

ESAMBER

Precise Oven Residual Oxygen & Atmosphere Analyzer



► Features

- Simultaneous Temperature, Oxygen, and Vibration Measurement:**
 Enters the reflow oven together with the PCB, enabling real-time, synchronized logging of temperature, oxygen concentration inside the oven, and rail vibration, while generating analytical curves.
- Full Dynamic Tracking:**
 Captures temperature, oxygen concentration, and rail vibration data for each zone / time point throughout the process.
- Core to Process Optimization:**
 Provides actual in-oven oxygen levels, temperature, and rail vibration data to optimize atmosphere control and soldering parameters.
- Reliable & User-Friendly:**
 Withstands the harsh oven environment and is easy to operate.

► Technical Specifications

Model	TO81V
Sensor	Zirconia oxygen sensor / Type K thermocouple
Measuring Range	0-10000ppm / -100°C~480°C
Measurement Accuracy	0-99ppm, ±10ppm; 100-999ppm, ±2.5%F.S; 100-10000ppm, ±2.5%F.S; /±0.5°C, 5%
Sampling Rate	Settable from 0.1s to 10.0s
T90 Response Time	<30 seconds
Dimensions	60(W)x205(D)x17(H)mm; approx. 950g (including core components)
Battery Life	Approx. 60 minutes
Power Supply	Rechargeable lithium battery
Charging Interface	Type-C 5V/2A
Communication Method	USB

► Typical Applications

Defect analysis:

Correlate oxygen concentration fluctuations, temperature, and rail vibration with soldering issues (e.g., oxidation, bridging, misalignment, component drop) to shorten troubleshooting time. Integrate the relationship between temperature, oxygen concentration, and rail vibration to enhance analytical dimensions.

Process optimization:

Provide actual in-oven oxygen concentration, product temperature, and rail vibration curves to optimize atmosphere control and soldering parameters. Offer a basis for setting oxygen concentration in each zone, improve solder wetting, reduce defects, and increase soldering yield.

Cost reduction:

Precisely regulate nitrogen flow in each zone to avoid waste.

Data traceability:

Record temperature, oxygen, and vibration curves with support for viewing/exporting for reporting and traceability.

► Temperature-Oxygen Curve, Vibration Curve

