

WINSTAR Display

OLED SPECIFICATION

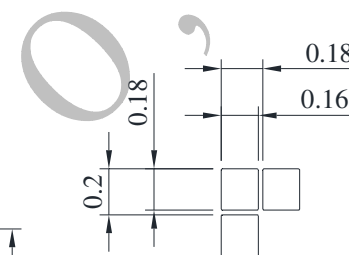
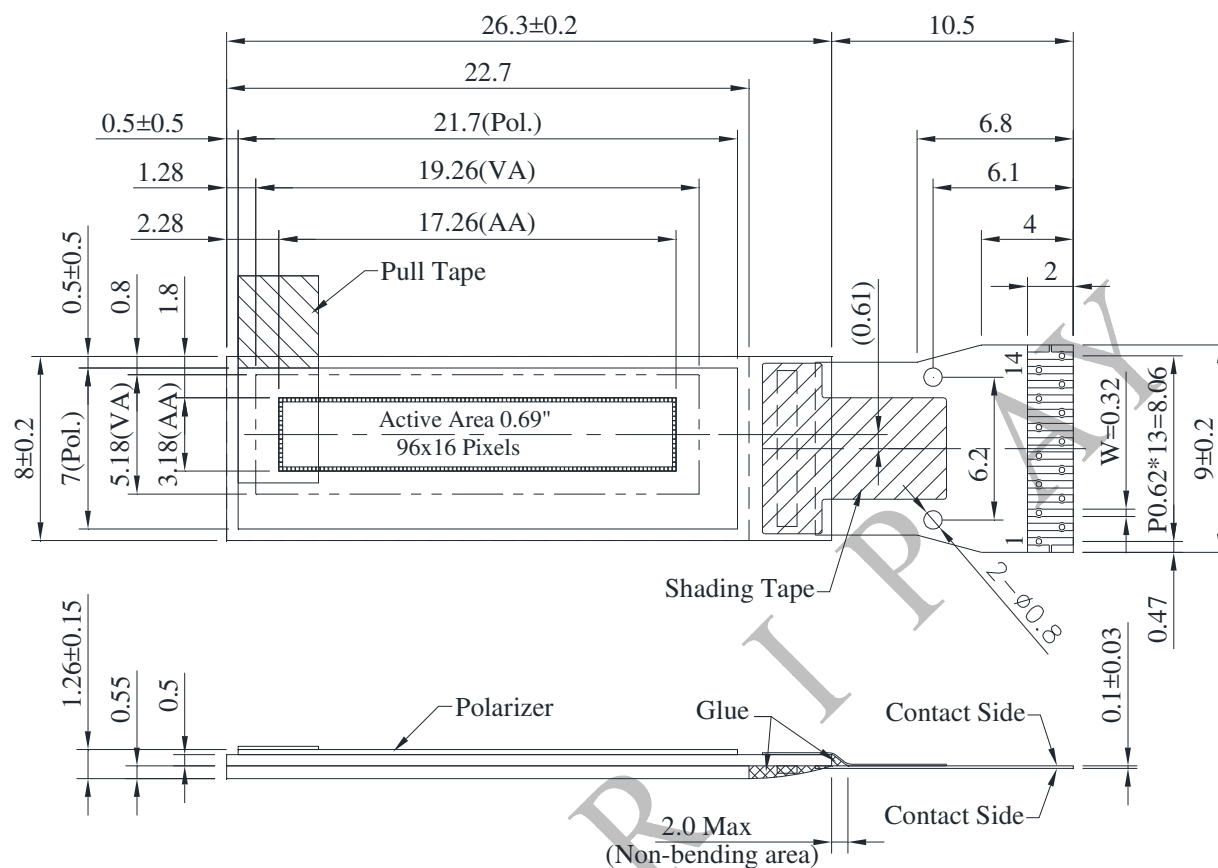
Model No:

WEO009616B

General Specification

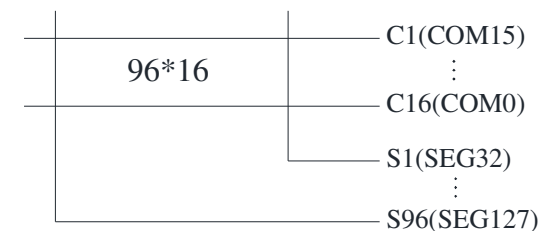
| Item | Dimension | Unit |
|------------------|-------------------|------|
| Dot Matrix | 96 × 16 Dots | — |
| Module dimension | 26.3 × 8.0 × 1.26 | mm |
| Active Area | 17.26 × 3.18 | mm |
| Pixel Size | 0.16 × 0.18 | mm |
| Pixel Pitch | 0.18 × 0.20 | mm |
| Display Mode | Passive Matrix | |
| Display Color | Monochrome | |
| Drive Duty | 1/16 Duty | |
| IC | SSD1306 | |
| Interface | I2C | |
| Size | 0.69 inch | |

Contour Drawing & Block Diagram



DOTS SIZE
SCALE 10/1

| PIN | SYMBOL |
|-----|--------|
| 1 | C2N |
| 2 | C2P |
| 3 | C1P |
| 4 | C1N |
| 5 | VBAT |
| 6 | NC |
| 7 | VSS |
| 8 | VDD |
| 9 | RES# |
| 10 | SCL |
| 11 | SDA |
| 12 | IREF |
| 13 | VCOMH |
| 14 | VCC |



The non-specified tolerance of dimension is ± 0.3 mm .

Interface Pin Function

| No. | Symbol | Function |
|-----|--------|--|
| 1 | C2N | C1P/C1N – Pin for charge pump capacitor; Connect to each other with a capacitor. C2P/C2N – Pin for charge pump capacitor; Connect to each other with a capacitor. |
| 2 | C2P | |
| 3 | C1P | |
| 4 | C1N | |
| 5 | VBAT | This is the power supply pin for the internal buffer of the DC/DC voltage converter. It must be connected to external source when the converter is used. It should be connected to VDD when the converter is not used. |
| 6 | NC | No connection |
| 7 | VSS | This is a ground pin. |
| 8 | VDD | Power supply pin for core logic operation. |
| 9 | RES# | This pin is reset signal input. When the pin is low, initialization of the chip is executed. Keep this pin HIGH (i.e. connect to VDD) during normal operation. |
| 10 | SCL | When I2C mode is selected, D2, D1 should be tied together and serve as SDAout, SDAin in application and D0 is the serial clock input, SCL. |
| 11 | SDA | |
| 12 | IREF | This pin is segment current reference pin. A resistor should be connected between this pin and VSS. Set the current lower than 30uA. When internal IREF is used, this pin should be kept NC. |
| 13 | VCOMH | The pin for COM signal deselected voltage level. A capacitor should be connected between this pin and VSS. |
| 14 | VCC | This is the most positive voltage supply pin of the chip. A stabilization capacitor should be connected between this pin and VSS when the converter is used. It must be connected to external source when the converter is not used. |

Absolute Maximum Ratings

| Parameter | Symbol | Min | Max | Unit |
|--------------------------------------|--------|-----|------|------|
| Supply Voltage for Logic | VDD | 0 | 4.0 | V |
| Supply Voltage for Display | VCC | 0 | 16.0 | V |
| Charge Pump Regulator Supply Voltage | VBAT | 0 | 5 | V |
| Operating Temperature | TOP | -30 | +70 | °C |
| Storage Temperature | TSTG | -30 | +70 | °C |

Electrical Characteristics

DC Electrical Characteristics

| Item | Symbol | Condition | Min | Typ | Max | Unit |
|--|-----------------|-----------|---------|-----|---------|------|
| Supply Voltage for Logic | VDD | — | 1.65 | 3.0 | 3.3 | V |
| Supply Voltage for Display (Supplied Externally) | VCC | — | 6.0 | 7.5 | 8.0 | V |
| Charge Pump Regulator Supply Voltage | VBAT | — | 3.0 | — | 4.2 | V |
| Charge Pump Output Voltage for Display (Generated by Internal DC/DC) | Charge Pump VCC | — | 7.0 | 7.5 | — | V |
| Input High Volt. | VIH | — | 0.8×VDD | — | VDD | V |
| Input Low Volt. | VIL | — | 0 | — | 0.2×VDD | V |
| Output High Volt. | VOH | — | 0.9×VDD | — | VDD | V |
| Output Low Volt. | VOL | — | 0 | — | 0.1×VDD | V |
| 50% check Board operating Current (VCC Supplied Externally) | ICC | — | — | 5 | 10 | mA |
| 50% check Board operating Current (VCC Generated by Internal DC/DC) | IBAT | — | — | 5 | 10 | mA |