



GIX™ Microplotter®

Precision picoliter printing

Key Features

- Noncontact deposition
- Features as small as 5µm
- Viscosities up to 450 cP
- True contiguous lines, arcs, and bends
- Consistent spot size and shape with coefficients of variability as low as 2.5%
- 3-axis positioning with 1 µm resolution
- Integrated digital video capture
- Automated surface calibration
- Interchangeable holding platen for a variety of substrate sizes
- SonoGuide software for full automation and control

Applications

- High-density microarrays
- Protein crystallography
- pOLED printing
- Additive repair

For More Information

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The SonoPlot® GIX™ Microplotter® instrument is a precision picoliter fluid dispensing system for the microarray and polymer electronics markets with significant advantages over existing products in deposited feature size and type, regularity of volumes dispensed, and flexibility for the user.

The core of the Microplotter® instrument is a dispenser that uses controlled ultrasonics to deposit fluid in a noncontact manner. This patented technology can produce picoliter droplets that form features on a surface as small as 5 µm wide. When combined with automatic surface height calibration, coefficients of variability for deposited feature diameters as small as 2.5% can be achieved. A wide range of fluids can be used, including aqueous solutions and many organic-solvent-based mixtures. Fluids that other dispensers struggle with, such as saturated solutions for MALDI-ToF matrices, or fluids with viscosities up to 450 cP, can be deposited with ease. The ultrasonic pumping action is also an efficient cleaning mechanism for quickly depositing many solutions sequentially.

In addition to spots, the GIX™ Microplotter® instrument can draw true continuous features, such as lines, arcs, and bends. These are uniform elements, not made from overlapping droplets like other technologies, and are particularly well-suited to the polymer electronics field.

Technical Specifications

Feature size	5 µm - 200 µm
Feature types	Droplets and contiguous lines, arcs, and bends
Deposition volume	≥ 0.6 pL
Deposition variability	As low as 2.5%
Viscosity	≤ 450 cP
Positioning	45 x 30 x 5 cm (X, Y, Z axes) 1 µm resolution, 2 µm repeatability
Calibration	Automatic surface height calibration
Camera	Firewire™ with digital video capture
Software	Mac OS X™ (computer included)
Dimensions	114.6 x 68.7 x 76.4 cm (45.1 x 27.1 x 30.1 in.)
Weight	120 kg (266 lbs)
Power	3.5 A for 100-120 V or 1.75 A for 220-240 V