Elitech DIT-220

Elitech DIT-220 Laser Temperature Gun Instruction Manual

Model: DIT-220 | Brand: Elitech

Introduction

This manual provides detailed instructions for the safe and effective operation of your Elitech DIT-220 Laser Temperature Gun. This non-contact digital infrared thermometer is designed for measuring surface temperatures across a wide range of applications, including cooking, HVAC, automotive, and various DIY projects. It offers instant, accurate readings with adjustable emissivity and a clear laser targeting system.

Safety Information

Please read all safety warnings and instructions carefully before using the device. Failure to follow these instructions may result in injury or damage to the device.

- **Laser Safety:** Do not look directly into the laser beam or point it at people or animals. The laser is for targeting purposes only.
- **Non-Contact Measurement:** This device measures surface temperature only. It is not intended for measuring human or animal body temperature.
- **Avoid Direct Contact:** Do not touch hot surfaces with the thermometer. Maintain a safe distance as indicated by the distance-to-spot ratio.
- **Environmental Conditions:** Do not expose the device to extreme temperatures, humidity, or direct sunlight for prolonged periods.
- **Cleaning:** Use a soft, damp cloth for cleaning. Do not use abrasive cleaners or solvents.
- **Battery Handling:** Ensure correct battery polarity. Remove batteries if the device will not be used for an extended period.

Image: An infrared thermometer with a warning symbol indicating it is not for human or animal use, emphasizing that it measures surface temperatures only.

Product Overview

The Elitech DIT-220 is a compact and ergonomic infrared thermometer designed for ease of use and accurate temperature measurement.

Image: The Elitech DIT-220 infrared thermometer, orange and black, shown alongside its retail packaging and two AAA batteries.

Key Features:

- Wide Temperature Range: -50°C to 530°C (-58°F to 986°F)
- High Accuracy: ±1.5% or ±1.5°C (±2.7°F)
- 12:1 Distance-to-Spot Ratio
- Adjustable Emissivity (0.10-1.00)
- Fast Response Time: 0.5 seconds
- Backlit LCD Display
- MAX/MIN/AVG Temperature Hold
- Unit Conversion (°F/°C)
- Auto Shut-off and Low Power Indication

Image: A graphic illustrating the key features of the Elitech DIT-220, including its wide temperature range, laser targeting, 12:1 distance-to-spot ratio, adjustable emissivity, fast response, backlit display, MAX/MIN/Average hold, auto shut-off, and low battery reminder.

Components:

Image: A diagram labeling the main components of the Elitech DIT-220: the LCD display, Mode Key, Trigger, and the location for 2 AAA batteries.

- **LCD Display:** Shows temperature readings, unit, and various indicators.
- **Laser Aperture:** Emits the targeting laser.
- **Infrared Sensor:** Detects infrared radiation for temperature measurement.
- **Trigger:** Activates measurement and laser.
- **Mode Key:** Cycles through different functions (MAX/MIN, Emissivity, Calibration).
- **Up/Down Buttons:** Adjust settings and switch units.
- **Battery Compartment:** Holds 2 AAA batteries.

Setup

Battery Installation:

The Elitech DIT-220 requires 2 AAA batteries (included). To install:

1. Open the battery compartment cover located on the handle.
2. Insert two AAA batteries, ensuring correct polarity (+/-).
3. Close the battery compartment cover securely.

Your browser does not support the video tag.

Video: An instructional video demonstrating how to install the batteries and operate the Elitech DIT-220 infrared thermometer, including switching units, activating the laser, and adjusting emissivity.

Operating Instructions

1. Power On/Off:

- To power on, press the trigger. The device will automatically shut off after a period of inactivity to conserve battery.

2. Unit Conversion (°C/°F):

- With the device on, press the **"C/F"** button (left button) to switch between Celsius and Fahrenheit.

3. Laser On/Off:

- Press the trigger to activate the laser for targeting.
- To turn off the laser, press the right button (light bulb icon).

Image: The Elitech DIT-220 infrared thermometer in use, with its laser targeting a surface and the digital display showing a temperature reading.

4. MAX/MIN/AVG Value:

- Press the **"MODE"** key to cycle through Maximum (MAX), Minimum (MIN), and Average (AVG) temperature readings.

Image: The Elitech DIT-220 thermometer displaying the MAX, MIN, and AVG temperature values, demonstrating its data hold capabilities.

5. Adjustable Emissivity (0.10-1.00):

Emissivity is the ability of a material to emit thermal energy. Different materials have different emissivities. Adjusting this setting ensures accurate readings for various surfaces.

- Press the **"MODE"** key until "EMS" appears on the display.
- Use the Up/Down buttons to adjust the emissivity value from 0.10 to 1.00.
- The default emissivity is 0.95, suitable for most common surfaces like wood, ceramic, and food.

Image: The Elitech DIT-220 thermometer demonstrating adjustable emissivity for various surfaces, showing recommended values for iron (0.70), oil (0.94), and ice (0.98).

6. Temperature Calibration (-5°C to 5°C):

If necessary, you can calibrate the thermometer for minor adjustments.

- Press the **"MODE"** key until "CAL" appears on the display.
- Use the Up/Down buttons to adjust the calibration value within the range of -5°C to 5°C.

7. Measurement Procedure:

1. Point the thermometer at the target surface.
2. Press and hold the trigger. The laser will activate, and the temperature reading will appear on the display.
3. Release the trigger to hold the reading. The "HOLD" icon will appear.
4. Ensure the distance-to-spot ratio (D:S) is appropriate for accurate measurement. The DIT-220 has a 12:1 D:S ratio, meaning at 12 inches distance, it measures a 1-inch spot.

Image: The Elitech DIT-220 thermometer measuring the temperature of croissants inside an oven, demonstrating its non-contact capability for high-temperature applications.

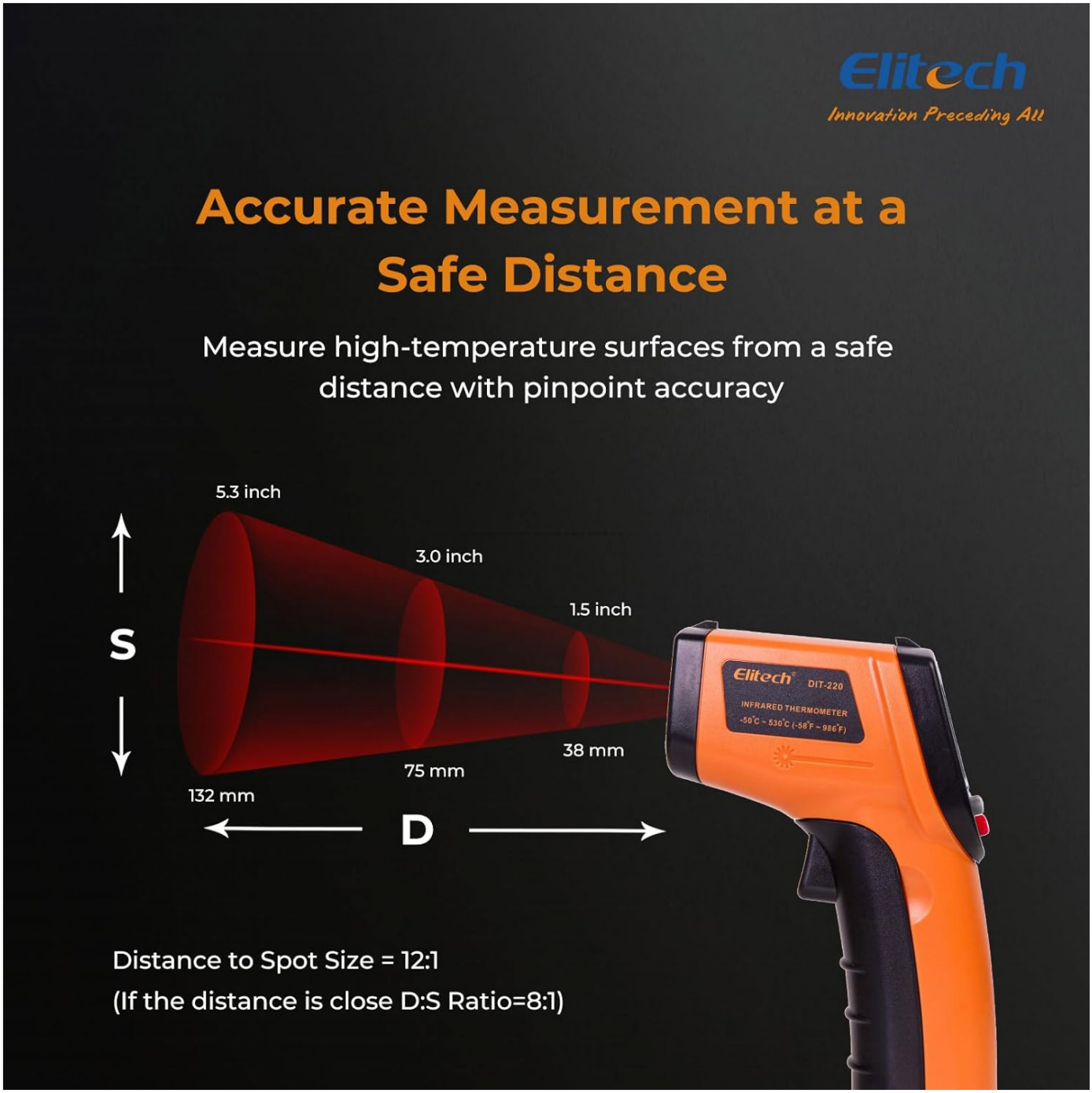


Image: A diagram explaining the 12:1 distance-to-spot ratio, showing how the measurement spot size increases with distance from the target.

Applications

The Elitech DIT-220 is suitable for a wide range of non-contact temperature measurement tasks:

- **Cooking:** Checking grill, oven, or food surface temperatures.
- **HVAC:** Diagnosing heating and cooling systems.
- **Automotive:** Measuring engine components, tires, or brakes.
- **Industrial:** Monitoring machinery, electrical panels, or manufacturing processes.
- **Home Use:** Checking insulation, appliance temperatures, or pool water.

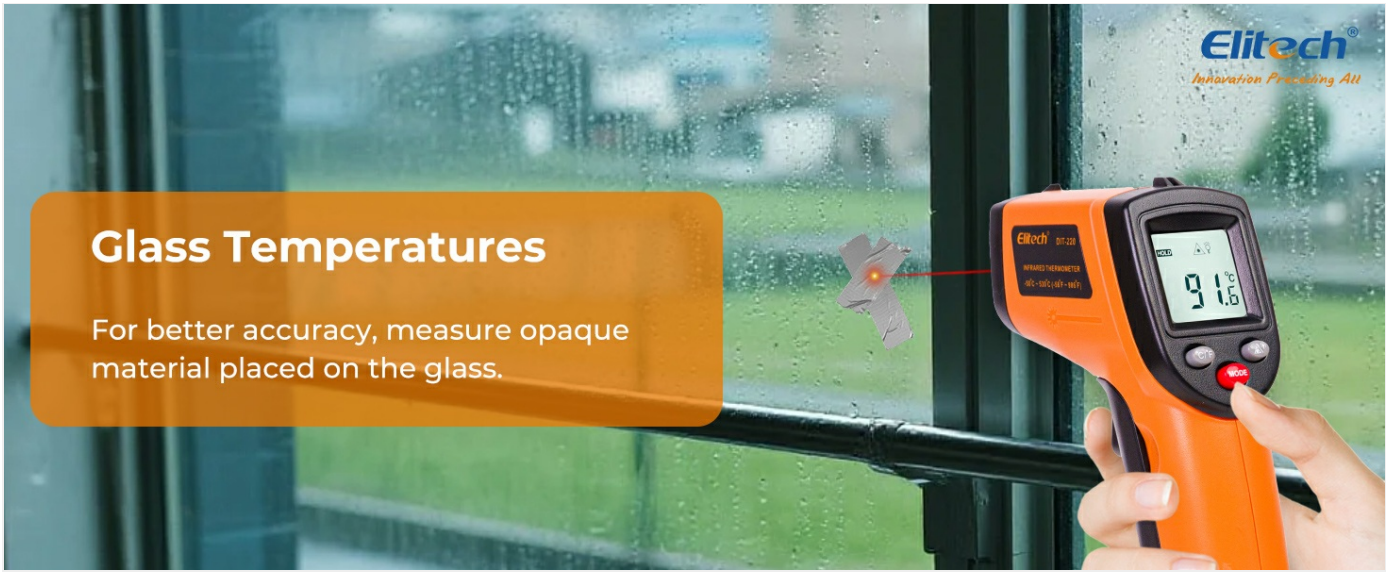


Image: A collage showing the Elitech DIT-220 being used in diverse environments such as a kitchen, for HVAC measurement, electrical inspection, auto repair, and on a circuit board, highlighting its versatility.

Maintenance

- **Cleaning the Lens:** The most critical part of the thermometer is the lens. Keep it clean to ensure accurate readings. Use a soft cloth or cotton swab with water or medical alcohol. Do not use abrasive cleaners.
- **Cleaning the Casing:** Clean the device casing with a damp sponge or soft cloth and mild soap.
- **Storage:** Store the thermometer in a dry, dust-free environment when not in use. Remove batteries if storing for extended periods.
- **Avoid Damage:** Do not drop the device or expose it to strong impacts.

Troubleshooting

Problem	Possible Cause	Solution
No display/Device won't turn on	Low or dead batteries; incorrect battery installation.	Replace batteries; ensure correct polarity.
Inaccurate readings	Dirty lens; incorrect emissivity setting; too far from target; smoke/steam interference.	Clean the lens; adjust emissivity for the target material; move closer to the target; avoid measuring through smoke/steam.
Laser not visible	Laser turned off; bright ambient light.	Press the right button to turn on the laser; use in less bright conditions if possible.
"LO" or "HI" displayed	Temperature is outside the measurable range.	Ensure the target temperature is within -50°C to 530°C (-58°F to 986°F).

Image: An illustration showing that measuring through smoke or steam can lead to inaccurate temperature readings, advising to avoid such conditions.

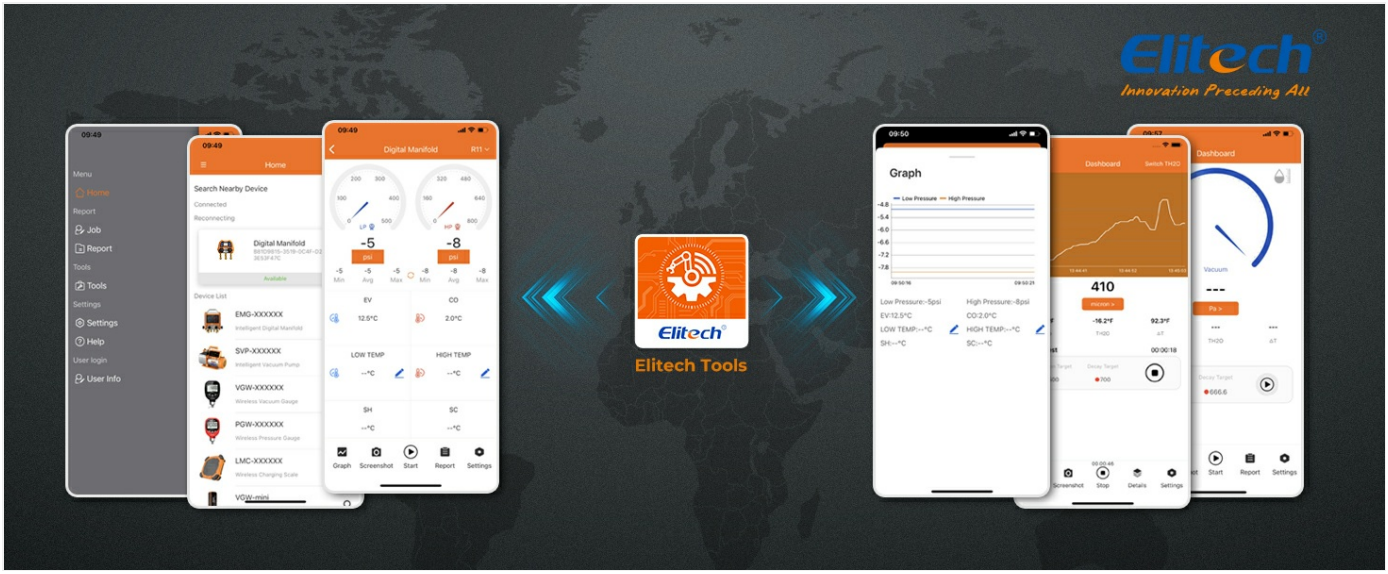


Image: A tip for accurately measuring glass temperatures: place an opaque material on the glass surface and measure the temperature of that material.

Specifications

Feature	Detail
Temperature Range	-50°C to 530°C (-58°F to 986°F)
Accuracy	±1.5% or ±1.5°C (±2.7°F)
Distance-to-Spot Ratio (D:S)	12:1
Emissivity	Adjustable from 0.10 to 1.00 (default 0.95)
Response Time	0.5 seconds
Spectral Response	8-14 µm
Power Source	2 x AAA batteries (included)

Feature	Detail
Auto Shut-off	Yes
Display Type	LCD Digital with Backlight
Material	Plastic
Dimensions	7.52 x 3.9 x 1.42 inches
Weight	5.29 ounces

Warranty and Support

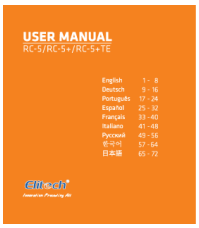
For warranty information, technical support, or service inquiries, please contact Elitech customer service. Refer to the product packaging or the official Elitech website for the most current contact details.
Manufacturer: Elitech
Return Policy: 30-day refund/replacement (as per Amazon's buybox winner information).

Related Documents - DIT-220

	Elitech WMT-20 Smart Wireless Meat Thermometer User Manual User manual for the Elitech WMT-20 Smart Wireless Meat Thermometer, providing instructions on setup, operation, app pairing, and troubleshooting.
	Elitech ICT-220 Dual Digital Thermometer: User Guide and Features Discover the Elitech ICT-220, a precise dual digital thermometer with K-type thermocouple support, Bluetooth connectivity, and mobile app integration for advanced temperature monitoring and data analysis.
	Elitech RCW-600WIFI IoT Temperature Monitor User Manual User manual for the Elitech RCW-600WIFI, a two-channel IoT temperature monitor with WiFi connectivity for remote data viewing, monitoring, and management in food, catering, logistics, and HACCP industries.

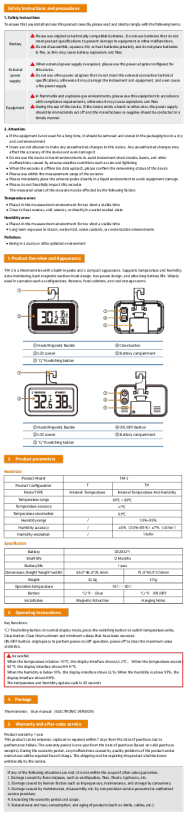
[Elitech MS-100 Digital Manifold: User Manual and Specifications]

Comprehensive guide to the Elitech MS-100 digital manifold, covering its features, technical specifications, operation, safety instructions, and troubleshooting. Learn how to use the device for pressure and temperature measurements, leak tests, vacuum processes, and data logging with the Elitech Tools app.



[Elitech RC-5+ Temperature Data Logger: User Manual and Specifications]

This manual provides detailed instructions for using the Elitech RC-5+ USB temperature data logger, covering setup, operation, data download, and analysis with Elitech software. Features and technical specifications are also included.



[Elitech TM-2 Series Fridge Thermometer User Manual]

User manual for the Elitech TM-2 Series Fridge Thermometer, detailing safety instructions, product overview, specifications, operating procedures, and warranty information for temperature and humidity monitoring in cold storage environments.