

***Phoenix Display International, Inc.***

# PRODUCT PREVIEW

## 101 x 33 Monochrome

**TN/STN**

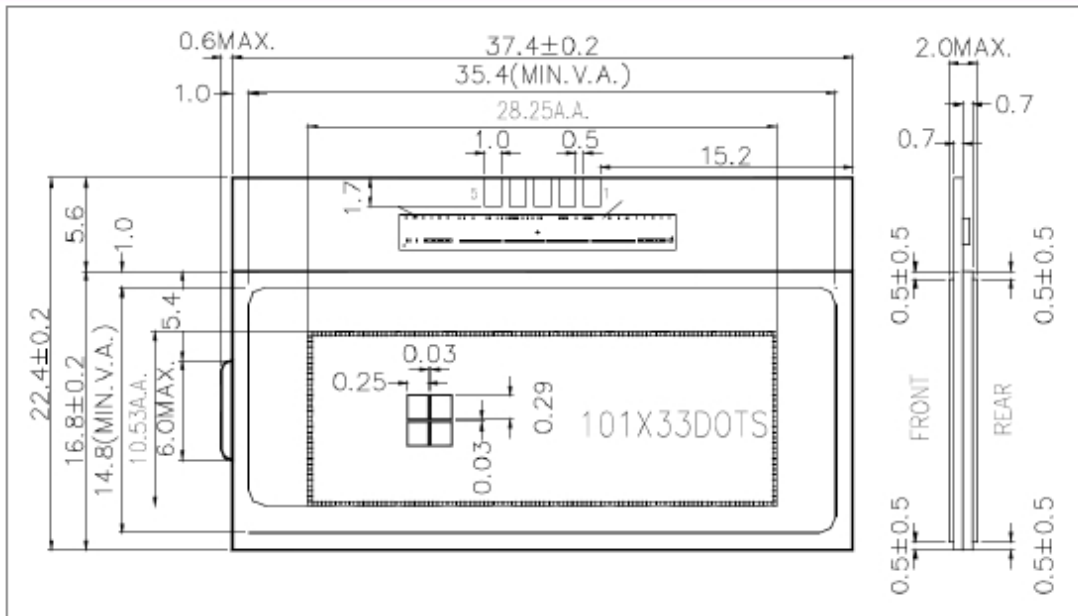
**Graphics**  
Liquid Crystal Display

### SPECIFICATIONS

#### MODULE

|                    |                         |
|--------------------|-------------------------|
| Part Number        | G-1013302G-VA           |
| Format             | 101 Columns by 33 Rows  |
| Controller         | OM4086-1                |
| Overall Dimensions | 37.4mm x 22.4mm x 2.0mm |
| Active Area        | 29.3mm x 10.5mm         |
| Pixel Pitch        | 280um x 320um           |
| Pixel Size         | 250um x 290um           |
| Backlight System   | None                    |
| Driver Attach      | Chip on Glass (COG)     |
| Glass Type         | STN, FSTN               |
| Display Type       | R,TF,TM                 |
| Duty               | 1/33                    |

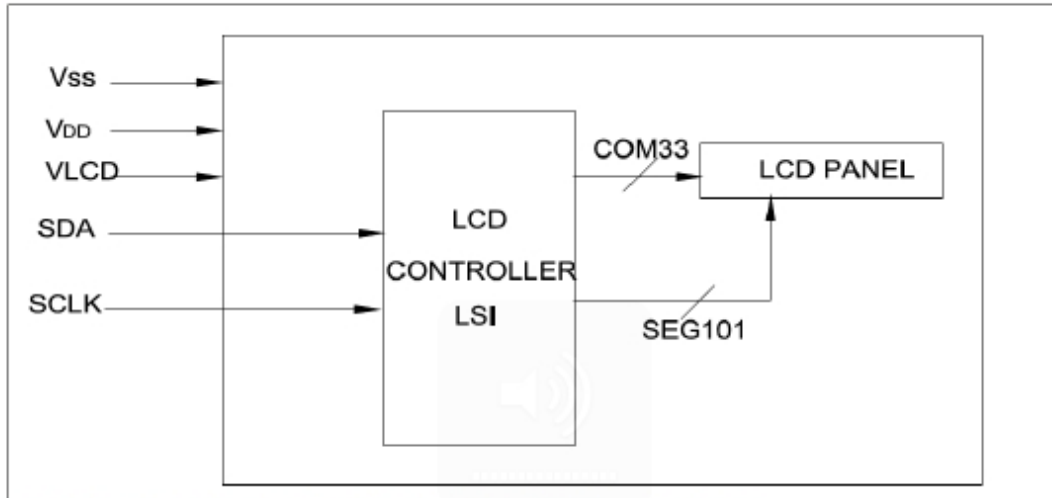
#### 1.0 DIMENSIONAL DRAWING



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### 2.0 BLOCK DIAGRAM



### 3.0 ELECTRICAL CHARACTERISTICS Ta=25 °C VDD=3.0V±0.25V

| Item                      | Symbol              | Test Condition | Standard Value |      |      |      |
|---------------------------|---------------------|----------------|----------------|------|------|------|
|                           |                     |                | Min.           | Typ. | Max. | Unit |
| Power Supply Voltage      | V <sub>DD-VSS</sub> | 25°C           | 2.75           | 3    | 3.25 | V    |
| LCD Operation Voltage     | V <sub>OP</sub>     |                | -              | 6.04 | -    | V    |
| LCM Current Consumption   | I <sub>DD</sub>     |                | -              | 0.03 | 0.35 | mA   |
| Backlight Forward Voltage | V <sub>F</sub>      |                | -              | -    | -    | V    |

### 4.0 ABSOLUTE MAXIMUM RATINGS

| Item                   | Symbol              | Test Condition | Standard Value |                      |      |
|------------------------|---------------------|----------------|----------------|----------------------|------|
|                        |                     |                | Min.           | Max.                 | Unit |
| Supply Voltage (Logic) | V <sub>DD-VSS</sub> | 25°C           | -0.5           | 7                    | V    |
| Supply Voltage (LCD)   | V <sub>DD-V0</sub>  |                | -0.3           | 10.0                 | V    |
| Input Voltage          | V <sub>IN</sub>     |                | -0.5           | V <sub>DD</sub> +0.5 | V    |
| Operating Temp.        | T <sub>OPR</sub>    |                | -10            | 60                   | °C   |
| Storage Temp.          | T <sub>STG</sub>    |                | -20            | 70                   | °C   |

### 5.0 PIN ASSIGNMENT

| PIN No. | Symbol | Description          |
|---------|--------|----------------------|
| 1       | VLCD   | Power supply for LCD |
| 2       | VDD    | Power supply(+)      |
| 3       | SDA    | Serial input data    |
| 4       | VSS    | Power supply (GND)   |
| 5       | SCLK   | Serial input clock   |

**Remark**

1. LCD option: FSTN .
2. Customized module.

