



RAYSTAR

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## RG14432B

### General Specification

- Module dimension: 80.0 x 36.0 x 13.2 (max.) mm
- View area: 66.0 x 16.0mm
- Active area: 60.44 x 13.4 mm
- Number of dots: 144 x 32
- Dot size: 0.38 x 0.38 mm
- Dot pitch: 0.42 x 0.42 mm
- Duty: 1/32
- Backlight Type: LED
- IC: ST7920
- Interface: 68 series

## Interface Pin Function

| Pin No. | Symbol | Level | Description                |
|---------|--------|-------|----------------------------|
| 1       | VSS    | 0V    | GND                        |
| 2       | VDD    | 5.0   | Power Supply (+5.0V)       |
| 3       | Vo     | —     | Contrast adjustment        |
| 4       | RS     | H/L   | H/L register select signal |
| 5       | R/W    | H/L   | H/L Read/Write signal      |
| 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      | NC     | —     | No connection              |
| 16      | NC     | —     | No connection              |



## 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   | $V_0-V_{SS}$    | $T_a=-20^{\circ}\text{C}$ | —            | —   | 5.5      | V    |
|                          |                 | $T_a=25^{\circ}\text{C}$  | 4.1          | 4.3 | 4.5      | V    |
|                          |                 | $T_a=+70^{\circ}\text{C}$ | 3.8          | —   | —        | 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           | $I_{DD}$        | $V_{DD}=5.0\text{V}$      | 2.0          | 2.5 | 3.5      | mA   |