

Direct write printing is our core technology.

Micropen printing is the most precise and cost-effective way of printing fine lines of functional materials onto many different substrates: both 2D and 3D surfaces.



Challenge us with your application.

We can print it seamlessly, without swaging or glue; with precise conductivity; in virtually any size or shape; and on any substance.

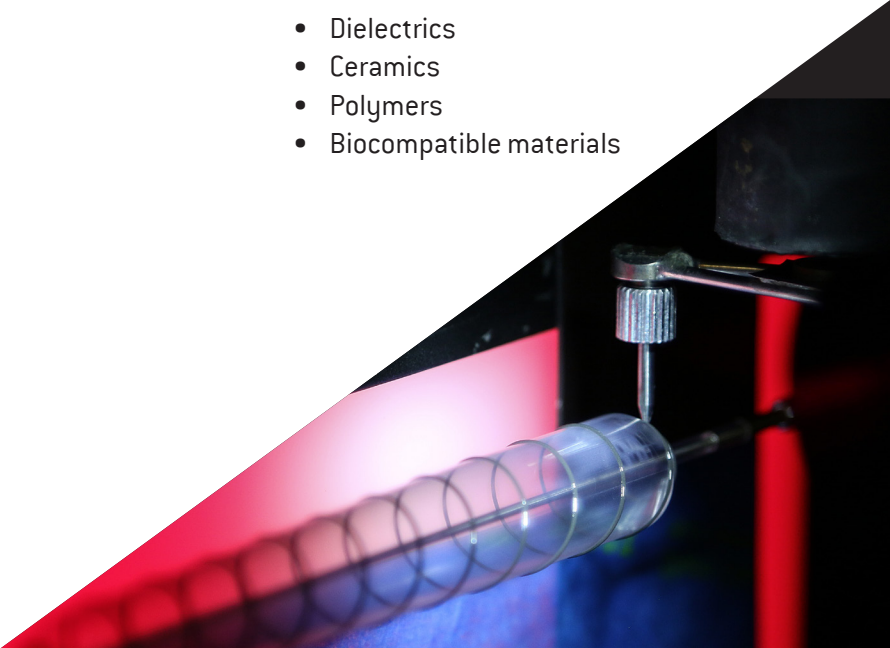
[Micropen.com](https://micropen.com)

	Direct-Write Sensors	Conventionally Embedded Sensors
Design Flexibility	High	Limited
Miniaturization	High	Limited
Material Compatibility	High	Limited
Sensor Coverage	High	Limited
Customization	High	Limited
Integration	Seamless	Complex
Reliability	High	Moderate
Cost	Application dependent	Application dependent
Prototype Production Time	Fast prototyping	Slower prototypes
Applications	Complex geometries, flexible substrates, large-area sensing, custom designs	Standard form factors, rigid substrates, established sensor types

We can print sensors, resistors, conductive materials, and radiopaque markers on any substrate!

Micropen capabilities

- Electronic printing
- Material formulation
- Supply chain management
- Assembly
- Testing and inspection
- Interconnection
- Wide latitude of materials:
 - Ag
 - Au
 - Pt
 - W
 - Dielectrics
 - Ceramics
 - Polymers
 - Biocompatible materials



Micropen Strengths



Flexible,
Expandable, or
Highly 3D Surfaces



Patterned Ink
Thickness



Fine Linewidths
and Spacing



Ink Waste Cost
Especially when using
expensive inks
[gold, silver, platinum]



Fast Prototyping

Consult us when you need a
better solution than...

- Screen Printing
- Pad Printing
- Inkjet/Aerosol Printing
- Applique Construction
- Subtractive Processes
- Metallization and etching



Micropen Certifications:

ISO 13485
AS9100D with ISO9001
RoHS and REACH compliant
FDA registration
ITAR registration

Contact Us:

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Exxelia Micropen

**Direct writing sensors
and conductive patterns
on any surface.**

Design, development, and manufacturing.



Micropen has printed sensors on these
and many more shapes and sizes!

Micropen industries:

Medical
Analytic
Aerospace
Defense

EXXELIA  MICROPEN