



# Leo 2.0

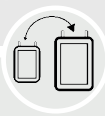
Handheld Meter. Precision in your hands.





### Precision Readings

Ensure accuracy with user-defined measurement setups tailored to each specific incubator model.



### Dual Operational Modes

Effortlessly navigate with a user-friendly touch screen interface, switching between Basic and Advanced modes with ease.



### Time Logging with Alert Guidance

Monitor your incubators over extended periods with comprehensive time logging. On-screen instructions help follow the protocols accurately, while alerts prevent errors.



### Seamless Data Analysis

Save, view, and download data for individual incubators easily, simplifying documentation and facilitating sharing. Analyze data directly in Excel without additional software.



### Large Storage Space

Access over 5900 individual sets of measurements for up to 30 incubators, providing ample storage space for data.

## ► GAS SAMPLING METHODS



### Diffusion Mode

Gas flows into LEO through the dedicated diffusion port with icon **IN**. The minimum operating flow rate is 30 ml/min.



### Aspiration Mode

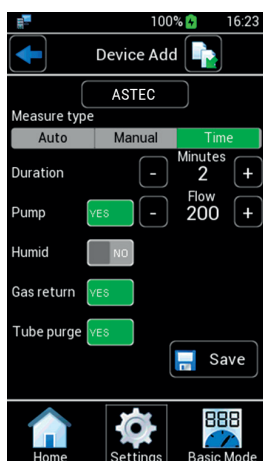
Gas is actively pulled in via LEO's internal pump through the dedicated aspiration port with icon **IN**. The pump flow rate can be set in the range 60-260 ml/min.



Humidified incubators measurement

- Water trap included by default
- Humidity corrected CO<sub>2</sub>-O<sub>2</sub> readings on demand

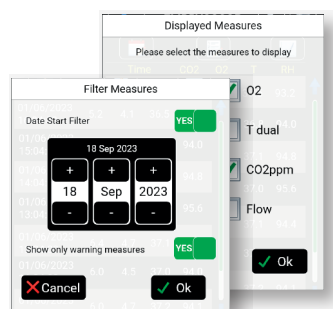
## ► ADVANCED SETTINGS AVAILABLE



Designed to deliver precise readings across all types of incubators, it serves as an invaluable instrument for embryologists. It facilitates daily validation and historical data evaluation, ultimately enhancing success rates.

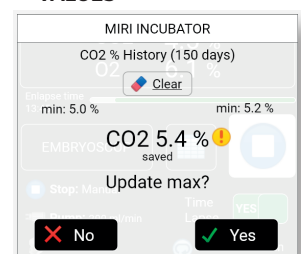
### ► SPECIFIC MEASUREMENT SETTINGS FOR EACH INCUBATOR MODEL

- Chose between AUTO/ MANUAL/TIME stop mode.
- Select the pump flow rate.
- Optional, automatic tube purge step, eliminates the error due to air present in the tubes, when sending the gas back to the incubator.



### ► FILTER AND VIEW DATA

### ► MANAGE NORMAL VALUES



## ► AVAILABLE SENSOR MODULES

- Factory Calibrated, with traceable standards certificate
- ISO 17025 Accreditation certificate available on request
- Warranty period of 2 years from shipment date
- Keep LEO 2.0 always up-to-date with the latest software version available online

### ANNUAL CALIBRATION CERTIFICATIONS:

- Can be requested from local institutions or authorized distributors
- Can be requested directly from Okolab

### CO<sub>2</sub>-O<sub>2</sub>-MODULE

The CO<sub>2</sub>-O<sub>2</sub>-MODULE measures the CO<sub>2</sub> and O<sub>2</sub> % concentration in the incubator's sampled gas. The measured values are temperature and pressure compensated. The expected CO<sub>2</sub>-O<sub>2</sub>-MODULE lifetime is 5 years.

#### Features - CO<sub>2</sub>

- Sensor: Non Dispersive InfraRed detector (NDIR)
- Measurement range: 0-20%
- Accuracy (in the range 0-10%):  $\pm(1\% \text{ of Full Scale} + 2\% \text{ reading})$

#### Features - O<sub>2</sub>

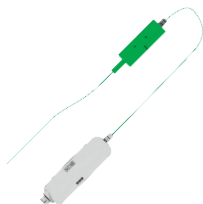
- Sensor: Fluorescence-based optical sensor
- Measurement range: 0-22%
- Accuracy (in the range 0-10%\*):  $\pm(1\% \text{ of Full Scale})$

*\*The measurement range may decrease as the sensor ages*

INCLUDED



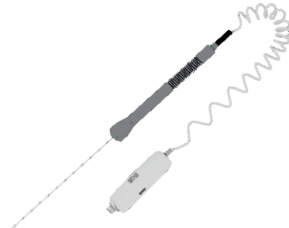
### TI-MODULE



#### Features

- Sensor: K-type thermocouple
- Measurement range: 0-60°C
- Accuracy:  $\pm 0.1^\circ\text{C}$  from 20 to 50°C
- External Diameter 0.13mm
- Flexible and Immersible Design

### T2-MODULE



#### Features

- Sensor: PT1000 RTD Class A
- Measurement range: 0-60°C
- Accuracy:  $\pm 0.1^\circ\text{C}$  from 20 to 50°C
- External Diameter 2mm

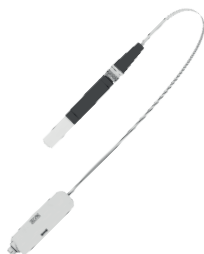
### CO<sub>2</sub>-PPM-MODULE



#### Features

- Sensor: Non-dispersive infrared (NDIR)
- Measurement range: 0-10000 ppm
- Accuracy:  $\pm (50 \text{ ppm} + 3\% \text{ reading})$
- Response time: 2 minutes
- Temperature and pressure compensated

### HUMIDITY-MODULE



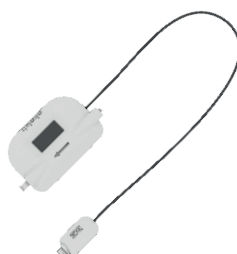
#### Features - Relative Humidity

- Sensor: Hygromer HT-1
- Measurement range: 0-100%
- Accuracy at 23°C:  $\pm 0.8\% \text{ RH}$
- Response time: 18 s

#### Features - Temperature

- Sensor: Pt100 1/3DIN Class B
- Measurement range: -10 + 100°C
- Accuracy:  $\pm 0.2^\circ\text{C}$  from 20 to 40°C

### FLOW-RATE-MODULE



#### Features

- Sensor: MEMS
- Measurement range: 0-200 ml/min
- Accuracy:  $\pm (2.0 \text{ reading} + 0.5\% \text{ full scale})$
- Response time: <1 s
- Calibration medium: air
- Also usable as standalone device

### VOC-MODULE



#### Features

- Sensor Type: VOCs with IE below 10.6 eV
- Measurement range: 0-2000 ppb
- Minimum detection: 5 ppb
- Repeatability:  $\pm 0.5\% \text{ full scale}$
- Warm up time: 10 min\*
- Lamp life: 10,000 hours continues
- Easy access to lamp and sensor
- Temperature, Humidity and Pressure Compensation
- Temperature range: 5°C - 40°C
- Relative Humidity: 0 - 99% (non condensing)
- Barometric Pressure: 800 - 1200 mbar





The LEO 2.0 Hard-case includes:

- LEO 2.0
- Moisture Trap
- Calibration Kit
- Gas measurement tubing
- Soda Lime Kit
- Power supply
- USB OTG cable
- Lanyard



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