Elitech®

Innovation Preceding All

ILD series
Infrared
Refrigerant Leak Detector
User Manual

English

ILD-100/ILD-200/ILD-300 Infrared Leak Detector User Manual

⚠ Warning!

Please read and understand this manual thoroughly before operation and maintenance.

Please do NOT disassemble the detector by yourself.

If you have any technical questions, please feel free to contact us.

1. Please ONLY install clean filter before detection detection, otherwise it may damage the sensor.
2. Please charge the detector promptly to ensure sufficient battery level for the detection*.
3. Do NOT touch or detect any charged objects using the probe.
4. Do not let water enter the air inlet of the probe.
5. Please protect your eyes and skin while using the UV LED accessory during detection. Never look directly at the UV ray.
6. Please avoid breathing the refrigerant vapors. Inhalation of high concentrationrefrigerant is harmful that may cause unconsciousness or death.

** The detector has a built-in rechargeable lithium battery, please do not change to other battery types.*

Overview

The ILD series are hand-held infrared refrigerant leak detectors that are independently developed by Elitech® based on infrared detection principle. Compared with traditional corona or heating diode detectors, this sensor has higher accuracy, much longer service life and more detectable refrigerant types. Also with exclusive ergonomic design and an innovated large TFT LCD display screen, it optimizes the user experience and presents the detection results more intuitively.

1. Flexible Probe	8. Charging & Status Indicator
2. UV LED	9. Buzzer
3. Probe Tip	10. Plastic Case
4. Headphone Jack	11. Charging Cable
5. USB Port	12. Filters
6. Display Screen	13. Power Adapter
7. Buttons	

Specifications

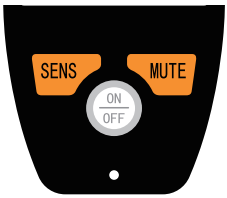
Sensor Life	10 years	Charging time	Approx. 4h
Sensitivity	Maximum 4g/yr	Weight	415g(14.6oz)
Sensor Principle	Infrared (IR) absorption spectroscopy		
Alarm Mode	Audible and visual alarm; TFT indication		
Auto OFF	After 10 minutes of inactivity		
Battery	Built-in rechargeable lithium battery (3.7V 3000mAh)		
Working Hour	6h continuous use on a single charge		
Storage Temperature	-20°C ~ 60°C (-4°F ~ 140°F)		
Operating Environment	Temperature: -10°C~ 52°C (14°F ~ 125°F); Humidity: Maximum 90% (non-condensing)		
Dimensions	201 x 86 x 38 mm (7.9″x 3.3″ x1.5″)		
Certifications	CE, EN14624:2012, RoHS, SAE_J1627, SAE_J2791, SAE_J2913		
Detectable Gases	CFCs, HFCs, HCFC blends and HFO-1234YF		
Charging Voltage/Current	DC 5V, 1A		

Functions

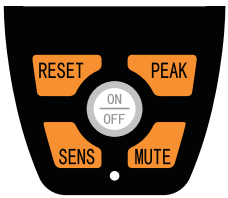
Function \ Model	ILD-100	ILD-200	ILD-300
Leak Indication	√	√	√
Sensitivity levels	√	√	√
Buzzer ON/OFF	√	√	√
Peak Function		√	√
UV LED	√	√	√
Refrigerant Selection			√

Button & Display

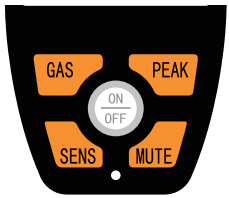
Button Functions



ILD-100



ILD-200



ILD-300

ON/OFF : Press and hold for 2 seconds to turn on the detector; press again to turn it off.

SENS : Press to select preferred sensitivity level among Low, Medium and High.

MUTE : Press to turn on/off the buzzer.

RESET *: Reserved.

PEAK **: Press and release to mark or unmark the maximum leak. If unmarked, the peak value will be cleared.

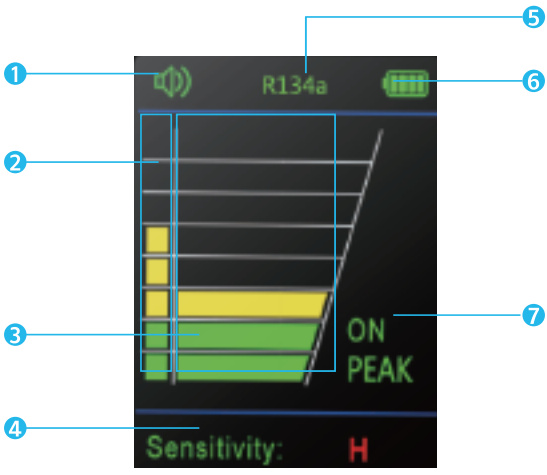
GAS ***: Press and release to switch refrigerant types between R22, R134a, R404A, R407C, R410A, R1234 and Other.

* ONLY for ILD-200

** ONLY for ILD-200/300

*** ONLY for ILD-300

Display



1. Buzzer: Indicates buzzer status. Red icon: disabled; Green icon: enabled.
2. Peak value*: Indicates the maximum detected leakage.

Note: PEAK function must be ON or it will not show peak value.

3. Leak value: Indicates the current detected leakage. Higher leak concentration, higher the bars.
4. Sensitivity level: Displays current sensitivity level. 3 levels are available for different needs.
   H: high sensitivity; M: medium sensitivity; L: low sensitivity.
5. Refrigerant type**: Displays current selected and all other refrigerant options.
   The options are: R22, R134a, R404A, R407C, R410A, R1234, Other
6. Battery level: Displays current battery level.
   Green: Full battery; Yellow: Low battery; Red: Extreme-low battery, please charge ASAP.
7. PEAK ON/OFF*: Indicates PEAK function status. The display shows ON or OFF to indicate the peak function is enabled or disabled (To turn off PEAK will clear all recorded peak values).

* PEAK function ONLY for ILD-200/300. ** GAS function ONLY for ILD-300.

Others

Alert: If the sensor is faulty, the display will pop up alert info: “Error: Sensor”

Warm-up countdown: Please wait for about 30 seconds until the warm-up finishes.

Operation

⚠ Warning!

- Please keep moving the detector during the detection. As ILD series are designed to detect the relative concentration of gases, that if the detected concentration remains unchanged in the stationary environment, it will not be able to pinpoint the leakages.
- Please ensure the system pressure is at least above 340Kpa (50psi) before detection as many refrigerant leaks can't be detected at low pressure.
- Do not place the detector close to organic solvents, detergents or high voltage power supplies. Please wipe up the detectors with a clean towel.
- Before start, please confirm the battery is sufficient for this detection (it normally takes about 30min for one detection).

Steps

1. Press ON/OFF to turn on the detector. Wait for the warm-up countdown in order to reach the optimal detection status. It takes about 30 seconds before it enters the main interface.
2. Press SENS button to adjust you preferred sensitivity level (default level is High).
3. Locate places that are most likely to occur refrigerant leaks, such as:

- Joints in refrigerant lines
- Points that have changes in cross section
- Points that have changes in vertical section
- Visually trace the entire refrigerant system for all lines, hoses, fittings, couplings, service valves, etc. and signs of lubricant leak, damage and corrosion as the likely leak points.

4. Move the probe slowly (about 3ft/s or 75mm/s) at these suspicious places, move back and forth but no more than 0.25"/6mm away from the leak areas.

Note: A closer probe position and slower "sweeping" movement usually improve the possibility of finding a leak.

5. The buzzer and LCD display will indicate the detected leak at the same time:

   Buzzer: The sound will increase in proportion to the leak intensity.

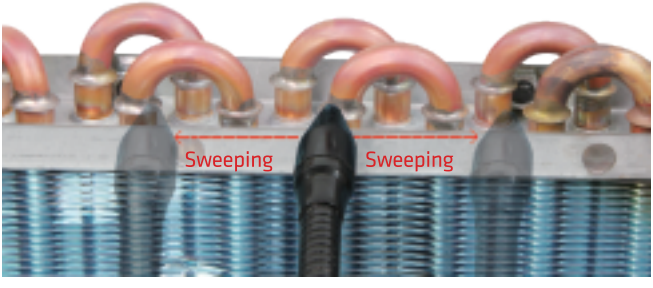
   The faster the buzzer beeps, the higher leakage has been detected.

   LCD display: The bar graph will increase from bottomtotop in proportion to leak intensity.

   The higher the bar graph rises, the higher leakage has been detected.

6. Follow the operations above to detect the entire refrigerant system and mark every leak that has been found.

See the illustration below for visualized detection method:



Battery & Filter

Battery Charging & Maintenance

⚠ Warning!

- Avoid complete charging and discharging frequently, otherwise it may affect battery life.
- Do not dissemble the built-in rechargeable lithium battery.
- If the detector will not be used for a long time, please charge it beforehand to prevent battery life reducing due to self-discharging. Do not recommend to store it for more than 6 months.

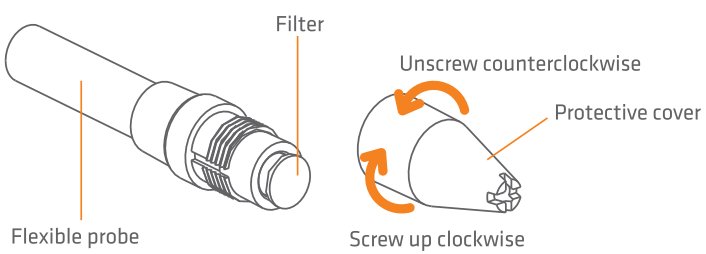
1. Use DC 5V/1A power adapter to charge the detector.
   Charging indicator in red: the battery is charging now;
   Charging indicator in blue: the battery is fully charged.

Filter Replacement

The filter can block large particle contaminants and moisture to reduce false alarms caused by excessive humidity. Please replace the filter in time when it is seriously polluted (black and clogged).

Follow the steps below:

1. Unscrew the protection cover counterclockwise and remove the contaminated filter (do not pull out the rubber holder, or it may cause open circuit of the air tube).
2. Place a new filter and screw the protection cover clockwise.



What's Included

Infrared Leak Detector	x 1
UV LED	x 1
User Manual	x 1
Plastic Case	x 1
Power Adapter	x 1*
Charging Cable	x 1
Filter	x 10 **

* Only for ILD-300.

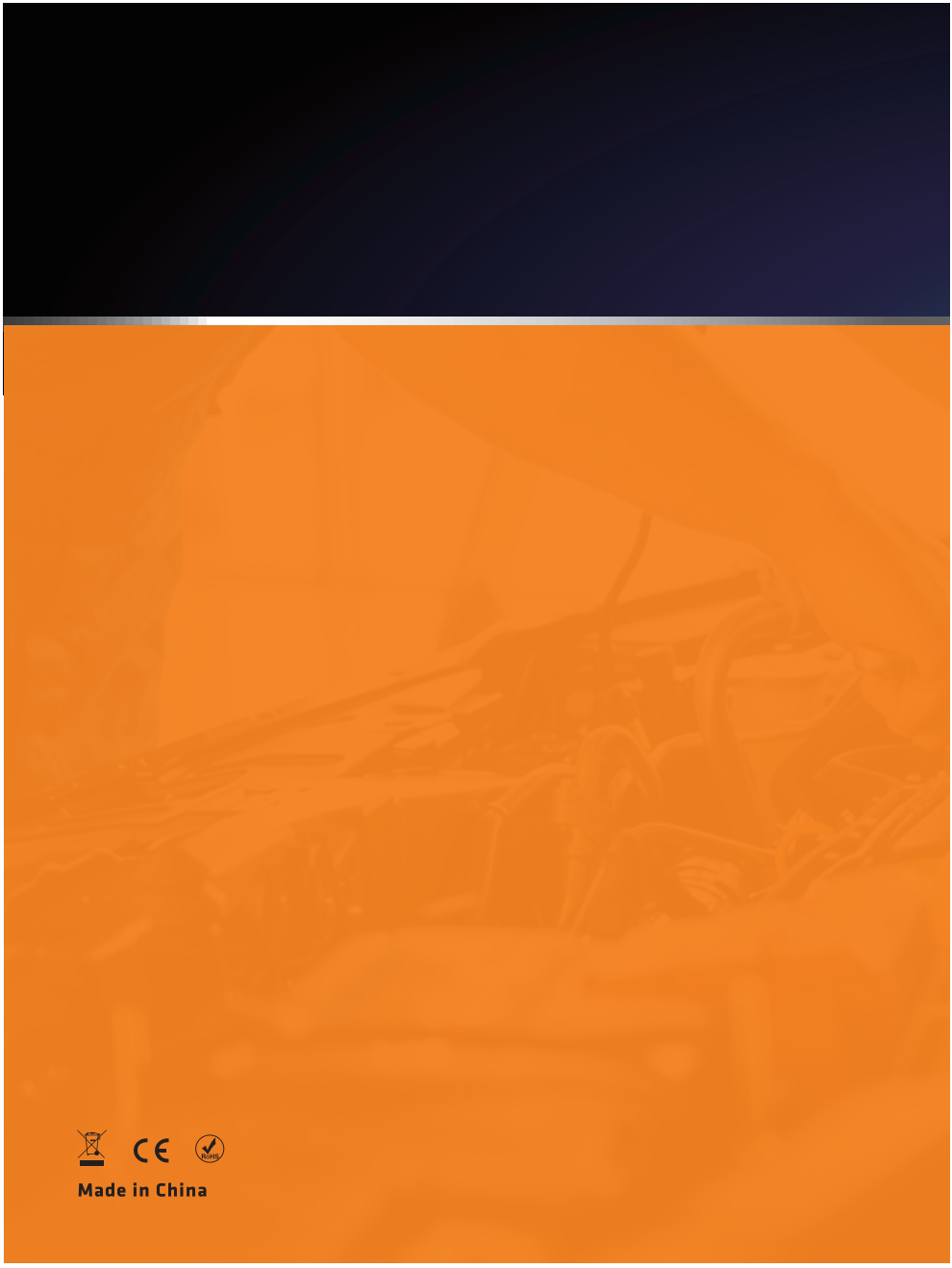
** 5 filters for ILD-100; 10 filters for ILD-200/ILD-300.

Warranty

⚠ Notice!

Please do NOT dissemble the detector or otherwise the relative malfunction or damages will not be covered for warranty.

Warranty Periods: One year since the date of original purchase.



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