



RAYSTAR

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RG12864C1

General Specification

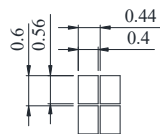
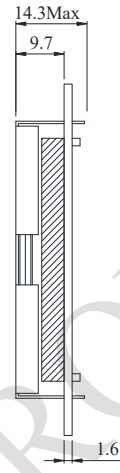
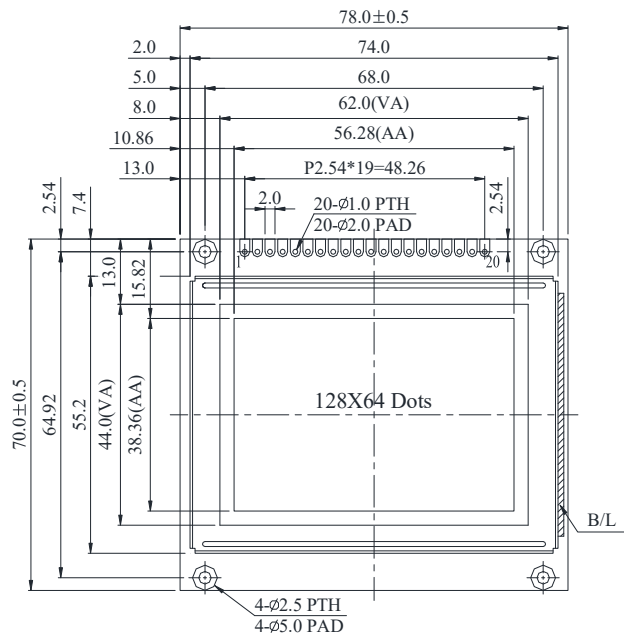
The Features of the Module is description as follow:

- Module dimension: 78.0 x 70.0 x 14.3 (max.) mm
- View area: 62.0 x 44.0 mm
- Active area: 56.28 x 38.36 mm
- Number of Dots: 128 x 64
- Dot size: 0.40 x 0.56 mm
- Dot pitch: 0.44 x 0.60 mm
- Duty: 1/64
- Backlight Type: LED
- IC:RA6963
- Interface:80 series

Interface Pin Function

| Pin No. | Symbol | Level | Description |
|---------|--------|-------|--|
| 1 | Vee | — | Negative Voltage Output |
| 2 | Vss | — | GND |
| 3 | Vdd | — | Power supply |
| 4 | Vo | — | Power supply for LCD driver |
| 5 | /WR | L | Data write. Write data into RA6963WR = L |
| 6 | /RD | L | Data read. Read data from RA6963RD = L |
| 7 | /CE | L | L : Chip enable |
| 8 | /CD | H/L | WR=L , C/D=H : Command Write C/D=L: Data write |
| 9 | /RESET | H/L | H : Normal ; L : Initialize RA6963 |
| 10 | DB0 | H/L | Data bus line |
| 11 | DB1 | H/L | Data bus line |
| 12 | DB2 | H/L | Data bus line |
| 13 | DB3 | H/L | Data bus line |
| 14 | DB4 | H/L | Data bus line |
| 15 | DB5 | H/L | Data bus line |
| 16 | DB6 | H/L | Data bus line |
| 17 | DB7 | H/L | Data bus line |
| 18 | FS | H/L | Pins for selection of font ; H : 6 * 8 , L : 8 * 8 |
| 19 | K | — | Power supply for LED B/L- |
| 20 | A | — | Power supply for LED B/L+ |

Contour Drawing



DOT SIZE
SCALE 10/1

| PIN NO. | SYMBOL |
|---------|-----------------|
| 1 | V _{ee} |
| 2 | V _{ss} |
| 3 | V _{dd} |
| 4 | V _o |
| 5 | WR |
| 6 | RD |
| 7 | CE |
| 8 | CD |
| 9 | RESET |
| 10 | DB0 |
| 11 | DB1 |
| 12 | DB2 |
| 13 | DB3 |
| 14 | DB4 |
| 15 | DB5 |
| 16 | DB6 |
| 17 | DB7 |
| 18 | FS |
| 19 | K |
| 20 | A |

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

Absolute Maximum Ratings

| Item | Symbol | Min | Typ | Max | Unit |
|--------------------------|-----------------|------|-----|--------------|------|
| Operating Temperature | T_{OP} | -20 | — | +70 | °C |
| Storage Temperature | T_{ST} | -30 | — | +80 | °C |
| Input Voltage | V_{IN} | -0.3 | — | $V_{DD}+0.3$ | V |
| Supply Voltage For Logic | $V_{DD}-V_{SS}$ | -0.3 | — | +7.0 | V |

Electrical Characteristics

| Item | Symbol | Condition | Min | Typ | Max | Unit |
|--------------------------|-----------------|---------------------------|--------------|-----|---------------|------|
| Supply Voltage For Logic | $V_{DD}-V_{SS}$ | — | 4.5 | 5.0 | 5.5 | V |
| Supply Voltage For LCD | $V_{DD}-V_0$ | $T_a=-20^{\circ}\text{C}$ | — | — | 9.8 | V |
| | | $T_a=25^{\circ}\text{C}$ | 8.2 | 8.5 | 8.8 | V |
| | | $T_a=70^{\circ}\text{C}$ | 7.6 | — | — | V |
| Input High Volt. | V_{IH} | — | $0.8V_{DD}$ | — | V_{DD} | V |
| Input Low Volt. | V_{IL} | — | 0 | — | $0.15 V_{DD}$ | V |
| Output High Volt. | V_{OH} | — | $V_{DD}-0.3$ | — | V_{DD} | V |
| Output Low Volt. | V_{OL} | — | 0 | — | 0.3 | V |
| Supply Current | I_{DD} | — | 11 | 12 | 13 | mA |