oceanside IR01B

Infrared Thermometer User Manual

Model: IR01B | Brand: oceanside

1. Important Safety Information

Please read this manual carefully before operating the device. Failure to follow these instructions may result in injury or damage to the device.

- **Industrial Use Only:** This product is designed for industrial temperature measurement and is **not intended for human body temperature measurement**.
- **Laser Safety:** The device emits a Class 2 laser (<1mW 630~670nm). **DO NOT STARE INTO BEAM. AVOID DIRECT EYE EXPOSURE.**
- **Battery Safety:** Use only specified AAA batteries. Do not mix old and new batteries. Dispose of batteries properly.
- **Operating Environment:** Do not expose the device to extreme temperatures, humidity, or direct sunlight.
- **Cleaning:** Use a soft, dry cloth for cleaning. Do not use abrasive cleaners or immerse the device in water.

Figure 1: Front view of the Infrared Thermometer showing laser emission and safety warnings.

2. Product Overview and Features

The oceanside IR01B Infrared Thermometer is a portable, non-contact temperature measurement device designed for industrial applications. It offers precise and rapid temperature readings across a wide range.

Key Features:

- **Wide Temperature Range:** Measures from -50°C to 550°C (-58°F to 1022°F).
- **High Accuracy:** Accurate to ±(1.5% of reading + 2°C/4°F).
- **Fast Response Time:** Provides readings in less than 0.5 seconds.
- **Color LCD Display:** High-definition color LCD for clear and easy-to-read data, even in dark environments with backlight.
- **Adjustable Emissivity:** User-adjustable emissivity from 0.1 to 1.00 for accurate measurements on various surfaces.
- **12-Point Circular Laser:** Features a 12-point laser pointer for precise targeting of the measurement area (D:S ratio of 12:1).
- **High Temperature Warning:** LED indicator with red warning light and alarm when measured temperature exceeds a set

range.

- **Unit Switching:** Easily switch between Celsius (°C) and Fahrenheit (°F).
- **Automatic Shutdown:** Conserves battery life by automatically shutting down after 30 seconds of inactivity.
- **Data Hold:** Function to temporarily hold the displayed measurement.

Figure 2: The device features a colorful backlit LCD for clear readings and buttons for unit switching.

3. Components and Controls

Familiarize yourself with the different parts and controls of your infrared thermometer.

Figure 3: Labeled diagram of the Infrared Thermometer's components.

1. **Laser Hole:** Emits the laser pointer for targeting.
2. **Laser Lens:** Infrared sensor for temperature detection.
3. **Measurement Trigger:** Press to initiate temperature measurement.
4. **Down & Laser On/Off Button:** Used to navigate menus (down) and toggle the laser pointer.
5. **Mode Key:** Cycles through different measurement modes or settings.
6. **Battery Cover:** Access point for battery installation.
7. **Up & Backlight On/Off Button:** Used to navigate menus (up) and toggle the display backlight.
8. **Alarm Indicator:** LED light that illuminates for high temperature warnings.
9. **LCD Display:** Shows temperature readings, settings, and indicators.

4. Setup

4.1 Battery Installation

The device requires 2 x 1.5V AAA batteries (included).

1. Locate the battery cover on the handle of the thermometer (refer to Figure 3).
2. Slide or open the battery cover.
3. Insert two AAA batteries, ensuring correct polarity (+ and -).
4. Close the battery cover securely.

Figure 4: Illustration of battery compartment and AAA battery installation.

5. Operating Instructions

5.1 Taking a Measurement

1. Point the thermometer at the target object. Ensure the distance to spot ratio (D:S) of 12:1 is considered for accurate readings. For example, at 12 inches distance, the measurement spot is 1 inch in diameter.
2. Press and hold the **Measurement Trigger**. The laser pointer will activate (if enabled) to indicate the measurement area.

3. The temperature reading will be displayed on the LCD screen instantly.
4. Release the trigger to hold the current reading on the display. The device will automatically shut down after 30 seconds of inactivity.

5.2 Switching Temperature Units (°C/°F)

To switch between Celsius and Fahrenheit:

- While the device is on, press the **Mode Key** until the ℃/℉ symbol flashes or the unit changes.
- Use the **Up** or **Down** buttons to select the desired unit.
- Press the **Mode Key** again to confirm the selection.

5.3 Adjusting Emissivity (E)

Emissivity (ε) is the ability of a material to emit energy by radiation. Different materials have different emissivity values. Adjusting this setting ensures accurate temperature readings for various surfaces. The default emissivity is 0.95, suitable for most organic materials and painted surfaces.

Figure 5: Emissivity values vary for different materials, impacting measurement accuracy.

To adjust emissivity:

1. Press the **Mode Key** repeatedly until "E" or "Emissivity" is displayed on the screen.
2. Use the **Up** or **Down** buttons to adjust the emissivity value from 0.1 to 1.00.
3. Press the **Mode Key** again to save the setting and exit.

Refer to common emissivity tables for specific materials if precise measurements are required.

5.4 High Temperature Warning

The device features a high temperature warning. If the measured temperature exceeds a pre-set threshold, the alarm indicator (red LED) will light up, and an audible alarm may sound. This feature helps in quickly identifying overheating components or areas.

6. Applications

The oceanside IR01B Infrared Thermometer is versatile and suitable for a wide range of industrial and household applications, including but not limited to:

- **Power Industry:** Monitoring electrical components and systems.
- **HVAC Equipment:** Checking heating, ventilation, and air conditioning systems.
- **Automotive:** Diagnosing engine temperatures, brakes, and other vehicle components.
- **Mechanical Equipment:** Inspecting machinery for overheating parts.
- **Refrigeration:** Monitoring temperatures in cold storage and refrigeration units.
- **Kitchen/Cooking:** Measuring surface temperatures of cooking surfaces, ovens, and food (not for internal food temperature).
- **Home Repair:** Identifying insulation issues, drafts, or hot spots in walls.
- **Chemistry:** Monitoring reaction temperatures in laboratory settings.

Figure 6: Examples of broad applications for the infrared thermometer.

7. Maintenance

7.1 Cleaning the Device

To ensure accurate readings and prolong the life of your thermometer, keep it clean.

- **Lens Cleaning:** The most critical part is the infrared lens. Use a soft, clean cloth or cotton swab with a small amount of rubbing alcohol or lens cleaner. Gently wipe the lens. Do not use excessive force or abrasive materials.
- **Housing Cleaning:** Clean the device housing with a damp cloth and mild soap, if necessary. Do not use harsh chemicals, abrasive cleaners, or immerse the device in water.
- **Storage:** When not in use for extended periods, remove the batteries and store the device in a cool, dry place, away from direct sunlight and extreme temperatures.

8. Troubleshooting

If you encounter issues with your infrared thermometer, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
Device does not turn on.	Low or dead batteries; incorrect battery polarity.	Replace batteries with new AAA batteries, ensuring correct +/- orientation.
Inaccurate readings.	Incorrect emissivity setting; dirty lens; target too far or too small; ambient temperature fluctuations.	Adjust emissivity for the target material; clean the infrared lens; ensure target fills the measurement spot; allow device to acclimate to ambient temperature.
Laser pointer not visible.	Laser disabled; bright ambient light.	Press the "Down & Laser On/Off Button" to enable the laser. The laser may be difficult to see in very bright conditions.
Display shows "OL" or "LO".	Temperature is outside the measurement range (Over Limit / Low Limit).	Ensure the target temperature is within -50°C to 550°C (-58°F to 1022°F).

9. Specifications

Parameter	Value
Infrared Temperature Measurement (Surface)	-50°C~550°C (-58°F~1022°F)
Accuracy	-50°C~0°C: ±3°C; 0°C~550°C: ±(1.5% Reading + 2°C) -58°F~0°F: ±6°F; 0°F~1022°F: ±(1.5% Reading + 4°F)
LCD Display	Color LCD Display
Laser	<1mW 630~670nm Class 2, 12-Point Circular Indicating Measurement Area
Test Distance Ratio Target Size (D:S)	12:1
Emissivity	0.1~1.00 (Adjustable)
Response Spectrum	8~14um
Response Time	<0.5S
Automatic Shutdown	30 Seconds
Operating Temperature	0-40°C
Storage Temperature	-10°C~60°C
Power Supply	2 x 1.5V AAA Batteries
Product Dimensions	Approx. 9x14x4.2cm / 3.5x5.5x1.7in

10. Warranty and Support

For warranty information, technical support, or service inquiries, please refer to the warranty card included with your product or contact oceanside customer service directly. Contact details can typically be found on the manufacturer's official website or product packaging.