Graphic
 - 4.) Temperature Range: Wide
 - 5.) Resolution: 96x96
 - 6.) Interface: 8-bit 68XX/80XX Parallel, 4-wire SPI
 - 7.) IC Controller: SEPS114A

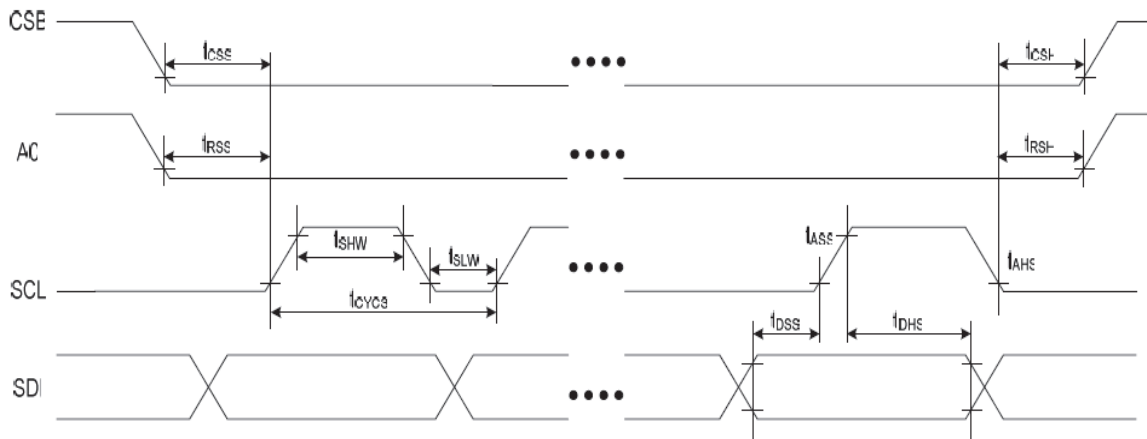


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| | | | | |
|--------------------------------------|----------|-----------|--------------|----------|
| | | PARTS NO. | O9696A-F-TW3 | |
| TOLERANCE UNLESS OTHERWISE SPECIFIED | X.X±0.3 | Drawn | | Unit |
| | X.XX±0.2 | Checked | | mm |
| Scale | 1:1 | Approve | | Page 1/1 |

5.3 Serial Interface Timing Characteristics

| Parameter | Symbol | Min | Max | Unit | Port |
|---------------------|------------|-----|-----|------|------|
| Serial Clock Cycle | t_{CYCS} | 200 | - | ns | SCL |
| SCL "L" Pulse Width | t_{SLW} | 90 | - | ns | |
| SCL "H" Pulse Width | t_{SHW} | 90 | - | ns | |
| Data Setup Timing | t_{DSS} | 25 | - | ns | SDI |
| Data Hold Timing | t_{DHS} | 25 | - | ns | |
| CSB-SCL Timing | t_{CSS} | 25 | - | ns | CSB |
| CSB-Hold Timing | t_{CSH} | 25 | - | ns | |
| RS-SCL Timing | t_{RSS} | 25 | - | ns | A0 |
| RS-Hold Timing | t_{RSH} | 25 | - | ns | |



6. Cautions and Handling Precautions

6.1 Handling and Operating the Module

1. When the module is assembled, it should be attached to the system firmly. Do not warp or twist the module during assembly work.
2. Protect the module from physical shock or any force. In addition to damage, this may cause improper operation or damage to the module and back-light unit.
3. Note that polarizer is very fragile and could be easily damaged. Do not press or scratch the surface.
4. Do not allow drops of water or chemicals to remain on the display surface. If you have the droplets for a long time, staining and discoloration may occur.
5. If the surface of the polarizer is dirty, clean it using some absorbent cotton or soft cloth.
6. The desirable cleaners are water, IPA (Isopropyl Alcohol) or Hexane. Do not use ketene type materials (ex. Acetone), Ethyl alcohol, Toluene, Ethyl acid or Methyl chloride. It might permanent damage to the polarizer due to chemical reaction.
7. If the liquid crystal material leaks from the panel, it should be kept away from the eyes or mouth. In case of contact with hands, legs, or clothes, it must be washed away thoroughly with soap.
8. Protect the module from static, it may cause damage to the CMOS ICs.
9. Use finger-stalls with soft gloves in order to keep display clean during the incoming inspection and assembly process.
10. Do not disassemble the module.
11. Protection film for polarizer on the module shall be slowly peeled off just before use so that the electrostatic charge can be minimized.
12. Pins of I/F connector shall not be touched directly with bare hands.
13. Do not connect, disconnect the module in the "Power ON" condition.
14. Power supply should always be turned on/off by the item Power On Sequence & Power Off Sequence.

6.2 Storage and Transportation

1. Do not leave the panel in high temperature, and high humidity for a long time. It is highly recommended to store the module with temperature from 0 to 35 °C and relative humidity of less than 70%
2. Do not store the OLED module in direct sunlight.
3. The module shall be stored in a dark place. When storing the modules for a long time, be sure to adopt effective measures for protecting the modules from strong ultraviolet radiation, sunlight, or fluorescent light.
4. It is recommended that the modules should be stored under a condition where no condensation is allowed. Formation of dewdrops may cause an abnormal operation or a failure of the module. In particular, the greatest possible care should be taken to prevent any module from being operated where condensation has occurred inside.
5. This panel has its circuitry FPC on the bottom side and should be handled carefully in order not to be stressed.