

THE NEXT GENERATION

5 MICRON MULTILAYER CIRCUITRY

You've designed a state-of-the-art instrument. None of your circuit vendors can make the parts. Now what???

Enter DRC- Metrigraphics, specialists in miniaturization. Truth is, most flex and many PCB houses can't make circuits below 5 mils with their etching and screen printing technologies. Metrigraphics takes over and reduces the size of your designs anywhere from 5x to 29x on a variety of substrates: Glass, Quartz, Piezoceramics (PZT, PVDF, etc.), Polyimides and many others.

MARKETS AND APPLICATIONS

Medical / Biomedical

Micro Sensors

- Glucose (in-vitro and in-vivo)
- Immuno assay (in-vitro)
- Blood flow monitoring (in-vivo)

Electrophysiology

- Cardiac stimulation, monitoring (in-vivo)
- Intravascular catheterization

Electronics

Test and Measurement

- Known Good Die (KGD) testing
- Burn-in testing

RF and Microwave Components

- Antennas
- Delay lines
- Inductors and coils

Back Planes

- Ball Grid Arrays (BGAs)
- Chip-On-Flex (COF)
- Multi-Chip Modules (MCMs)

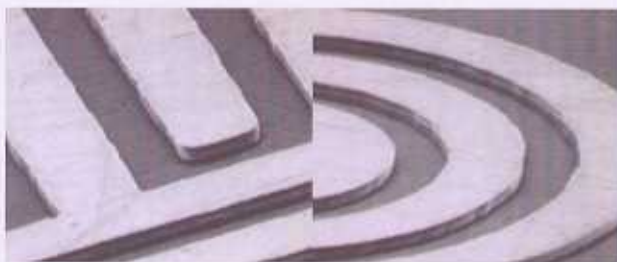


METRIGRAPHICS®

DIVISION OF DYNAMICS RESEARCH CORPORATION

INNOVATIVE SOLUTIONS THROUGH PEOPLE AND TECHNOLOGY

Dynamics Research Corporation



Dynamics Research Corporation Metrigraphics Division

50 Concord Street, Wilmington
Massachusetts 01887-2193, USA

freephone: 800-261-2557
tel: +1 978 658 6100 x2238
fax: +1 978 657 7765
e-mail: metsales@drc.com
website: www.drc.com

COMPANY DESCRIPTION

Metrigraphics Division of DRC (DRCO on NASDAQ) is a leading worldwide supplier of high precision custom components for designers and builders of medical/analytical and industrial sensors. We produce microminiature flexible circuits in high volumes that allow medical product designers to install communicating transmitters and transducers directly into intravascular, subcutaneous or implantable devices for diagnostic imaging, monitoring or drug administration.

PRODUCTS & SERVICES

High resolution photolithography, thin-film coating and microminiature 2-D and 3-D precision electroforming are combined to produce high density, multilayer flexible circuits with 5 μm traces and spaces for use inside such devices with diameters of only 1.25 mm. Our core technologies of electroforming, photolithography, and thin-film deposition are applied to a variety of substrates including PZT, alumina, glass and flexible polyimides. High aspect ratio micro mechanical parts (gears, cams, coils) are produced by electroforming, LIGA and other processes.

Our products include:

- PZT actuators
- Electrochemical sensors
- Microflex circuits (5 μm lines)
- Inductors
- Pinhole slits/reticles
- High-density interconnects
- Micro-mechanical parts
- Micron-level nozzles/apertures (Microfluidics)

QUALITY OF SERVICE

Through our work with medical equipment and device manufacturers over the last 40 years, we have developed a high level of competence in the fabrication of microminiature components for medical, scientific and analytical instruments and devices. We work with you, from concept through to production, to develop new methods, processes and techniques for your next generation medical products.

MARKETS SERVED

We serve leading medical, analytical and scientific equipment and device manufacturers worldwide in the fabrication of high precision, microminiature components and assemblies. Electroform apertures ($> 1 \mu\text{m}$) are produced for nozzle plates, electro-optical parts, X-ray targets and shadow masks in nickel, gold, glass, alumina and other materials. High resolution ($> 3 \mu\text{m}$ traces), extreme density rigid and flexible circuits in polyimide, PZT and Al_2O_3 .



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