



RAYSTAR

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RG16032E

General Specification

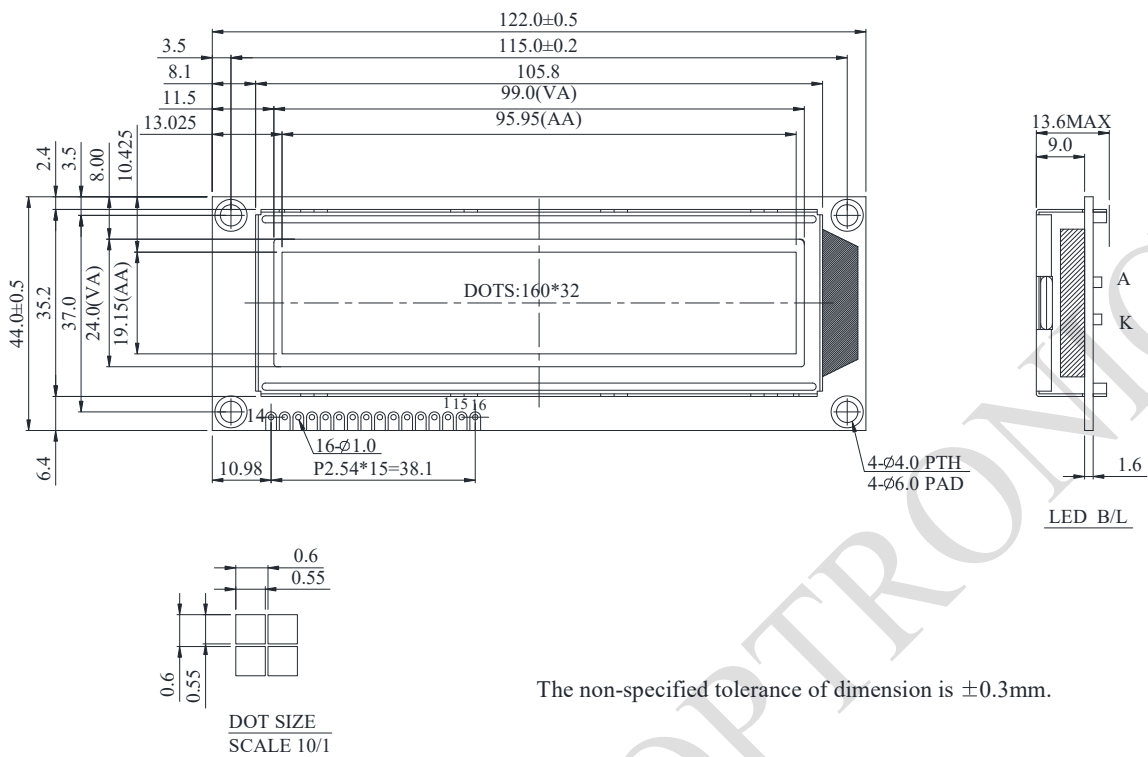
The Features is described as follow:

- Module dimension: 122.0 x 44.0x 13.6 (max.) mm
- View area: 99.0 x 24.0 mm
- Active area: 95.95 x 19.15 mm
- Number of dots: 160 x 32
- Dot size: 0.55 x 0.55 mm
- Dot pitch: 0.60 x 0.60 mm
- Duty: 1/32
- Backlight Type: LED
- IC: ST7920

Interface Pin Function

| Pin No. | Symbol | Level | Description |
|---------|--------|-------|----------------------------|
| 1 | VSS | 0V | Ground |
| 2 | VDD | 5.0V | Supply voltage for logic |
| 3 | NC | — | No connection |
| 4 | RS | H/L | Register select signal |
| 5 | R/W | H/L | H: read data L: write data |
| 6 | E | H/L | Enable signal |
| 7 | DB0 | H/L | Data bus line |
| 8 | DB1 | H/L | Data bus line |
| 9 | DB2 | H/L | Data bus line |
| 10 | DB3 | H/L | Data bus line |
| 11 | DB4 | H/L | Data bus line |
| 12 | DB5 | H/L | Data bus line |
| 13 | DB6 | H/L | Data bus line |
| 14 | DB7 | H/L | Data bus line |
| 15 | A | — | Power supply for B/L + |
| 16 | K | — | Power supply for B/L - |

Contour Drawing



| PIN NO. | SYMBOL |
|---------|--------|
| 1 | Vss |
| 2 | Vdd |
| 3 | NC |
| 4 | RS |
| 5 | R/W |
| 6 | E |
| 7 | DB0 |
| 8 | DB1 |
| 9 | DB2 |
| 10 | DB3 |
| 11 | DB4 |
| 12 | DB5 |
| 13 | DB6 |
| 14 | DB7 |
| 15 | A |
| 16 | K |

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

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 | — | 5.5 | V |
| LCD Driver Voltage | V_{LCD} | -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_0-V_{SS} | $T_a=-20^{\circ}\text{C}$ | — | — | — | V |
| | | $T_a=25^{\circ}\text{C}$ | — | — | — | V |
| | | $T_a=+70^{\circ}\text{C}$ | — | — | — | V |
| Input High Volt. | V_{IH} | — | $0.7V_{DD}$ | — | V_{DD} | V |
| Input Low Volt. | V_{IL} | — | -0.3 | — | 0.6 | V |
| Output High Volt. | V_{OH} | — | $0.8 V_{DD}$ | — | V_{DD} | V |
| Output Low Volt. | V_{OL} | — | — | — | 0.4 | V |
| Supply Current | I_{DD} | $V_{DD}=5.0\text{V}$ | 4.48 | 5.15 | 5.73 | mA |