

1 Product Introduction

Thank you for purchasing the ILD series infrared leak detector. Please read this manual carefully before use to ensure safe operation and prevent any potential hazards caused by improper handling.

The ILD-200 MAX infrared leak detector is a high-precision instrument utilizing infrared spectroscopy technology. It is specifically engineered to swiftly identify refrigerant leaks in refrigeration systems, including air conditioners, cold storage units, and cold chain equipment. Its primary advantages include non-contact detection, high sensitivity, and exceptional anti-interference capabilities. This device is well-suited for leak detection and environmental monitoring across various industries, including heating, ventilation, and air conditioning (HVAC), industrial applications, and the automotive sector.

2 Safety Precautions

1. This product contains an integrated lithium battery. Do not expose it to high temperatures or fire to prevent the risk of explosion.
2. Ensure the filter component is properly installed and clean before use to prevent sensor damage.
3. Do not allow water or other liquids to enter the probe rod's air inlet.
4. When using the ultraviolet lamp, avoid direct eye exposure to the ultraviolet (UV) light.
5. The instrument is equipped with a rechargeable lithium battery inside. Please do not replace it with any other battery models.
6. Avoid inhaling the refrigerant, as excessive exposure can pose severe health risks, including unconsciousness or fatality.
7. In the event of product damage, contact the manufacturer immediately. Unauthorized disassembly may result in further damage or pose a risk of battery combustion or explosion.

3 Environmental Protection

1. At the end of its service life, dispose of the product in accordance with local recycling regulations to minimize environmental impact.
2. Used batteries should be recycled in strict compliance with local regulations.

4 Overview



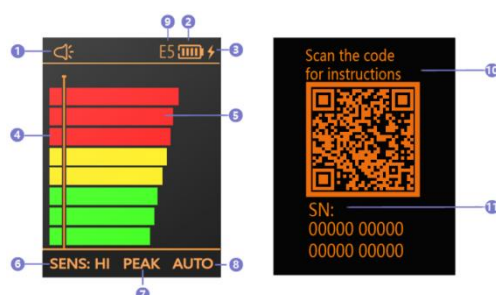
1. Gas filtration port (including filter element)	6. Display screen
2. UV lamp	7. button
3. Flexible probe rod	8. Charging indicator light
4. TYPE-C charging port	9. Buzzer port
5. Headphone jack	10. Rubber Protective cover




5 Button



	Long press: Turn on/off.
	Short press: Switch between auto/manual mode. Long press: Access settings menu.
	Short press: Turn on/off and mark the maximum leakage
	Short press: Switch sensitivity (in auto mode). Long press: Reset (in manual mode)
	Short press: Turn on/off the buzzer.

6 Display



1. **Buzzer indication:**  It indicates being turned on;  It indicates being turned off.
2. **Battery level indication:** Displayed in four segments.
3. **Charging indication:**  Indicates charging progress.
4. **Leakage Peak Record:** Displays the highest detected leakage value when activated.
5. **Leakage indication:** The bar chart changing from green to red indicates that increasing leakage levels.
6. **Sensitivity Levels:** Four adjustable levels (Super, High, Medium, Low). The default setting is High.
7. **Peak value record switch:** Indicates whether peak recording is enabled.
8. **Mode indication:** Displays whether the device is in manual or automatic mode.
9. **Sensor fault warning:** 'E5' indicates a sensor malfunction.
10. **QR code for manual:** Scan to access the digital user manual.
11. **Serial number:** Uniquely identifies the product.

7 Specifications

Detection Principle	Infrared spectrum absorption
Sensor Lifespan	10 years
Sensitivity	Four-level sensitivity adjustment Super: 1g/a High: 3g/a Medium: 7g/a Low: 14g/a (g/a: grams of leakage per year)
Detectable gases	CFCs, HFCs, HCFCs, HFOs (R134a, R410a, etc.)
Alarm method	TFT display and audible alarm

Operating environment	Temperature: -10°C — +52°C Humidity: ≤90% (non-condensing)
Working time	8 hours
Charging time	4 hours
Battery	lithium battery (3.7V 3000mAh)
Charging	5V/1A (Type-C)
Specifications and dimensions	201*86*38mm
Weight	415g (14.6oz)

8 Operation Guide

The ILD series detects refrigerant leaks by analyzing variations in refrigerant concentration within the surrounding environment. It determines leakage points by comparing concentration levels at different locations. When the refrigerant leaks, the concentration of the refrigerant near the leakage point will be significantly higher than that in the surrounding environment.


Operation Modes

The automatic reset mode and the manual reset mode are two distinct operational methods employed for resetting the system following the detection of refrigerant leakage.

Automatic Reset Mode: Automatically resets after an alarm is triggered. Ideal for environments with minimal interference.

Manual Reset Mode: Requires manual reset via button press. Maximum sensitivity in this mode is 10 g/a, and the preheating time is 10 minutes. Suitable for high-interference environments.

Operating Steps

1. Power On: Press the power button to turn on the device. It will take approximately 30 seconds to preheat.
2. Press  to adjust to the desired sensitivity level. The default sensitivity level is high.
3. Look for the places where refrigerant leakage is most likely to occur. Suggested considerations include:
 - (1) Refrigerant pipeline joints
 - (2) Irregular pipeline cross-sections
 - (3) Abnormal pipeline structures
 - (4) Areas showing signs of oil leaks, structural damage, or corrosion

Detection Process

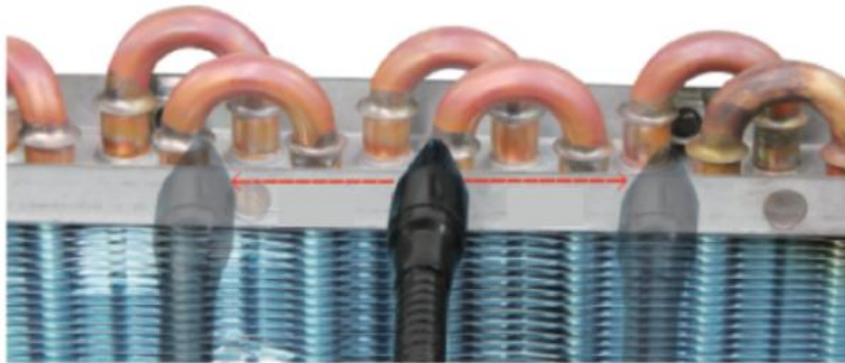
Keep the probe approximately 6mm (0.25 inches) from the suspected leak area.
Move the probe slowly (about 75mm/sec or 0.25ft/sec).

Leakage detection indicators

Buzzer: Increasing beep frequency corresponds to greater leakage intensity.

LCD Display: The bar graph height increases with higher leak intensity.

An example diagram of the query method is as follows for your reference:



9 Instrument Maintenance

Battery Care

Charger specifications: 5V/1A

Charging Indicator:

Red: Charging

Blue: Fully charged

Avoid prolonged charging and excessive discharge.

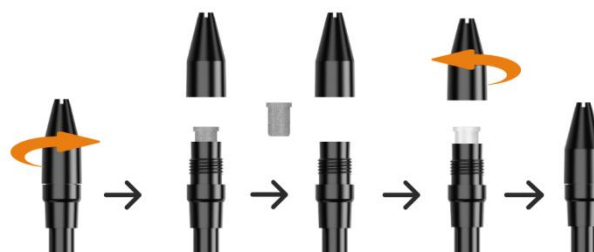
Charge in a well-ventilated, cool environment.

Filter Element Replacement

The filter element removes contaminants and moisture to prevent false alarms.

Replace the filter when it appears blackened or clogged.

1. The filter element prevents false alarms caused by contamination and humidity. Replace the filter when it becomes blackened or blocked.
2. Rotate and remove the protective cover counterclockwise. Remove the old filter (do not pull out the rubber seat to avoid circuit disconnection).
3. Insert a new filter and reattach the cover.



10 Problems and Solutions

Problem	Possible reasons	Solutions
No alarm when exposed to refrigerant	Clogged filter element	Replace the filter
	Weak suction or non-functional pump	Replace the pump
	Sensor failure	Replace the sensor
No display but buzzer sounds	Loose or damaged screen connection	Reconnect or replace the screen

For all issues except filter replacement, please contact professional support.

11 Set of Accessories



Infrared Leak Detector	*1
Charging Cable	*1
UV Lamp	*1
Filter Elements	*10
User Manual	*1
Blow-molded Case	*1

Warranty Policy

Warranty Period: 12 months from the date of purchase.

Warranty Coverage:

Covers defects under normal usage conditions.

Valid proof of purchase is required.

Exclusions:

- Malfunctions caused by human damage or improper use.
- Unauthorized repair or modification.