



RAYSTAR

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RG128128A

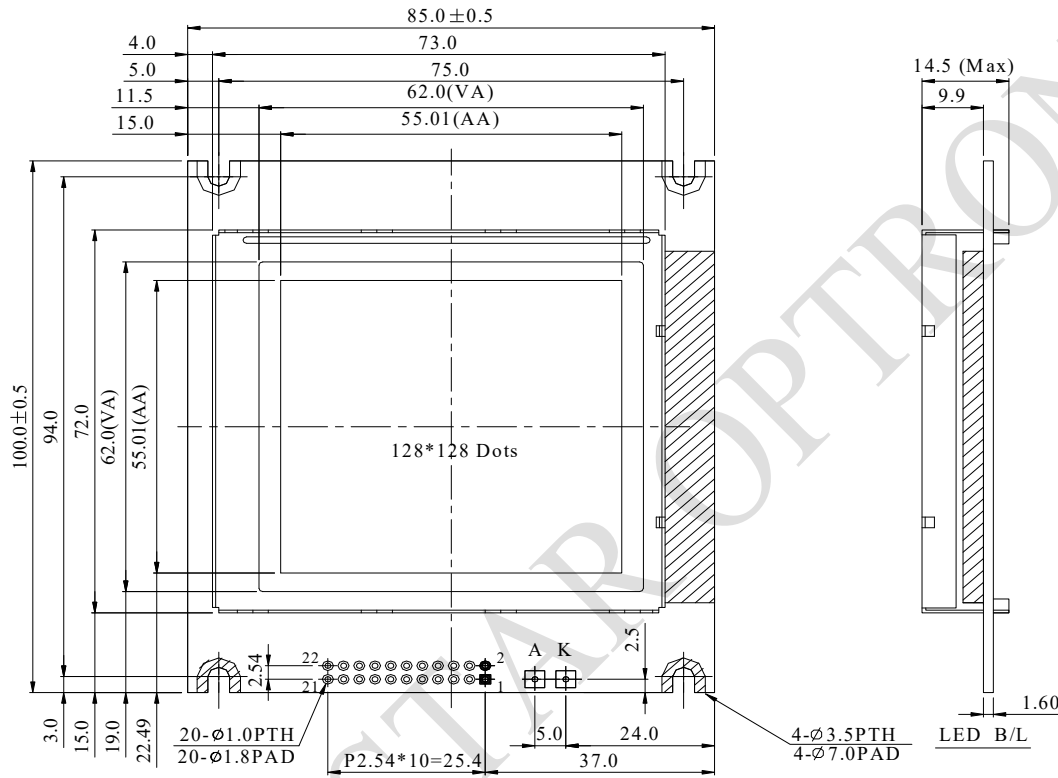
General Specification

- Module dimension: 85.0 × 100.0 × 14.5 (max.) mm
- View area: 62.0 × 62.0 mm
- Active area: 55.01 × 55.01 mm
- Number of dots: 128 × 128
- Dot size: 0.4 × 0.4 mm
- Dot pitch: 0.43 × 0.43 mm
- Duty: 1/128
- Backlight Type: LED
- IC:RA6963
- Interface:80 series

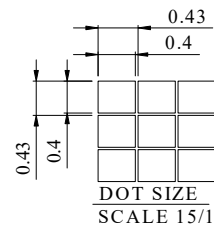
Interface Pin Function

| Pin No. | Symbol | Level | Description |
|---------|--------|-------|--|
| 1 | FGND | — | Frame ground |
| 2 | GND | 0V | Ground |
| 3 | Vdd | — | Power supply for logic |
| 4 | Vo | — | Power supply for LCD driver |
| 5 | /WR | L | Data write. Write data into RA6963 when /WR = L |
| 6 | /RD | L | Data read. Read data from RA6963 when RD = L |
| 7 | /CE | L | Chip enable the controller RA6963 |
| 8 | C/D | H / L | WR=L , C/D=H : Command Write C/D=L: Data write |
| 9 | NC | — | No connection |
| 10 | /RESET | L | Reset signal |
| 11 | DB0 | H / L | Data bus line |
| 12 | DB1 | H / L | Data bus line |
| 13 | DB2 | H / L | Data bus line |
| 14 | DB3 | H / L | Data bus line |
| 15 | DB4 | H / L | Data bus line |
| 16 | DB5 | H / L | Data bus line |
| 17 | DB6 | H / L | Data bus line |
| 18 | DB7 | H / L | Data bus line |
| 19 | FS | H / L | Pins for selection of font ; H : 6 * 8 , L : 8 * 8 |
| 20 | Vee | — | Negative Voltage Output |
| 21 | A | — | Power supply for B/L + |
| 22 | K | — | Power supply for B/L — |

Contour Drawing



| PIN NO. | SYMBOL |
|---------|--------|
| 1 | FGND |
| 2 | GND |
| 3 | Vdd |
| 4 | VO |
| 5 | WR |
| 6 | RD |
| 7 | CE |
| 8 | C/D |
| 9 | NC |
| 10 | RESET |
| 11 | DB0 |
| 12 | DB1 |
| 13 | DB2 |
| 14 | DB3 |
| 15 | DB4 |
| 16 | DB5 |
| 17 | DB6 |
| 18 | DB7 |
| 19 | FS |
| 20 | VEE |
| 21 | A |
| 22 | K |



The non-specified tolerance of dimension is $\pm 0.3\text{mm}$.

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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 | $V_{DD}-V_0$ | $T_a=-20^{\circ}\text{C}$ | — | — | 18.6 | V |
| | | $T_a=25^{\circ}\text{C}$ | 16.2 | 16.35 | 16.5 | V |
| | | $T_a=70^{\circ}\text{C}$ | 15.2 | — | — | 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} | — | — | 45 | 50 | mA |