

 Taiwan

**eBio**

**Ebiologic Technology Co., Ltd.**

羅碁生化科技股份有限公司

**Certified Medical Device Manufacturer**

**ISO 13485 | TFDA | CE | QMS**

Scalable OEM/ODM Manufacturing for  
Electrochemical Sensing

# High-Precision Screen-Printed Electrodes (SPEs)

Reliable Electrochemical Sensing for Medical & Analytical Applications

Ebiologic Technology specializes in high-precision screen-printed electrodes (SPEs) designed for electrochemical sensing and diagnostic applications. Manufactured in an ISO 13485-certified facility, our SPEs deliver excellent repeatability, long-term stability, and low signal variation, making them suitable for both R&D and large-scale production environments.

## Key Features

- High repeatability and stable electrochemical response
- Proven long-term stability (300-cycle CV validation available)
- Low signal variation and consistent peak behavior
- Flexible WE / CE / RE design configurations
- Multilayer screen-printing capability
- Medical-grade materials and controlled curing processes



## Customization Options

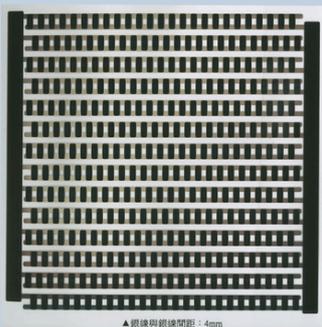
- Working, counter, and reference electrode layouts
- Conductive ink systems (carbon, silver, gold, copper, Ag/AgCl, and customized ink formulations)
- Electrode geometry and active area
- Substrate selection
- OEM / ODM co-development supported

## Production Capability

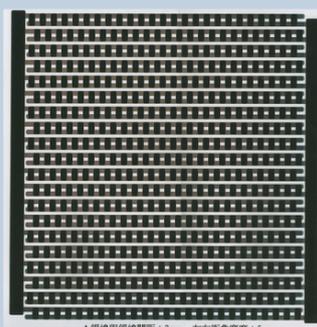
- ISO 13485-certified manufacturing
- Automated multilayer screen-printing lines
- Monthly capacity: 25–30 million strips
- Full batch traceability and documentation

## Applications

- Glucose, uric acid, cholesterol, lactate biosensors
- Disposable diagnostic sensors
- Electrochemical research & development
- Printed electronics and sensing platforms



▲ 網線與網線間距：4mm

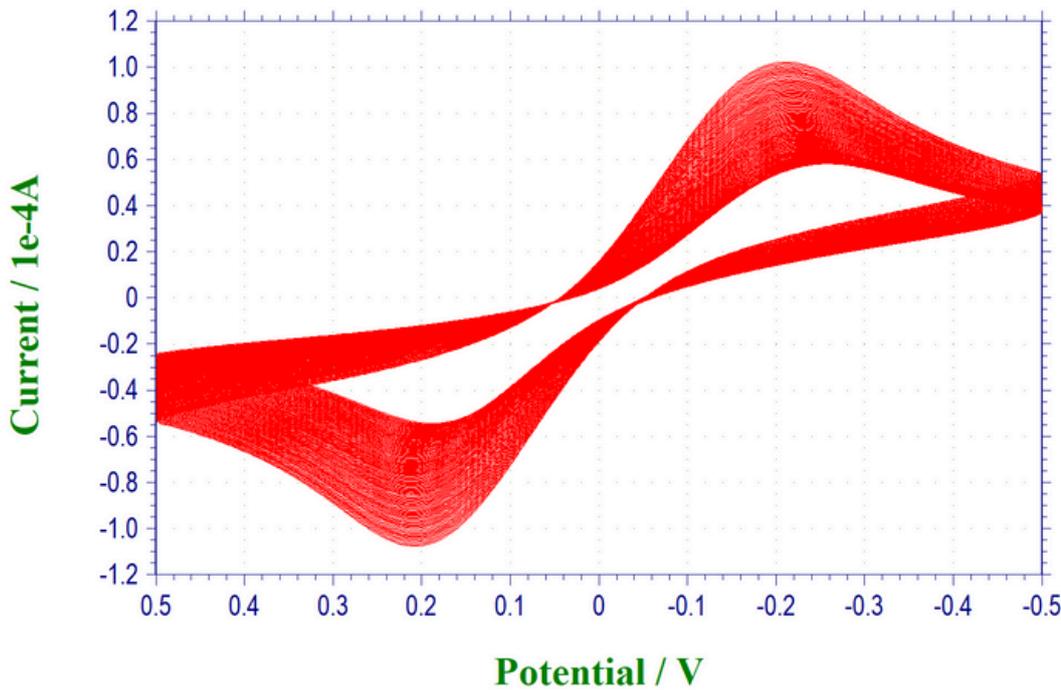


▲ 網線與網線間距：2mm 左右街角寬度：5mm

Large-Area Electrode Pattern Printing Capability

# High Stability Demonstrated by 300 CV Cycles

Electrochemical Repeatability & Durability Validation



Dec. 10, 2025 13:19:17  
 Tech: CV  
 File: 300圈測試.bin  
 Init E (V) = 0.5  
 High E (V) = 0.5  
 Low E (V) = -0.5  
 Init P/N = N  
 Scan Rate (V/s) = 0.05  
 Segment = 300  
 Smpl Interval (V) = 0.003  
 Quiet Time (s) = 2  
 Sensitivity (A/V) = 1e-4

Demonstrates long-term electrochemical stability for production-grade biosensors.

## Performance Validation

Ebiologic's screen-printed electrodes were evaluated using continuous cyclic voltammetry (CV) testing over 300 cycles. The results demonstrate excellent electrochemical stability and repeatability under extended cycling conditions.

## Key Observations

- Consistent peak currents across 300 cycles
- Minimal baseline drift
- Stable peak separation
- Low noise and clean voltammogram profiles
- No observable degradation of printed electrode layers

## Conclusion

The test results confirm the robustness of Ebiologic's SPE structure, ink formulation, and curing process. These electrodes are suitable for long-term electrochemical measurements, biosensor development, and production-grade diagnostic devices requiring high reliability.

## Recommended Applications

- Long-term electrochemical sensing
- Biosensor stability evaluation
- Quality validation for mass production
- Academic and industrial research



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# ISO 13485-Certified OEM/ODM Manufacturing

## Scalable Production from Prototype to Mass Manufacturing

### Manufacturing Strength

Ebiologic provides end-to-end OEM/ODM manufacturing services for screen-printed electrodes and printed biosensors. Our production environment integrates automation, precision control, and medical-grade quality systems.



### Production Highlights

- Automated multilayer screen-printing lines
- Controlled drying and curing processes
- Inline electrical and visual inspection
- High batch-to-batch consistency
- Full documentation and traceability

### Production Capacity

- Monthly output: 25–30 million strips
- Smooth scale-up from R&D prototypes to mass production
- Stable global supply capability

### Certifications & Compliance

- ISO 13485
- CE
- TFDA
- QMS-compliant operations

### Industries Served

- Medical diagnostics
- Biosensing platforms
- Environmental monitoring
- Printed electronics

